

DIGIEVER

Network Video Recorder User Manual

1.0.0.27

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Chapter 1. Introduction

Before You Use This Product

When you first open the product's package, verify that all the accessories listed on the "Package Contents" of "Quick Installation Guide" are included. Before installing the NVR, please read the instructions in the "Quick Installation Guide" to avoid misuse and then follow the instructions in the "Hard Disk Installation" section to avoid damages due to faulty assembly or installation.



1.1 Hardware Description

1.1.1 DS-2000 Series

DS-2005/DS-2009/DS-2012/DS-2016/DS-2020/DS-2025/DS-2032



Figure 1-1. Front & Rear View of DS-2000 Series

1. Figure LED indicators: LAN, eSATA, HDD1, HDD2
2. Power button
3. USB BACKUP button- Auto video backup
4. USB 2.0 X1(Support auto video backup)
5. HDD1
6. HDD2
7. Gigabit LAN
8. USB 2.0 x 2
9. eSATA x 2
10. DI/DO (4 in 2 out)



↓ Top to bottom: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO-1, DO-2


11. Reset button*
12. Power connector
13. K-lock security slot

1.1.2 DS-4000 Series

DS-4005/DS-4009/DS-4012/DS-4016/DS-4020/ DS-4025/ DS-4032



Figure 1-2. Front & Rear View of DS-4000 Series

1. LED indicators: LAN, eSATA, HDD1, HDD2, HDD3, HDD4
2. Power button
3. USB BACKUP button- Auto video backup
4. USB 2.0 x 1 (Support auto video backup)
5. HDD1
6. HDD2
7. HDD3
8. HDD4
9. Gigabit LAN
10. USB 2.0 x 2
11. eSATA x 2
12. DI/DO (4 in 2 out)
 Top to bottom: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO-1, DO-2
13. Reset button*
14. Power connector
15. K-lock security slot

1.1.3 DS-1100 Pro Series

DS-1105 Pro/ DS-1109 Pro/ DS-1112 Pro/ DS-1116 Pro/ DS-1120 Pro/ DS-1125 Pro/
DS-1132 Pro/ DS-1136 Pro



Figure 1-3. Front & Rear View of DS-1100 Pro Series

1. Power button
2. LED indicators: HDD
3. USB 2.0 x1 (Support auto video backup)
4. USB 2.0 x1
5. Power connector
6. USB 3.0 x 2
7. DVI-I
8. eSATA x 1
9. HDMI x 1
10. Gigabit LAN
11. USB 2.0 x 2
12. Audio mic input (reserved)
13. Audio output (reserved)

1.1.4 DS-2100 Pro Series

DS-2105 Pro/ DS-2109 Pro/ DS-2112 Pro/ DS-2116 Pro/ DS-2120 Pro/ DS-2125 Pro/
DS-2132 Pro/ DS-2136 Pro



Figure 1-4. Front & Rear View of DS-2100 Pro Series


1. Power button
2. LED indicators: HDD
3. USB 2.0 x1 (Support auto video backup)
4. USB 2.0 x1
5. Power connector
6. USB 3.0 x 2
7. DVI-I
8. eSATA x 1
9. HDMI x 1
10. Gigabit LAN
11. USB 2.0 x 2
12. Audio mic input (reserved)
13. Audio output (reserved)

1.1.5 DS-4200 Pro Series

DS-4205 Pro/ DS-4209 Pro/ DS-4212 Pro/ DS-4216 Pro/ DS-4220 Pro/ DS-4225 Pro/
DS-4232 Pro/ DS-4236 Pro



Figure 1-5. Front & Rear View of DS-4200 Pro Series


1. LED indicators: LAN1, LAN2, eSATA, HDD1, HDD2, HDD3, HDD4
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 2.0 x 1(Support auto video backup)
5. USB 2.0 x 1
6. HDD1
7. HDD2
8. HDD3
9. HDD4
10. Gigabit LAN x 2
11. USB 2.0 x 4
12. eSATA x 2
13. VGA output
14. HDMI output
15. DI/DO (4 in 2 out)
 ↓ Top to bottom: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO-1, DO-2
16. Reset button*
17. Power connector
18. K-lock security slot

1.1.6 DS-4200-RM Pro Series

DS-4209-RM Pro/ DS-4212-RM Pro/ DS-4216-RM Pro/ DS-4220-RM Pro/
DS-4225-RM Pro/ DS-4232-RM Pro/ DS-4236-RM Pro



Figure 1-6. Front & Rear View of DS-4200-RM Pro Series


1. LED indicators: LAN1, LAN2, eSATA, HDD1, HDD2, HDD3, HDD4
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 3.0 x 1 (Support auto video backup)
5. HDD1
6. HDD2
7. HDD3
8. HDD4
9. Gigabit LAN x 2
10. USB 2.0 x 4
11. eSATA x 2
12. VGA output
13. HDMI output
14. DI/DO (4 in 2 out)
 Right to left: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO1, DO2
15. Reset button*
16. Power connector

1.1.7 DS-4200-RMP Pro Series

DS-4209-RMP Pro/ DS-4212-RMP Pro/ DS-4216-RMP Pro/ DS-4220-RMP Pro/
DS-4225-RMP Pro/ DS-4232-RMP Pro/ DS-4236-RMP Pro



Figure 1-7. Front & Rear View of DS-4200-RMP Pro Series

1. LED indicators: LAN1, LAN2, eSATA, HDD1, HDD2, HDD3, HDD4
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 3.0 x 1 (Support auto video backup)
5. HDD1
6. HDD2
7. HDD3
8. HDD4
9. Gigabit LAN x 2
10. USB 2.0 x 4
11. eSATA x 2
12. VGA output
13. HDMI output
14. DI/DO (4 in 2 out)
 Right to left: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO1, DO2
15. Reset button*
16. Power connector


⚠ Note: The redundant power (with two adaptors) will be indicated in green light in the rear panel of DS-4200-RMP Pro series. Once one of the adaptors is failed, system buzzer will start beeping and no LED indicator light will display in rear panel. To stop the buzzer, please press the red button in the rear panel of system.

1.1.8 DS-8200-RM Pro Series

DS-8209-RM Pro/ DS-8212-RM Pro/ DS-8216-RM Pro/ DS-8220-RM Pro/
DS-8225-RM Pro/ DS-8232-RM Pro/ DS-8236-RM Pro



Figure 1-8. Front & Rear View of DS-8200-RM Pro Series

1. LED indicators: LAN1, LAN2, eSATA, HDD1, HDD2, HDD3, HDD4, HDD5, HDD6, HDD7, HDD8
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 3.0 x 1 (Support auto video backup)
5. HDD1
6. HDD2
7. HDD3
8. HDD4
9. HDD5
10. HDD6
11. HDD7
12. HDD8
13. Gigabit LAN x 2
14. USB 2.0 x 4
15. eSATA x 2
16. VGA output
17. HDMI output
18. DI/DO (4 in 2 out)
 Right to left: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO1, DO2
19. Reset button*
20. Power connector


1.1.9 DS-8200-RMP Pro Series

DS-8209-RMP Pro/ DS-8212-RMP Pro/ DS-8216-RMP Pro/ DS-8220-RMP Pro/
DS-8225-RMP Pro/ DS-8232-RMP Pro/ DS-8236-RMP Pro



Figure 1-9. Front & Rear View of DS-8200-RMP Pro Series

1. LED indicators: LAN1, LAN2, eSATA, HDD1, HDD2, HDD3, HDD4, HDD5, HDD6, HDD7, HDD8
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 3.0 x 1 (Support auto video backup)
5. HDD1
6. HDD2
7. HDD3
8. HDD4
9. HDD5
10. HDD6
11. HDD7
12. HDD8
13. Gigabit LAN x 2
14. USB 2.0 x 4
15. eSATA x 2
16. VGA output
17. HDMI output
18. DI/DO (4 in 2 out)



Right to left: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO1, DO2
19. Reset button*
20. Power connector

⚠ Note: The redundant power (with two adaptors) will be indicated in green light in the rear panel of DS-8200-RMP Pro series. Once one of the adaptors is failed, system buzzer will start beeping and no LED indicator light will display in rear panel. To stop the buzzer, please press the red button in the rear panel of system.

1.1.10 DS-1100 Pro+ Series

DS-1105 Pro+/ DS-1109 Pro+/ DS-1112 Pro+/ DS-1116 Pro+/ DS-1120 Pro+/
DS-1125 Pro+/ DS-1132 Pro+/ DS-1136 Pro+/ DS-1142 Pro+/ DS-1149 Pro+/
DS-1156 Pro+/ DS-1164 Pro+



Figure 1-10. Front & Rear View of DS-1100 Pro+ Series

1. Power button
2. LED indicators: HDD
3. USB 2.0 x1 (Support auto video backup)
4. USB 2.0 x1
5. Power connector
6. USB 3.0 x 2
7. DVI-I
8. eSATA x 1
9. HDMI x 1
10. Gigabit LAN
11. USB 2.0 x 2
12. Audio mic input (reserved)
13. Audio output (reserved)

1.1.11 DS-2100 Pro+ Series

DS-2105 Pro+/ DS-2109 Pro+/ DS-2112 Pro+/ DS-2116 Pro+/ DS-2120 Pro+/
DS-2125 Pro+/ DS-2132 Pro+/ DS-2136 Pro+/ DS-2142 Pro+/ DS-2149 Pro+/
DS-2156 Pro+/ DS-2164 Pro+



Figure 1-11. Front & Rear View of DS-2100 Pro+ Series

1. Power button
2. LED indicators: HDD
3. USB 2.0 x1 (Support auto video backup)
4. USB 2.0 x1
5. Power connector
6. USB 3.0 x 2
7. DVI-I
8. eSATA x 1
9. HDMI x 1
10. Gigabit LAN
11. USB 2.0 x 2
12. Audio mic input (reserved)
13. Audio output (reserved)

1.1.12 DS-4200 Pro+ Series

DS-4205 Pro+/ DS-4209 Pro+/ DS-4212 Pro+/ DS-4216 Pro+/ DS-4220 Pro+/
 DS-4225 Pro+/ DS-4232 Pro+/ DS-4236 Pro+/ DS-4242 Pro+/ DS-4249 Pro+/
 DS-4256 Pro+/ DS-4264 Pro+



Figure 1-12. Front & Rear View of DS-4200 Pro+ Series

1. LED indicators: LAN1, LAN2, eSATA, HDD1, HDD2, HDD3, HDD4
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 2.0 x 1(Support auto video backup)
5. USB 2.0 x 1
6. HDD1
7. HDD2
8. HDD3
9. HDD4
10. Gigabit LAN x 2
11. USB 2.0 x 4
12. eSATA x 2
13. VGA output
14. HDMI output
15. DI/DO (4 in 2 out)



↓ Top to bottom: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO-1, DO-2


16. Reset button*
17. Power connector
18. K-lock security slot

1.1.13 DS-4200-RM Pro+ Series

DS-4209-RM Pro+/ DS-4212-RM Pro+/ DS-4216-RM Pro+/ DS-4220-RM Pro+/
 DS-4225-RM Pro+/ DS-4232-RM Pro+/ DS-4236-RM Pro+/ DS-4242-RM Pro+/
 DS-4249-RM Pro+/ DS-4256-RM Pro+/ DS-4264-RM Pro+



Figure 1-13. Front & Rear View of DS-4200-RM Pro+ Series


1. LED indicators: LAN1, LAN2, eSATA, HDD1, HDD2, HDD3, HDD4
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 3.0 x 1 (Support auto video backup)
5. HDD1
6. HDD2
7. HDD3
8. HDD4
9. Gigabit LAN x 2
10. USB 2.0 x 4
11. eSATA x 2
12. VGA output
13. HDMI output
14. DI/DO (4 in 2 out)
- 
 Right to left: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO1, DO2
15. Reset button*
16. Power connector

1.1.14 DS-4200-RMP Pro+ Series

DS-4209-RMP Pro+/ DS-4212-RMP Pro+/ DS-4216-RMP Pro+/ DS-4220-RMP Pro+/ DS-4225-RMP Pro+/ DS-4232-RMP Pro+/ DS-4236-RMP Pro+/ DS-4242-RMP Pro+/ DS-4249-RMP Pro+/ DS-4256-RMP Pro+/ DS-4264-RMP Pro+



Figure 1-14. Front & Rear View of DS-4200-RMP Pro+ Series

1. LED indicators: LAN1, LAN2, eSATA, HDD1, HDD2, HDD3, HDD4
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 3.0 x 1 (Support auto video backup)
5. HDD1
6. HDD2
7. HDD3
8. HDD4
9. Gigabit LAN x 2
10. USB 2.0 x 4
11. eSATA x 2
12. VGA output
13. HDMI output
14. DI/DO (4 in 2 out)
 Right to left: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO1, DO2
15. Reset button*
16. Power connector


⚠ Note: The redundant power (with two adaptors) will be indicated in green light in the rear panel of DS-4200-RMP Pro+ series. Once one of the adaptors is failed, system buzzer will start beeping and no LED indicator light will display in rear panel. To stop the buzzer, please press the red button in the rear panel of system.

1.1.15 DS-8200-RM Pro+ Series

DS-8209-RM Pro+/ DS-8212-RM Pro+/ DS-8216-RM Pro+/ DS-8220-RM Pro+/ DS-8225-RM Pro+/ DS-8232-RM Pro+/ DS-8236-RM Pro+/ DS-8242-RM Pro+/ DS-8249-RM Pro+/ DS-8256-RM Pro+/ DS-8264-RM Pro+



Figure 1-15. Front & Rear View of DS-8200-RM Pro+ Series

1. LED indicators: LAN1, LAN2, eSATA, HDD1, HDD2, HDD3, HDD4, HDD5, HDD6, HDD7, HDD8
 2. Power button
 3. USB BACKUP button - Auto video backup
 4. USB 3.0 x 1 (Support auto video backup)
 5. HDD1
 6. HDD2
 7. HDD3
 8. HDD4
 9. HDD5
 10. HDD6
 11. HDD7
 12. HDD8
 13. Gigabit LAN x 2
 14. USB 2.0 x 4
 15. eSATA x 2
 16. VGA output
 17. HDMI output
 18. DI/DO (4 in 2 out)
- 

Right to left: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO1, DO2
19. Reset button*
 20. Power connector

1.1.16 DS-8200-RMP Pro+ Series

DS-8209-RMP Pro+/ DS-8212-RMP Pro+/ DS-8216-RMP Pro+/ DS-8220-RMP Pro+/ DS-8225-RMP Pro+/ DS-8232-RMP Pro+/ DS-8236-RMP Pro+/ DS-8242-RMP Pro+/ DS-8249-RMP Pro+/ DS-8256-RMP Pro+/ DS-8264-RMP Pro+



Figure 1-16. Front & Rear View of DS-8200-RMP Pro+ Series

1. LED indicators: LAN1, LAN2, eSATA, HDD1, HDD2, HDD3, HDD4, HDD5, HDD6, HDD7, HDD8
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 3.0 x 1 (Support auto video backup)
5. HDD1
6. HDD2
7. HDD3
8. HDD4
9. HDD5
10. HDD6
11. HDD7
12. HDD8
13. Gigabit LAN x 2
14. USB 2.0 x 4
15. eSATA x 2
16. VGA output
17. HDMI output
18. DI/DO (4 in 2 out)
19. Reset button*
20. Power connector



Right to left: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO1, DO2

⚠ Note: The redundant power (with two adaptors) will be indicated in green light in the rear panel of DS-8200-RMP Pro+ series. Once one of the adaptors is failed, system buzzer will start beeping and no LED indicator light will display in rear panel. To stop the buzzer, please press the red button in the rear panel of system.

1.1.17 DS-4300 Pro+ Series

DS-4332 Pro+/ DS-4336 Pro+/ DS-4342 Pro+/ DS-4349 Pro+/ DS-4356 Pro+/ DS-4364 Pro+



Figure 1-17. Front & Rear View of DS-4300 Pro+ Series

1. LED indicators: LAN1, LAN2, eSATA, HDD1, HDD2, HDD3, HDD4
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 2.0 x 1(Support auto video backup)
5. USB 2.0 x 1
6. HDD1
7. HDD2
8. HDD3
9. HDD4
10. Gigabit LAN x 2
11. USB 2.0 x 4
12. eSATA x 2
13. VGA output
14. HDMI output
15. DI/DO (4 in 2 out)



↓ Top to bottom: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO-1, DO-2


16. Reset button*
17. Power connector
18. K-lock security slot

1.1.18 DS-4300-RM Pro+ Series

DS-4332-RM Pro+/ DS-4336-RM Pro+/ DS-4342-RM Pro+/ DS-4349-RM Pro+/
DS-4356-RM Pro+/ DS-4364-RM Pro+



Figure 1-18. Front & Rear View of DS-4300-RM Pro+ Series


1. LED indicators: LAN1, LAN2, eSATA, HDD1, HDD2, HDD3, HDD4
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 3.0 x 1 (Support auto video backup)
5. HDD1
6. HDD2
7. HDD3
8. HDD4
9. Gigabit LAN x 2
10. USB 2.0 x 4
11. eSATA x 2
12. VGA output
13. HDMI output
14. DI/DO (4 in 2 out)
- 
 Right to left: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO1, DO2
15. Reset button*
16. Power connector

1.1.19 DS-4300-RMP Pro+ Series

DS-4332-RMP Pro+/ DS-4336-RMP Pro+/ DS-4342-RMP Pro+/ DS-4349-RMP Pro+/ DS-4356-RMP Pro+/ DS-4364-RMP Pro+



Figure 1-19. Front & Rear View of DS-4300-RMP Pro+ Series

1. LED indicators: LAN1, LAN2, eSATA, HDD1, HDD2, HDD3, HDD4
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 3.0 x 1 (Support auto video backup)
5. HDD1
6. HDD2
7. HDD3
8. HDD4
9. Gigabit LAN x 2
10. USB 2.0 x 4
11. eSATA x 2
12. VGA output
13. HDMI output
14. DI/DO (4 in 2 out)
 Right to left: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO1, DO2
15. Reset button*
16. Power connector

⚠ Note: The redundant power (with two adaptors) will be indicated in green light in the rear panel of DS-4300-RMP Pro+ series. Once one of the adaptors is failed, system buzzer will start beeping and no LED indicator light will display in rear panel. To stop the buzzer, please press the red button in the rear panel of system.


1.1.20 DS-8300-RM Pro+ Series

DS-8342-RM Pro+/ DS-8349-RM Pro+/ DS-8356-RM Pro+/ DS-8364-RM Pro+



Figure 1-20. Front & Rear View of DS-8300-RM Pro+ Series

1. LED indicators: LAN1, LAN2, eSATA, HDD1, HDD2, HDD3, HDD4, HDD5, HDD6, HDD7, HDD8
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 3.0 x 1 (Support auto video backup)
5. HDD1
6. HDD2
7. HDD3
8. HDD4
9. HDD5
10. HDD6
11. HDD7
12. HDD8
13. Gigabit LAN x 2
14. USB 2.0 x 4
15. eSATA x 2
16. VGA output
17. HDMI output
18. DI/DO (4 in 2 out)



Right to left: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO1, DO2
19. Reset button*
20. Power connector


1.1.21 DS-8300-RMP Pro+ Series

DS-8342-RMP Pro+/ DS-8349-RMP Pro+/ DS-8356-RMP Pro+/ DS-8364-RMP Pro+



Figure 1-21. Front & Rear View of DS-8300-RMP Pro+ Series

1. LED indicators: LAN1, LAN2, eSATA, HDD1, HDD2, HDD3, HDD4, HDD5, HDD6, HDD7, HDD8
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 3.0 x 1 (Support auto video backup)
5. HDD1
6. HDD2
7. HDD3
8. HDD4
9. HDD5
10. HDD6
11. HDD7
12. HDD8
13. Gigabit LAN x 2
14. USB 2.0 x 4
15. eSATA x 2
16. VGA output
17. HDMI output
18. DI/DO (4 in 2 out)



Right to left: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO1, DO2
19. Reset button*
20. Power connector


⚠ Note: The redundant power (with two adaptors) will be indicated in green light in the rear panel of DS-8300-RMP Pro+ series. Once one of the adaptors is failed, system buzzer will start beeping and no LED indicator light will display in rear panel. To stop the buzzer, please press the red button in the rear panel of system.

1.1.22 DS-8400-RM Pro+ Series

DS-8442-RM Pro+/ DS-8449-RM Pro+/ DS-8456-RM Pro+/ DS-8464-RM Pro+



Figure 1-22. Front & Rear View of DS-8400-RM Pro+ Series

1. LED indicators: LAN1, LAN2, eSATA, HDD1, HDD2, HDD3, HDD4, HDD5, HDD6, HDD7, HDD8
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 3.0 x 1 (Support auto video backup)
5. HDD1
6. HDD2
7. HDD3
8. HDD4
9. HDD5
10. HDD6
11. HDD7
12. HDD8
13. Gigabit LAN x 2
14. USB 2.0 x 4
15. eSATA x 2
16. VGA output
17. HDMI output
18. DI/DO (4 in 2 out)
 Right to left: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO1, DO2
19. Reset button*
20. Power connector

1.1.23 DS-16200-RM Pro+ Series

DS-16216-RM Pro+/ DS-16220-RM Pro+/ DS-16225-RM Pro+/ DS-16232-RM Pro+/ DS-16236-RM Pro+



Figure 1-23. Front & Rear View of DS-16200-RM Pro+ Series

1. LED indicators: LAN1, LAN2, eSATA, HDD1~16
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 2.0 x 1 (Support auto video backup)
5. HDD1
6. HDD2
7. HDD3
8. HDD4
9. HDD5
10. HDD6
11. HDD7
12. HDD8
13. HDD9
14. HDD10
15. HDD11
16. HDD12
17. HDD13
18. HDD14
19. HDD15
20. HDD16
21. Gigabit LAN x 2
22. USB 2.0 x 4
23. eSATA x 2
24. VGA output
25. HDMI output

26. DI/DO (4 in 2 out)



Right to left: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO1, DO2

27. Reset button*

28. Power connector

29. Power switch

1.1.24 DS-16300-RM Pro+ Series

DS-16316-RM Pro+/ DS-16320-RM Pro+/ DS-16325-RM Pro+/ DS-16332-RM Pro+/ DS-16336-RM Pro+/ DS-16342-RM Pro+/ DS-16349-RM Pro+/ DS-16356-RM Pro+/ DS-16364-RM Pro+

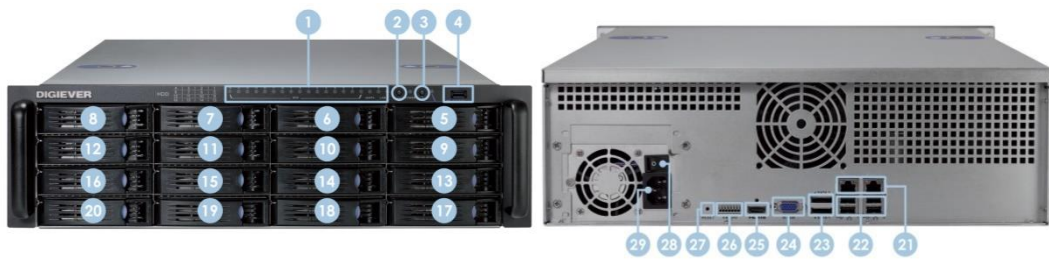


Figure 1-24. Front & Rear View of DS-16300-RM Pro+ Series

1. LED indicators: LAN1, LAN2, eSATA, HDD1~16
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 2.0 x 1 (Support auto video backup)
5. HDD1
6. HDD2
7. HDD3
8. HDD4
9. HDD5
10. HDD6
11. HDD7
12. HDD8
13. HDD9
14. HDD10
15. HDD11
16. HDD12
17. HDD13
18. HDD14
19. HDD15



- 20. HDD16
- 21. Gigabit LAN x 2
- 22. USB 2.0 x 4
- 23. eSATA x 2
- 24. VGA output
- 25. HDMI output
- 26. DI/DO (4 in 2 out)



Right to left: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO1, DO2

- 27. Reset button*
- 28. Power connector
- 29. Power switch

1.1.25 DS-16400-RM Pro+ Series

DS-16442-RM Pro+/ DS-16449-RM Pro+/ DS-16456-RM Pro+/ DS-16464-RM Pro+

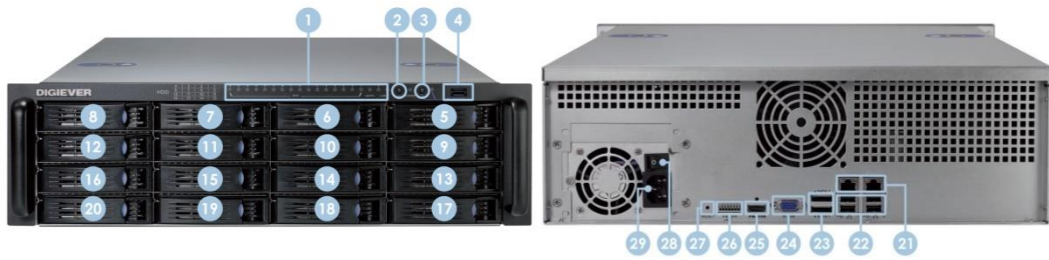


Figure 1-25. Front & Rear View of DS-16400-RM Pro+ Series

- 1. LED indicators: LAN1, LAN2, eSATA, HDD1~16
- 2. Power button
- 3. USB BACKUP button - Auto video backup
- 4. USB 2.0 x 1 (Support auto video backup)
- 5. HDD1
- 6. HDD2
- 7. HDD3
- 8. HDD4
- 9. HDD5
- 10. HDD6
- 11. HDD7
- 12. HDD8
- 13. HDD9
- 14. HDD10
- 15. HDD11

16. HDD12
17. HDD13
18. HDD14
19. HDD15
20. HDD16
21. Gigabit LAN x 2
22. USB 2.0 x 4
23. eSATA x 2
24. VGA output
25. HDMI output
26. DI/DO (4 in 2 out)



Right to left: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO1, DO2

27. Reset button*
28. Power connector
29. Power switch

1.1.26 DS-16500-RM Pro+ Series

DS-16542-RM Pro+/ DS-16549-RM Pro+/ DS-16556-RM Pro+/ DS-16564-RM Pro+

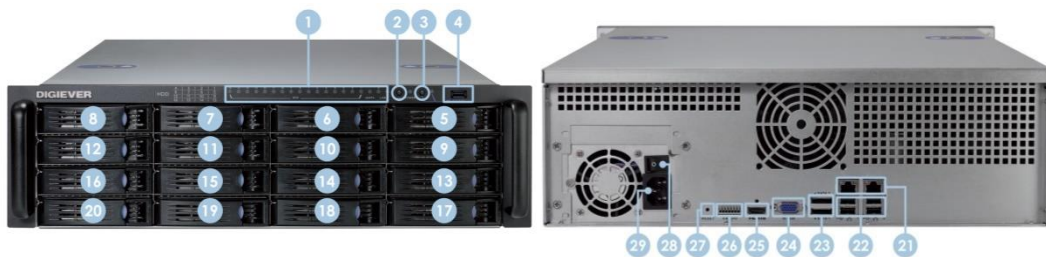


Figure 1-26. Front & Rear View of DS-16500-RM Pro+ Series

1. LED indicators: LAN1, LAN2, eSATA, HDD1~16
2. Power button
3. USB BACKUP button - Auto video backup
4. USB 2.0 x 1 (Support auto video backup)
5. HDD1
6. HDD2
7. HDD3
8. HDD4
9. HDD5
10. HDD6
11. HDD7

- 12. HDD8
- 13. HDD9
- 14. HDD10
- 15. HDD11
- 16. HDD12
- 17. HDD13
- 18. HDD14
- 19. HDD15
- 20. HDD16
- 21. Gigabit LAN x 2
- 22. USB 2.0 x 4
- 23. eSATA x 2
- 24. VGA output
- 25. HDMI output
- 26. DI/DO (4 in 2 out)



Right to left: Vcc5V, GND, DI-1, DI-2, DI-3, DI-4, DO1, DO2

- 27. Reset button*
- 28. Power connector
- 29. Power switch



1.1.27 MN-1100 Pro+ Series

MN-1105 Pro+ / MN-1109 Pro+ / MN-1112 Pro+ / MN-1116 Pro+ / MN-1120 Pro+ /
MN-1125 Pro+ / MN-1132 Pro+ / MN-1136 Pro+



Figure 1-27. Front & Rear View of MN-1100 Pro+ Series

1. LED indicators
2. Power SW (Bypass Ignition)
3. 2.5" Removable HDD tray x 1
4. Gigabit LAN x 4
5. USB 2.0 x 4
6. Antenna port x4
7. DI/DO port
8. HDMI x 1
9. DVI-D x 1(Reserved)
10. VGA x 1
11. 12V DC power output
12. 9~36 DC power input
13. COM x2

1.1.28 MN-2100 Pro+ Series

MN-2105 Pro+ / MN-2109 Pro+ / MN-2112 Pro+ / MN-2116 Pro+ / MN-2120 Pro+ /
MN-2125 Pro+ / MN-2132 Pro+ / MN-2136 Pro+



Figure 1-28. Front & Rear View of MN-2100 Pro+ Series

1. LED indicators
2. Power SW (Bypass Ignition)
3. 2.5" Removable HDD tray x 1
4. Gigabit LAN x 4
5. USB 2.0 x 4
6. Antenna port x4
7. DI/DO port
8. HDMI x 1
9. DVI-D x 1(Reserved)
10. VGA x 1
11. 12V DC power output
12. 9~36 DC power input
13. COM x2

1.2 LED Indicators Status

1.2.1 DS-2000 Series

DS-2005/ DS-2009/ DS-2012/ DS-2016/ DS-2020/ DS-2025/ DS-2032



Figure 2-1. DS-2000 Series Front Panel & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1 HDD2	Off	Hard disk drive device is not established
	Green	Hard disk drive is ready to be accessed
	Green blinking	Hard disk drive data is being accessed
	Red blinking	Hard disk drive error and need to be checked
Power	Red	Hard disk drive failure and need to be removed
	Off	Power Off
BACKUP	Green	Power On
	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs

LED on RJ-45 Port on Rear Panel


LED	LED Position	LED Status	Indicate
LAN	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow blinking	LAN Activity is occurring
LAN	Speed (Left LED)	Off	10M/100Mbps connection or no connection
		Orange	1000Mbps connection

 **Note:**

**USB BACKUP will beep and process after long pressing BACKUP button for 3 seconds.

**To turn off your NVR, long pressing power button at least 2 seconds.

**To turn on your NVR, long pressing power button at least 3 seconds.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

1.2.2 DS-4000 Series

DS-4005/ DS-4009/ DS-4012/ DS-4016/ DS-4020/ DS-4025/ DS-4032



Figure 2-2. DS-4000 Series Front Panel & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1 HDD2 HDD3 HDD4	Off	Hard disk drive device is not established
	Green	Hard disk drive is ready to be accessed
	Green blinking	Hard disk drive data is being accessed
	Red blinking	Hard disk drive error and need to be checked
	Red	Hard disk drive failure and need to be removed
Power	Off	Power Off
	Green	Power On
BACKUP	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Port on Rear Panel

LED	LED Position	LED Status	Indicate
LAN	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow blinking	LAN Activity is occurring
LAN	Speed (Left LED)	Off	10M/100Mbps connection or no connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, users need to press power button at least 2 seconds.

***To turn on NVR, users need to press power button at least 3 seconds.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

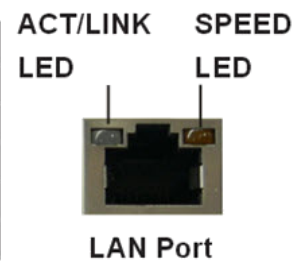
1.2.3 DS-1100 Pro Series

DS-1105 Pro/ DS-1109 Pro/ DS-1112 Pro/ DS-1116 Pro/ DS-1120 Pro/ DS-1125 Pro/
DS-1132 Pro/ DS-1136 Pro



Figure 2-3. DS-1100 Pro Series Front Panel

LAN Port LED Indications			
Activity/Link LED		SPEED LED	
Status	Description	Status	Description
Off	No Link	Off	10Mbps connection
Blinking	Data Activity	Off	100Mbps connection
On	100Mbps connection	Yellow	1Gbps connection



⚠️ Note:

**To turn off your NVR, long pressing power button at least 2 seconds.

**To turn on your NVR, long pressing power button at least 3 seconds.

⚠️ Note: To reset to default, please refer to “NVR Hardware reset to default method” in [Chapter5 - 5.6.3 Save/Load Configuration](#). Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations.

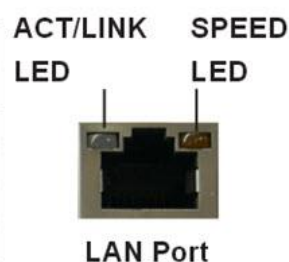
1.2.4 DS-2100 Pro Series

DS-2105 Pro/ DS-2109 Pro/ DS-2112 Pro/ DS-2116 Pro/ DS-2120 Pro/ DS-2125 Pro/
DS-2132 Pro/ DS-2136 Pro



Figure 2-4. DS-2100 Series Front Panel

LAN Port LED Indications			
Activity/Link LED		SPEED LED	
Status	Description	Status	Description
Off	No Link	Off	10Mbps connection
Blinking	Data Activity	Off	100Mbps connection
On	100Mbps connection	Yellow	1Gbps connection



⚠️ Note:

**To turn off your NVR, long pressing power button at least 2 seconds.

**To turn on your NVR, long pressing power button at least 3 seconds.

⚠️ Note: To reset to default, please refer to “NVR Hardware reset to default method” in [Chapter5 - 5.6.3 Save/Load Configuration](#). Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations.

1.2.5 DS-4200 Pro Series

DS-4205Pro/ DS-4209Pro/ DS-4212Pro/ DS-4216Pro/ DS-4220Pro/ DS-4225Pro/
DS-4232 Pro/ DS-4236 Pro



Figure 2-5. DS-4200 Pro Series Front Panel & RJ-45 Port

LED on Front Panel


LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1 HDD2 HDD3 HDD4	Off	Hard disk drive device is not established
	Green	Hard disk drive is ready to be accessed
	Green blinking	Hard disk drive data is being accessed
	Red blinking	Hard disk drive error and need to be checked
Power	Red	Hard disk drive failure and need to be removed
	Off	Power Off
BACKUP	Green	Power On
	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs

LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).



1.2.6 DS-4200-RM Pro Series

DS-4209-RM Pro/ DS-4212-RM Pro/ DS-4216-RM Pro/DS-4220-RM Pro/
DS-4225-RM Pro/ DS-4232-RM Pro/ DS-4236-RM Pro



Figure 2-6. Front View of DS-4200-RM Pro Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1 HDD2 HDD3 HDD4	Off	Hard disk drive device is not established
	Green	Hard disk drive is ready to be accessed
	Green blinking	Hard disk drive data is being accessed
	Red blinking	Hard disk drive error and need to be checked
Power	Red	Hard disk drive failure and need to be removed
	Off	Power Off
BACKUP	Green	Power On
	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

*** The LED in the HDD trays are reserved.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).



1.2.7 DS-4200-RMP Pro Series

DS-4209-RMP Pro/ DS-4212-RMP Pro/ DS-4216-RMP Pro/ DS-4220-RMP Pro/
DS-4225-RMP Pro/ DS-4232-RMP Pro/ DS-4236-RMP Pro



Figure 2-7. Front View of DS-4200-RMP Pro Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1 HDD2 HDD3 HDD4	Off	Hard disk drive device is not established
	Green	Hard disk drive is ready to be accessed
	Green blinking	Hard disk drive data is being accessed
	Red blinking	Hard disk drive error and need to be checked
Power	Red	Hard disk drive failure and need to be removed
	Off	Power Off
BACKUP	Green	Power On
	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

*** The LED in the HDD trays are reserved.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

1.2.8 DS-8200-RM Pro Series

DS-8209-RM Pro/ DS-8212-RM Pro/ DS-8216-RM Pro/DS-8220-RM Pro/
DS-8225-RM Pro/DS-8232-RM Pro/ DS-8236-RM Pro



Figure 2-8. Front View of DS-8200-RM Pro Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1	Off	Hard disk drive device is not established
HDD2	Green	Hard disk drive is ready to be accessed
HDD3		
HDD4	Green blinking	Hard disk drive data is being accessed
HDD5	Red blinking	Hard disk drive error and need to be checked
HDD6		
HDD7		
HDD8	Red	Hard disk drive failure and need to be removed
Power	Off	Power Off
	Green	Power On
BACKUP	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

*** The LED in the HDD trays are reserved.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

1.2.9 DS-8200-RMP Pro Series

DS-8209-RMP Pro/ DS-8212-RMP Pro/ DS-8216-RMP Pro/DS-8220-RMP Pro/
DS-8225-RMP Pro/DS-8232-RMP Pro/ DS-8236-RMP Pro



Figure 2-9. Front View of DS-8200-RMP Pro Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1	Off	Hard disk drive device is not established
HDD2	Green	Hard disk drive is ready to be accessed
HDD3	Green	Hard disk drive is ready to be accessed
HDD4	Green blinking	Hard disk drive data is being accessed
HDD5	Red blinking	Hard disk drive error and need to be checked
HDD6	Red	Hard disk drive failure and need to be removed
HDD7	Red	Hard disk drive failure and need to be removed
HDD8	Red	Hard disk drive failure and need to be removed
Power	Off	Power Off
	Green	Power On
BACKUP	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

*** The LED in the HDD trays are reserved.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

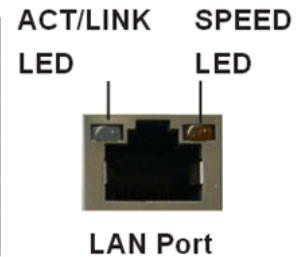
1.2.10 DS-1100 Pro+ Series

DS-1105 Pro+/ DS-1109 Pro+/ DS-1112 Pro+/ DS-1116 Pro+/ DS-1120 Pro+/
 DS-1125 Pro+/ DS-1132 Pro+/ DS-1136 Pro+/ DS-1142 Pro+/ DS-1149 Pro+/
 DS-1156 Pro+/ DS-1164 Pro+



Figure 2-10. DS-1100 Pro+ Series Front Panel

LAN Port LED Indications			
Activity/Link LED		SPEED LED	
Status	Description	Status	Description
Off	No Link	Off	10Mbps connection
Blinking	Data Activity	Off	100Mbps connection
On	100Mbps connection	Yellow	1Gbps connection



⚠️ Note:

**To turn off your NVR, long pressing power button at least 2 seconds.

**To turn on your NVR, long pressing power button at least 3 seconds.

⚠️ Note: To reset to default, please refer to “NVR Hardware reset to default method” in [Chapter5 - 5.6.3 Save/Load Configuration](#). Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations.

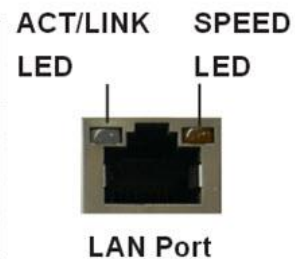
1.2.11 DS-2100 Pro+ Series

DS-2105 Pro+/ DS-2109 Pro+/ DS-2112 Pro+/ DS-2116 Pro+/ DS-2120 Pro+/
 DS-2125 Pro+/ DS-2132 Pro+/ DS-2136 Pro+/ DS-2142 Pro+/ DS-2149 Pro+/
 DS-2156 Pro+/ DS-2164 Pro+



Figure 2-11. DS-2100 Pro+ Series Front Panel

LAN Port LED Indications			
Activity/Link LED		SPEED LED	
Status	Description	Status	Description
Off	No Link	Off	10Mbps connection
Blinking	Data Activity	Off	100Mbps connection
On	100Mbps connection	Yellow	1Gbps connection



⚠️ Note:

**To turn off your NVR, long pressing power button at least 2 seconds.

**To turn on your NVR, long pressing power button at least 3 seconds.

⚠️ Note: To reset to default, please refer to “NVR Hardware reset to default method” in [Chapter5 - 5.6.3 Save/Load Configuration](#). Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations.

1.2.12 DS-4200 Pro+ Series

DS-4205 Pro+/ DS-4209 Pro+/ DS-4212 Pro+/ DS-4216 Pro+/ DS-4220 Pro+/
 DS-4225 Pro+/ DS-4232 Pro+/ DS-4236 Pro+/ DS-4242 Pro+/ DS-4249 Pro+/
 DS-4256 Pro+/ DS-4264 Pro+



Figure 2-12. DS-4200 Pro+ Series Front Panel & RJ-45 Port

LED on Front Panel


LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1 HDD2 HDD3 HDD4	Off	Hard disk drive device is not established
	Green	Hard disk drive is ready to be accessed
	Green blinking	Hard disk drive data is being accessed
	Red blinking	Hard disk drive error and need to be checked
Power	Red	Hard disk drive failure and need to be removed
	Off	Power Off
BACKUP	Green	Power On
	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs

LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

1.2.13 DS-4200-RM Pro+ Series

DS-4209-RM Pro+/ DS-4212-RM Pro+/ DS-4216-RM Pro+/ DS-4220-RM Pro+/
 DS-4225-RM Pro+/ DS-4232-RM Pro+/ DS-4236-RM Pro+/ DS-4242-RM Pro+/
 DS-4249-RM Pro+/ DS-4256-RM Pro+/ DS-4264-RM Pro+



Figure 2-13. Front View of DS-4200-RM Pro+ Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1 HDD2 HDD3 HDD4	Off	Hard disk drive device is not established
	Green	Hard disk drive is ready to be accessed
	Green blinking	Hard disk drive data is being accessed
	Red blinking	Hard disk drive error and need to be checked
	Red	Hard disk drive failure and need to be removed
Power	Off	Power Off
	Green	Power On
BACKUP	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

*** The LED in the HDD trays are reserved.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

1.2.14 DS-4200-RMP Pro+ Series

DS-4209-RMP Pro+/ DS-4212-RMP Pro+/ DS-4216-RMP Pro+/ DS-4220-RMP Pro+/ DS-4225-RMP Pro+/ DS-4232-RMP Pro+/ DS-4236-RMP Pro+/ DS-4242-RMP Pro+/ DS-4249-RMP Pro+/ DS-4256-RMP Pro+/ DS-4264-RMP Pro+



Figure 2-14. Front View of DS-4200-RMP Pro+ Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1 HDD2 HDD3 HDD4	Off	Hard disk drive device is not established
	Green	Hard disk drive is ready to be accessed
	Green blinking	Hard disk drive data is being accessed
	Red blinking	Hard disk drive error and need to be checked
	Red	Hard disk drive failure and need to be removed
Power	Off	Power Off
	Green	Power On
BACKUP	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

*** The LED in the HDD trays are reserved.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

1.2.15 DS-8200-RM Pro+ Series

DS-8209-RM Pro+/ DS-8212-RM Pro+/ DS-8216-RM Pro+/ DS-8220-RM Pro+/ DS-8225-RM Pro+/ DS-8232-RM Pro+/ DS-8236-RM Pro+/ DS-8242-RM Pro+/ DS-8249-RM Pro+/ DS-8256-RM Pro+/ DS-8264-RM Pro+



Figure 2-15. Front View of DS-8200-RM Pro+ Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1	Off	Hard disk drive device is not established
HDD2	Green	Hard disk drive is ready to be accessed
HDD3		
HDD4	Green blinking	Hard disk drive data is being accessed
HDD5	Red blinking	Hard disk drive error and need to be checked
HDD6		
HDD7		
HDD8	Red	Hard disk drive failure and need to be removed
Power	Off	Power Off
	Green	Power On
BACKUP	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

*** The LED in the HDD trays are reserved.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

1.2.16 DS-8200-RMP Pro+ Series

DS-8209-RMP Pro+/ DS-8212-RMP Pro+/ DS-8216-RMP Pro+/ DS-8220-RMP Pro+/
 DS-8225-RMP Pro+/ DS-8232-RMP Pro+/ DS-8236-RMP Pro+/ DS-8242-RMP Pro+/
 DS-8249-RMP Pro+/ DS-8256-RMP Pro+/ DS-8264-RMP Pro+



Figure 2-16. Front View of DS-8200-RMP Pro+ Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1	Off	Hard disk drive device is not established
HDD2		
HDD3	Green	Hard disk drive is ready to be accessed
HDD4	Green blinking	Hard disk drive data is being accessed
HDD5		
HDD6	Red blinking	Hard disk drive error and need to be checked
HDD7	Red	Hard disk drive failure and need to be removed
HDD8		
Power	Off	Power Off
	Green	Power On
BACKUP	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

*** The LED in the HDD trays are reserved.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

1.2.17 DS-4300 Pro+ Series

DS-4332 Pro+/ DS-4336 Pro+/ DS-4342 Pro+/ DS-4349 Pro+/ DS-4356 Pro+/ DS-4364 Pro+



Figure 2-17. DS-4300 Pro+ Series Front Panel & RJ-45 Port

LED on Front Panel


LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1 HDD2 HDD3 HDD4	Off	Hard disk drive device is not established
	Green	Hard disk drive is ready to be accessed
	Green blinking	Hard disk drive data is being accessed
	Red blinking	Hard disk drive error and need to be checked
Power	Red	Hard disk drive failure and need to be removed
	Off	Power Off
BACKUP	Green	Power On
	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs

LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).



1.2.18 DS-4300-RM Pro+ Series

DS-4332-RM Pro+/ DS-4336-RM Pro+/ DS-4342-RM Pro+/ DS-4349-RM Pro+/
DS-4356-RM Pro+/ DS-4364-RM Pro+



Figure 2-18. Front View of DS-4300-RM Pro+ Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1 HDD2 HDD3 HDD4	Off	Hard disk drive device is not established
	Green	Hard disk drive is ready to be accessed
	Green blinking	Hard disk drive data is being accessed
	Red blinking	Hard disk drive error and need to be checked
	Red	Hard disk drive failure and need to be removed
Power	Off	Power Off
	Green	Power On
BACKUP	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

*** The LED in the HDD trays are reserved.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

1.2.19 DS-4300-RMP Pro+ Series

DS-4332-RMP Pro+/ DS-4336-RMP Pro+/ DS-4342-RMP Pro+/ DS-4349-RMP Pro+/
DS-4356-RMP Pro+/ DS-4364-RMP Pro+



Figure 2-19. Front View of DS-4300-RMP Pro+ Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1 HDD2 HDD3 HDD4	Off	Hard disk drive device is not established
	Green	Hard disk drive is ready to be accessed
	Green blinking	Hard disk drive data is being accessed
	Red blinking	Hard disk drive error and need to be checked
	Red	Hard disk drive failure and need to be removed
Power	Off	Power Off
	Green	Power On
BACKUP	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

*** The LED in the HDD trays are reserved.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

1.2.20 DS-8300-RM Pro+ Series

DS-8342-RM Pro+/ DS-8349-RM Pro+/ DS-8356-RM Pro+/ DS-8364-RM Pro+



Figure 2-20. Front View of DS-8300-RM Pro+ Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1	Off	Hard disk drive device is not established
HDD2	Green	Hard disk drive is ready to be accessed
HDD3	Green	Hard disk drive is ready to be accessed
HDD4	Green blinking	Hard disk drive data is being accessed
HDD5	Red blinking	Hard disk drive error and need to be checked
HDD6	Red	Hard disk drive failure and need to be removed
HDD7	Red	Hard disk drive failure and need to be removed
HDD8	Red	Hard disk drive failure and need to be removed
Power	Off	Power Off
	Green	Power On
BACKUP	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

*** The LED in the HDD trays are reserved.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

1.2.21 DS-8300-RMP Pro+ Series

DS-8342-RMP Pro+/ DS-8349-RMP Pro+/ DS-8356-RMP Pro+/ DS-8364-RMP Pro+



Figure 2-21. Front View of DS-8300-RMP Pro+ Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1	Off	Hard disk drive device is not established
HDD2	Green	Hard disk drive is ready to be accessed
HDD3	Green	Hard disk drive is ready to be accessed
HDD4	Green blinking	Hard disk drive data is being accessed
HDD5	Green	Hard disk drive is ready to be accessed
HDD6	Red blinking	Hard disk drive error and need to be checked
HDD7	Red	Hard disk drive failure and need to be removed
HDD8	Red	Hard disk drive failure and need to be removed
Power	Off	Power Off
	Green	Power On
BACKUP	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

*** The LED in the HDD trays are reserved.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

1.2.22 DS-8400-RM Pro+ Series

DS-8442-RM Pro+/ DS-8449-RM Pro+/ DS-8456-RM Pro+/ DS-8464-RM Pro+



Figure 2-22. Front View of DS-8400-RM Pro+ Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1	Off	Hard disk drive device is not established
HDD2	Green	Hard disk drive is ready to be accessed
HDD3		
HDD4	Green blinking	Hard disk drive data is being accessed
HDD5	Red blinking	Hard disk drive error and need to be checked
HDD6		
HDD7		
HDD8	Red	Hard disk drive failure and need to be removed
Power	Off	Power Off
	Green	Power On
BACKUP	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

*** The LED in the HDD trays are reserved.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

1.2.23 DS-16200-RM Pro+ Series

DS-16216-RM Pro+/ DS-16220-RM Pro+/ DS-16225-RM Pro+/ DS-16232-RM Pro+/ DS-16236-RM Pro+



Figure 2-23. Front View of DS-16200-RM Pro+ Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN1 LAN2	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1 to HDD16	Off	Hard disk drive device is not established
	Green	Hard disk drive is ready to be accessed
	Green blinking	Hard disk drive data is being accessed
	Red blinking	Hard disk drive error and need to be checked
Power	Red	Hard disk drive failure and need to be removed
	Off	Power Off
BACKUP	Green	Power On
	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

*** The LED in the HDD trays are reserved.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

1.2.24 DS-16300-RM Pro+ Series

DS-16316-RM Pro+/ DS-16320-RM Pro+/ DS-16325-RM Pro+/ DS-16332-RM Pro+/ DS-16336-RM Pro+/ DS-16342-RM Pro+/ DS-16349-RM Pro+/ DS-16356-RM Pro+/ DS-16364-RM Pro+



Figure 2-24. Front View of DS-16300-RM Pro+ Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1 to HDD16	Off	Hard disk drive device is not established
	Green	Hard disk drive is ready to be accessed
	Green blinking	Hard disk drive data is being accessed
	Red blinking	Hard disk drive error and need to be checked
	Red	Hard disk drive failure and need to be removed
Power	Off	Power Off
	Green	Power On
BACKUP	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

*** The LED in the HDD trays are reserved.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

1.2.25 DS-16400-RM Pro+ Series

DS-16442-RM Pro+/ DS-16449-RM Pro+/ DS-16456-RM Pro+/ DS-16464-RM Pro+



Figure 2-25. Front View of DS-16400-RM Pro+ Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1 to HDD16	Off	Hard disk drive device is not established
	Green	Hard disk drive is ready to be accessed
	Green blinking	Hard disk drive data is being accessed
	Red blinking	Hard disk drive error and need to be checked
	Red	Hard disk drive failure and need to be removed
Power	Off	Power Off
	Green	Power On
BACKUP	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

*** The LED in the HDD trays are reserved.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

1.2.26 DS-16500-RM Pro+ Series

DS-16542-RM Pro+/ DS-16549-RM Pro+/ DS-16556-RM Pro+/ DS-16564-RM Pro+



Figure 2-25. Front View of DS-16500-RM Pro+ Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
eSATA	Off	No data transmission
	Orange blinking	The eSATA device is being accessed
HDD1 to HDD16	Off	Hard disk drive device is not established
	Green	Hard disk drive is ready to be accessed
	Green blinking	Hard disk drive data is being accessed
	Red blinking	Hard disk drive error and need to be checked
Power	Red	Hard disk drive failure and need to be removed
	Off	Power Off
BACKUP	Green	Power On
	Off	USB device is not detected
	Blue	USB device is ready
	Blue blinking	NVR data is being copied to the USB device (Blinking with 1Hz)
	Red	Backup error occurs


LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1 LAN2	Link/Activity (Right LED)	Off	LAN Link is not established
		Yellow	LAN Link is established
		Yellow Blinking	LAN activity is occurring
LAN1 LAN2	Speed (Left LED)	Off	10Mbps connection or no connection
		Green	100Mbps connection
		Orange	1000Mbps connection

*USB BACKUP will start and beep after 3 seconds user presses BACKUP button.

**To turn off NVR, user needs to press power button at least 2 seconds.

*** The LED in the HDD trays are reserved.

 **Note:** Once users press reset button, configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail Settings, and Server Settings** will reset to default. It is advised to backup system configurations. For more information, refer to detail information in user manual [5.6.3 Save/Load Configuration](#).

1.2.27 MN-1100 Pro+ Series

MN-1105 Pro+/ MN-1109 Pro+/ MN-1112 Pro+/MN-1116 Pro+ /MN-1120 Pro+/
MN-1125 Pro+/ MN-1132 Pro+/ MN-1136 Pro+



Figure 2-27. Front View of MN-1100 Pro+ Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
HDD	Off	Hard disk drive device is not established
	Green	Hard disk drive is ready to be accessed
	Green blinking	Hard disk drive data is being accessed
	Red blinking	Hard disk drive error and need to be checked
	Red	Hard disk drive failure and need to be removed
Power	Off	Power Off
	Green	Power On
3G	Off	3G module is not ready to be accessed
	Green	3G module is ready to be accessed
Wi-Fi	Off	Wi-Fi module is not ready to be accessed
	Green	Wi-Fi module is ready to be accessed
POE	Off	POE module is not ready to be accessed
	Green	POE module is ready to be accessed
GPS	Off	GPS module is not ready to be accessed
	Green	GPS module is ready to be accessed

LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1	Link/Activity (Right LED)	Off	LAN Link is not established
LAN2		Yellow	LAN Link is established
LAN3		Yellow Blinking	LAN activity is occurring
LAN4			

LAN1	Speed (Left LED)	Off	10Mbps connection or no connection
LAN2		Green	100Mbps connection
LAN3		Orange	1000Mbps connection
LAN4			

1.2.28 MN-2100 Pro+ Series

MN-2105 Pro+/ MN-2109 Pro+/ MN-2112 Pro+/MN-2116 Pro+ /MN-2120 Pro+/
MN-2125 Pro+/ MN-2132 Pro+/ MN-2136 Pro+



Figure 2-28. Front View of MN-2100 Pro+ Series & RJ-45 Port

LED on Front Panel

LED	LED Color & Status	Indicate
LAN	Off	LAN Link is not established
	Orange	LAN Link is established
	Orange blinking	LAN is being accessed
HDD	Off	Hard disk drive device is not established
	Green	Hard disk drive is ready to be accessed
	Green blinking	Hard disk drive data is being accessed
	Red blinking	Hard disk drive error and need to be checked
	Red	Hard disk drive failure and need to be removed
Power	Off	Power Off
	Green	Power On
3G	Off	3G module is not ready to be accessed
	Green	3G module is ready to be accessed
Wi-Fi	Off	Wi-Fi module is not ready to be accessed
	Green	Wi-Fi module is ready to be accessed
POE	Off	POE module is not ready to be accessed
	Green	POE module is ready to be accessed
GPS	Off	GPS module is not ready to be accessed
	Green	GPS module is ready to be accessed

LED on RJ-45 Connection at Rear Panel

LED	LED Position	LED/State	Indicate
LAN1	Link/Activity (Right LED)	Off	LAN Link is not established
LAN2		Yellow	LAN Link is established
LAN3		Yellow Blinking	LAN activity is occurring
LAN4			
LAN1	Speed (Left LED)	Off	10Mbps connection or no connection
LAN2		Green	100Mbps connection
LAN3		Orange	1000Mbps connection
LAN4			

1.3 Dual/Mirror Display Solution: HDMI/VGA/DVI-I Connection

DS-4200 Pro, DS-4200-RM Pro, DS-4200-RMP Pro, DS-8200-RM Pro, DS-8200-RMP Pro, DS-4200 Pro+, DS-4200-RM Pro+, DS-4200-RMP Pro+, DS-8200-RM Pro+, DS-8200-RMP Pro+, DS-4300 Pro+, DS-4300-RM Pro+, DS-4300-RMP Pro+, DS-8300-RM Pro+, DS-8300-RMP Pro+, DS-8400-RM Pro+, DS-16200-RM Pro+ and DS-16300-RM Pro+, MN-1100 Pro+, MN-2100 Pro+ series provide HDMI and VGA port for local display. Users can connect both of HDMI and VGA at the same time for video output.

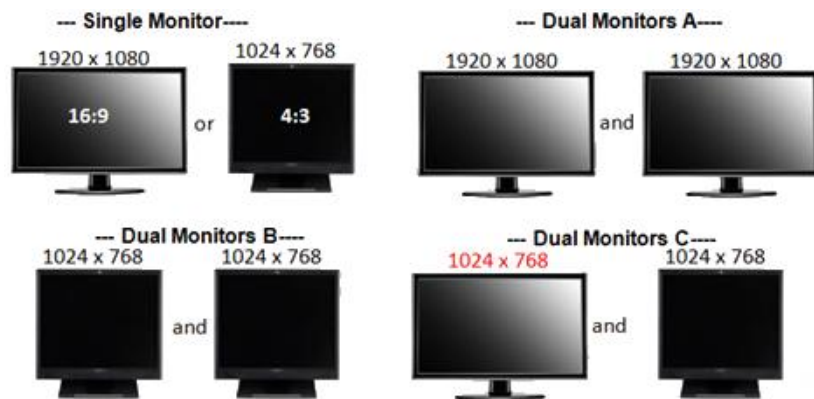
DS-1100 Pro Series, DS-2100 Pro Series, DS-1100 Pro+ and DS-2100 Pro+ Series provide HDMI and DVI-I port for local display. Users can connect both of HDMI and DVI-I at the same time for video output.

Mirror display scenario

Scenario A: If both monitors are Full HD (1920x1080), those will be shown as Full HD.

Scenario B: If both monitors are VGA (1024x768), those will be shown all as VGA.

Scenario C: If one of monitors is 1920x1080 and another is 1024x768, both monitors are set as 1024x768



Dual display scenario

Scenario: If both monitors are Full HD (1920x1080), those will be shown as Full HD.






- ⚠ 1024 X 768 resolutions is not supported in dual display.
- ⚠ Dual display is ONLY supported in NVR Plus series.

Chapter 2. NVR Installation

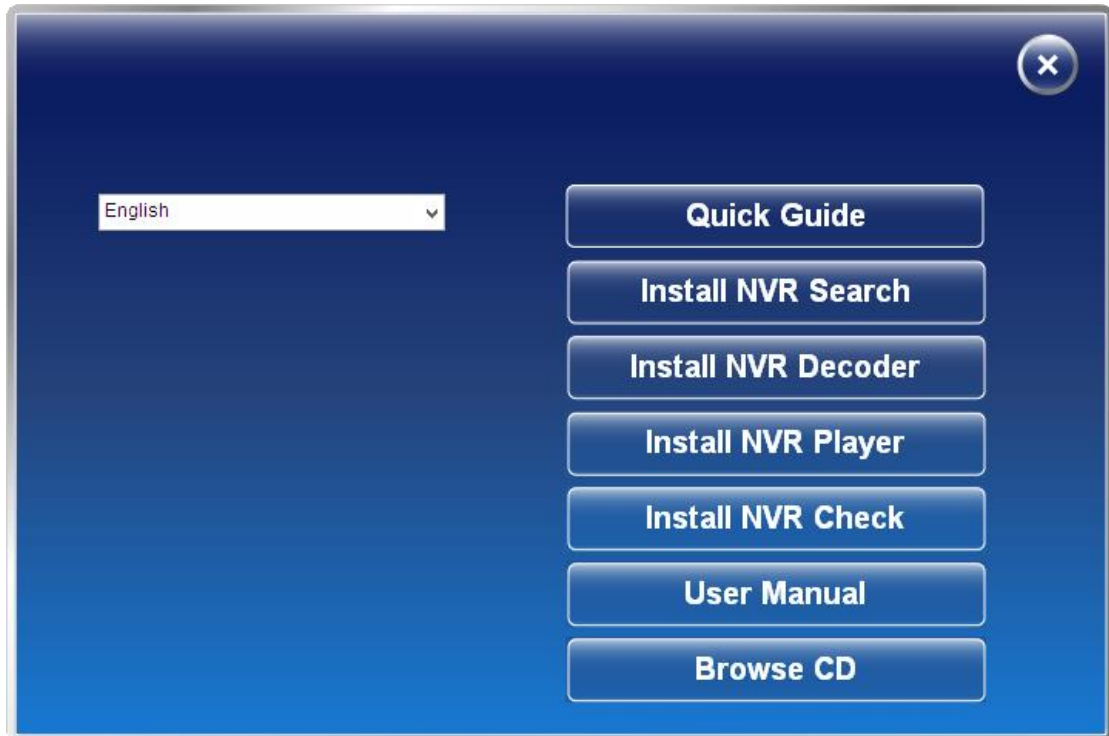
2.1 Remote Web Browser PC System Requirements

The following information is the minimum required specification for remote Windows PC, which users can open a remote browser from the PC to access the Linux NVR server on the network.


- **Operating System**
Microsoft® Windows® Vista /7 / 8 (32-bit and 64-bit)
- **Browsers in Windows OS (32-bit)**
Microsoft® Internet Explorer 8.0 or above, Firefox 25 or above, Opera 17.0 or above, Safari 5.1.7 or above
- **CPU**
For channels under 16 : Intel® Dual core CPU 3.0 GHz or above.
For channels over 16 : Intel® i5/i7 CPU 3.3 GHz or above.
- **Network**
Minimum 10/100 Ethernet (Gigabit Ethernet is recommended)
 **Note:** * User is suggested to connect cameras and NVR with Gigabit switch.
- **Memory**
For channels under 16: DDR3 4G or above.
For channels over 16: DDR3 8G or above
- **Graphics Adapter**
AGP or PCI-Express, minimum 1024×768, 16 bit colors, 1G memory or above
 **Note:** It is highly recommended to use a graphics adaptor which provides higher than resolutions 1024 x 768 in order to experience the full benefits of the software.
 - Make sure the display DPI setting is set to default at 96DPI
 - To set DPI value, right-click on desktop, choose “**Settings**” tab >> “**Advanced**” >> “**General.**”
- **CD-ROM Drive**
It is necessary to read the operating instructions in the provided CD-ROM.
- **Adobe Reader**
It is necessary to read the operating instructions in the provided CD-ROM. The audio function will not work if a sound card is not installed in the PC.
 **Note:** Audio may be interrupted depending on network traffic.

2.2 Connect to NVR


To begin, please insert the product CD-ROM in a PC to access the Quick Guide, User Manual and install the utilities. As user runs the product CD, the following menu is displayed.

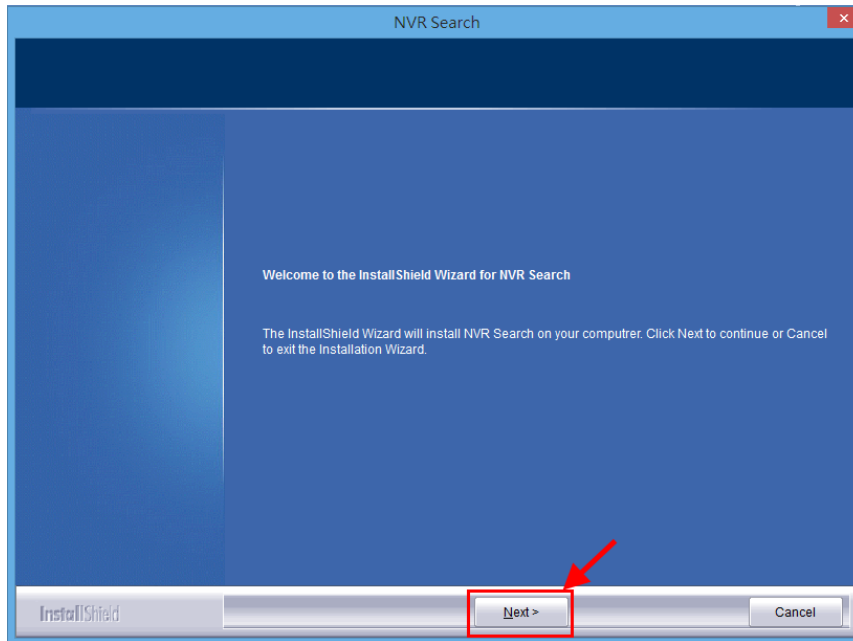


2.2.1 Quick Guide

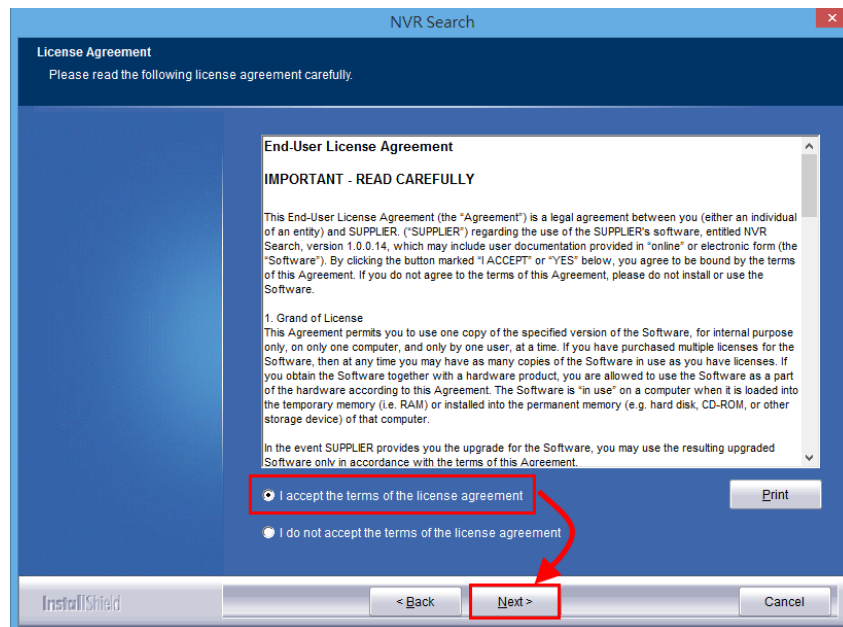
Click **“Quick Guide”**  to enter the folder and double click the file to open. Please read Quick Guide to quickly understand the process of NVR installation.

2.2.2 Install NVR Search

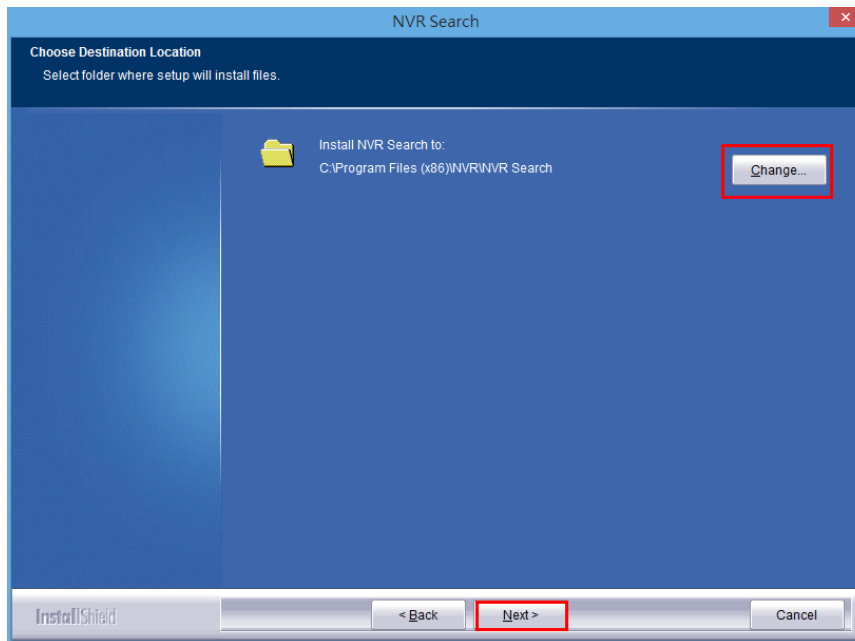
Click **“Install EZ Search”**  to find NVR in the network. Please follow the instructions to install and EZ Search will run automatically.



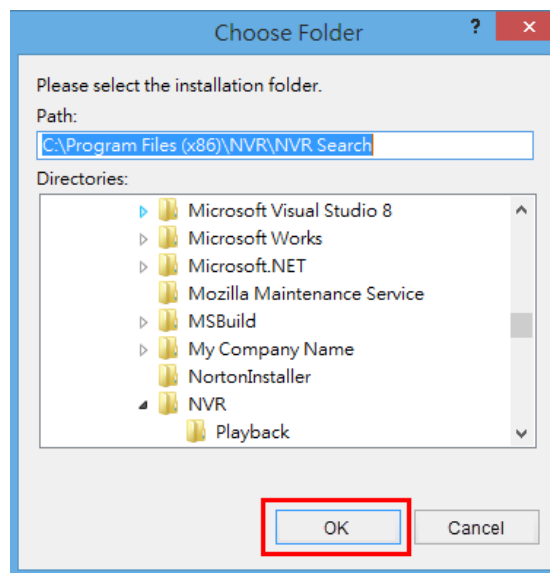
When installing NVR Search, **Shield Wizard window for NVR Search** will pop up. Click **“Next”** to continue installation.



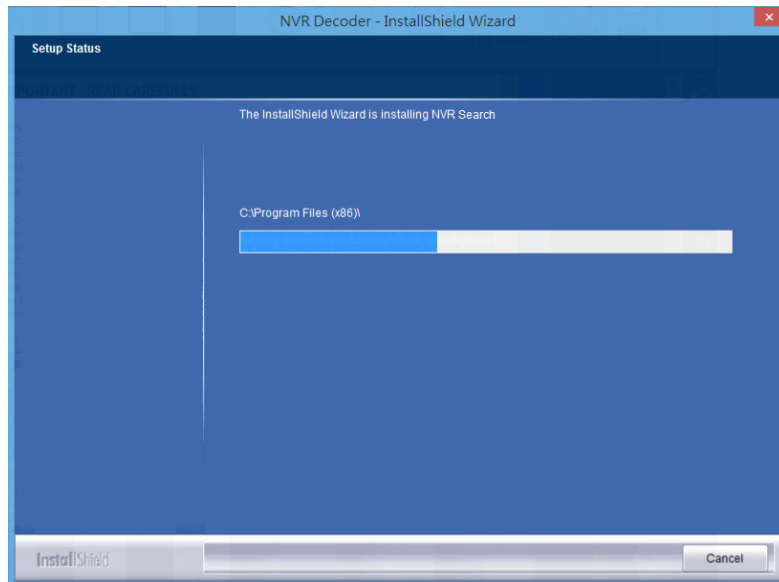
Read the license agreement and click **“I accept the terms of the license agreement”**. Click **“Next”** to continue installation.



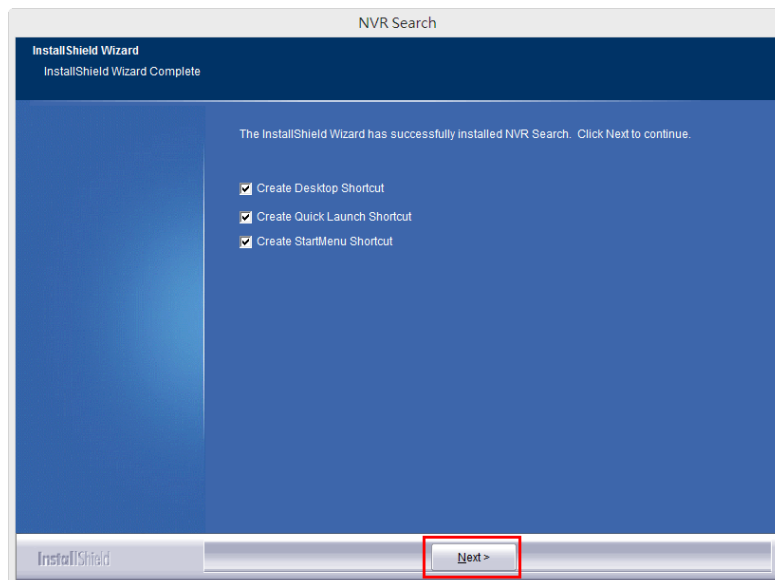
Select a location of destination and select a folder where the setup can install files. The default location is: **C:\Program Files (x86)\NVR\NVR Search**. Users can also install NVR Search in other folder by clicking “**Change**” and select a location as below. Click “**OK**” to save the setting.



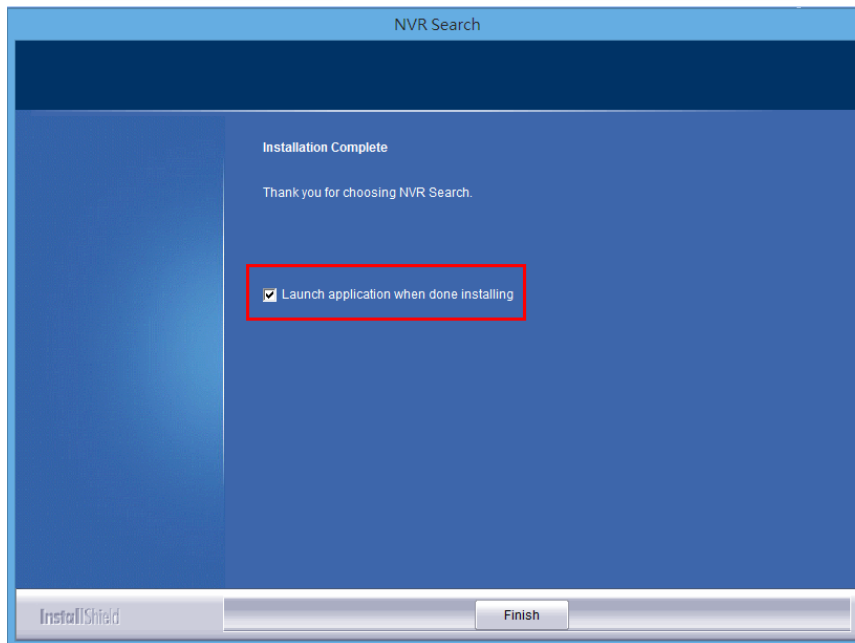
Once a folder is selected, please click “**OK**” to continue installation.



The window shows that the InstallShield Wizard is installing NVR Search. Please wait until the Wizard completes the installation.

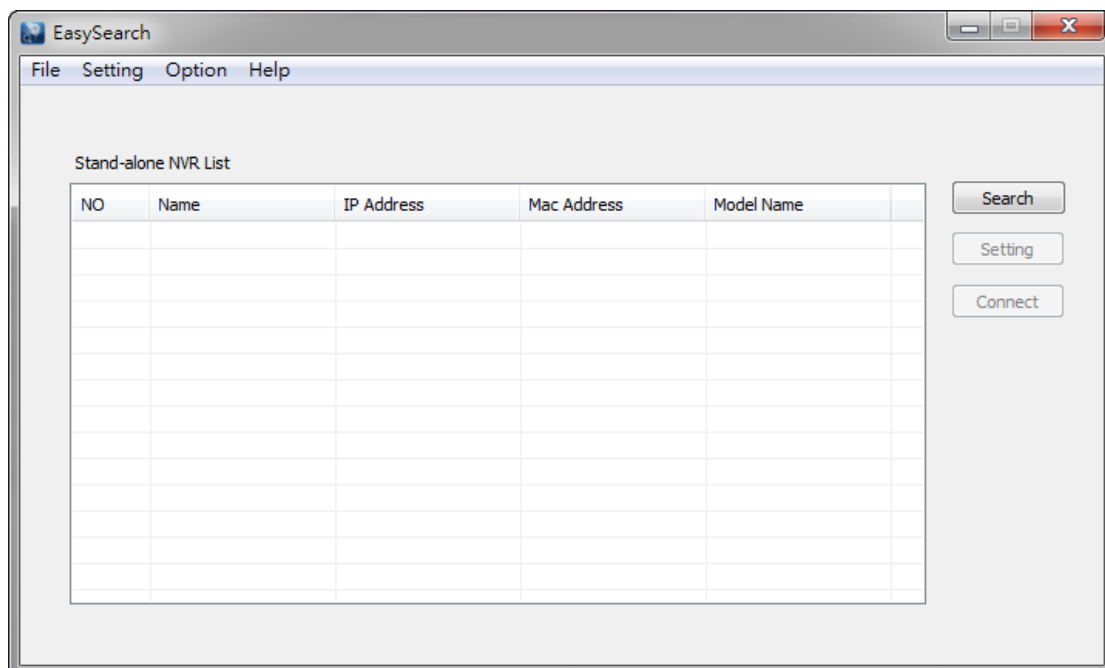


The InstallShield has successfully installed NVR Search. Select **“Create Desktop Shortcut”**/ **“Create Quick Launch Shortcut”**/ **“Create Start Menu Shortcut”** and please click **“Next”** to continue.



The installation is complete. Please click **“Launch application when done installing”** to execute NVR Search.

After finishing the setup, the window of NVR Search will pop up. NVR Search will execute automatically and show **NO., Name, IP Address, Mac Address and Model name** of connected NVR.



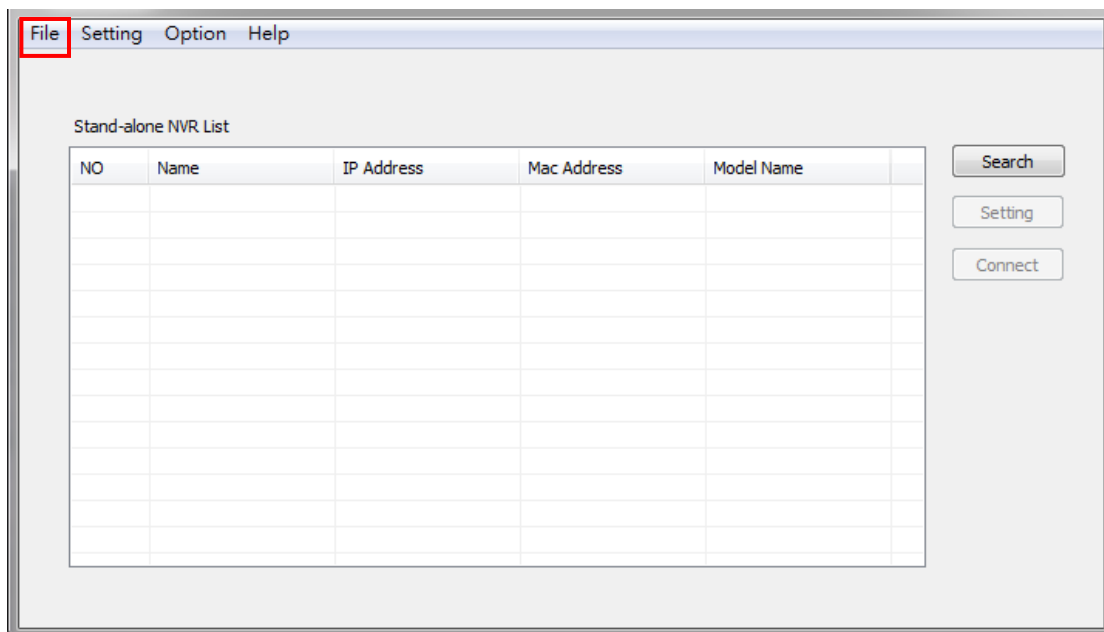
Users can click **“Search”** to search NVR.

You can click **“Connect”** or **double click** on one NVR; IE browser will pop up automatically

Introduction of NVR Search

NVR Search provides three kinds of toolbars for users:

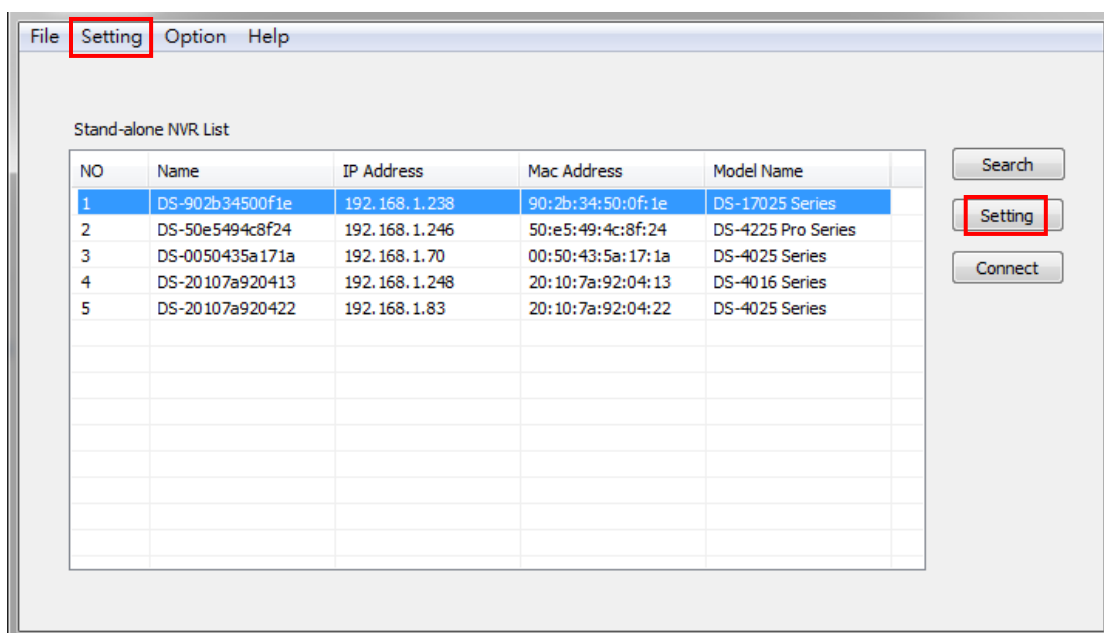
1. File



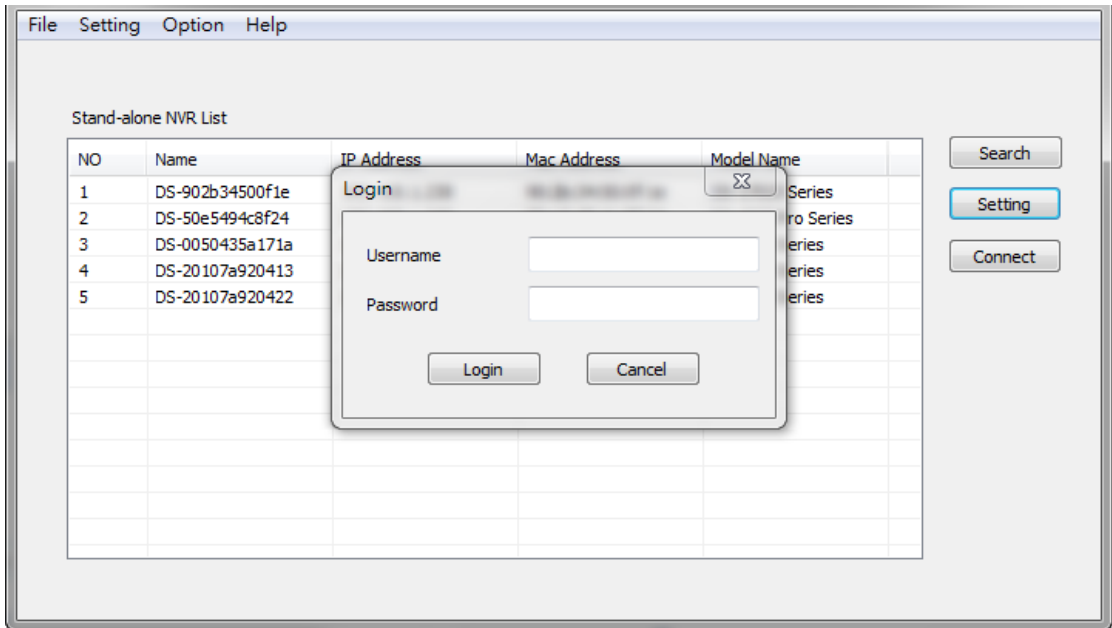
You can click "**Exit**" to leave NVR Search and close the window.

2. Setting

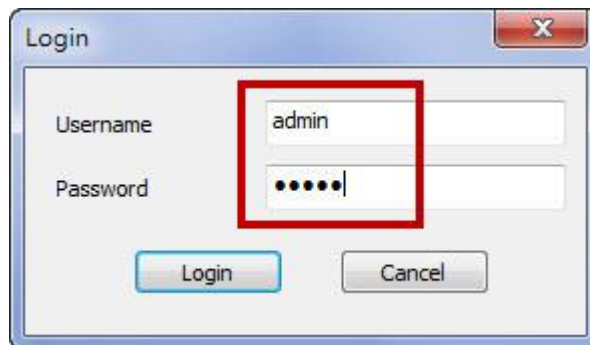
Configure UPnP and Network by clicking "**Setting**" in the top left or in the middle right.



Note: Users will be prompted to enter the login information of NVR before being allowed to change the setting.

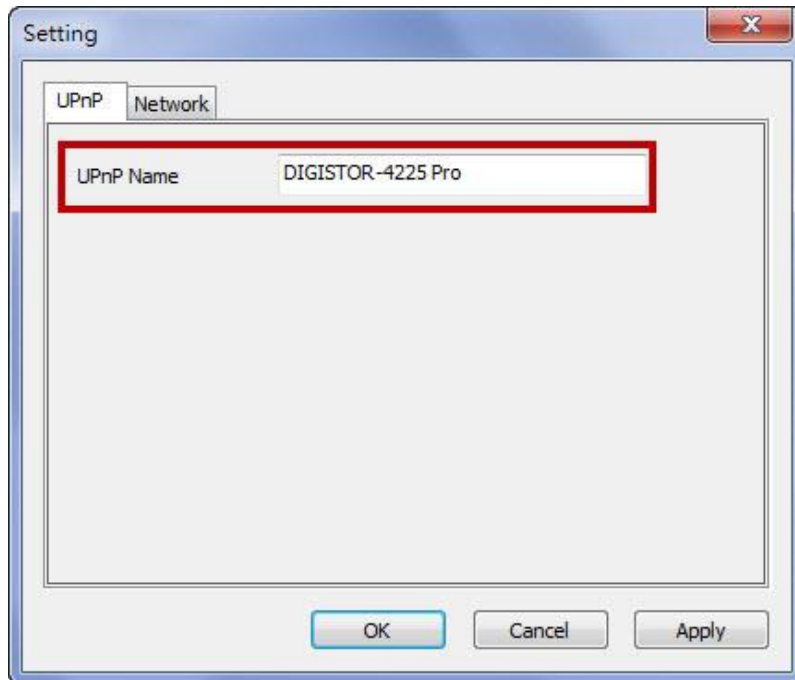


When accessing the NVR setting, users will be prompted to enter username and password. For the first-time use, the default username and password are **admin/admin**. When the correct username and password have been entered, click “**Login**” to continue.



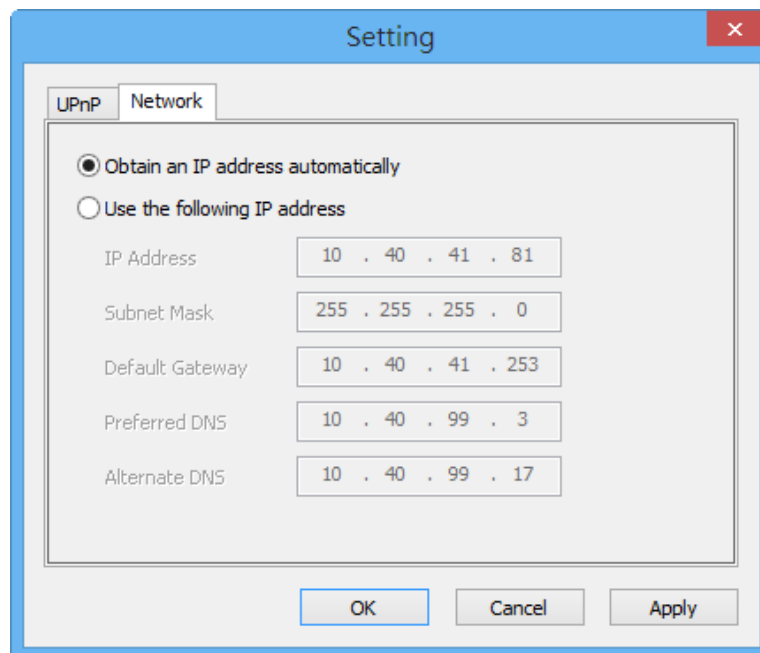
1) UPnP

Universal Plug and Play (UPnP) simplifies the process of adding a NVR to a local area network. Once connected to a LAN, NVR will automatically appear on the internet. You can rename UPnP Name on the NVR. Click “**OK**” to finish the setting.



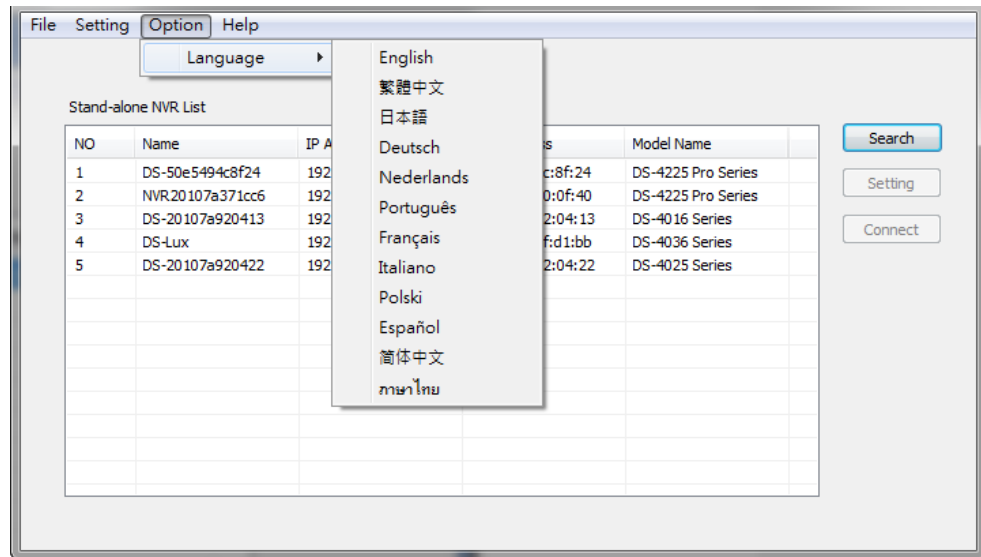
2) Network

NVR provides two network settings: **DHCP** and **Static IP**.




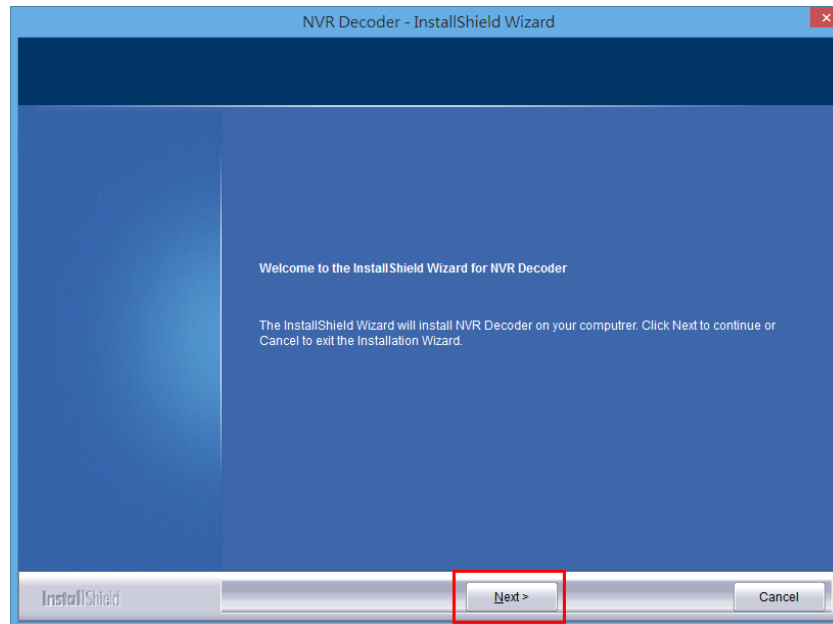
3. Option

Option provides users to change language.

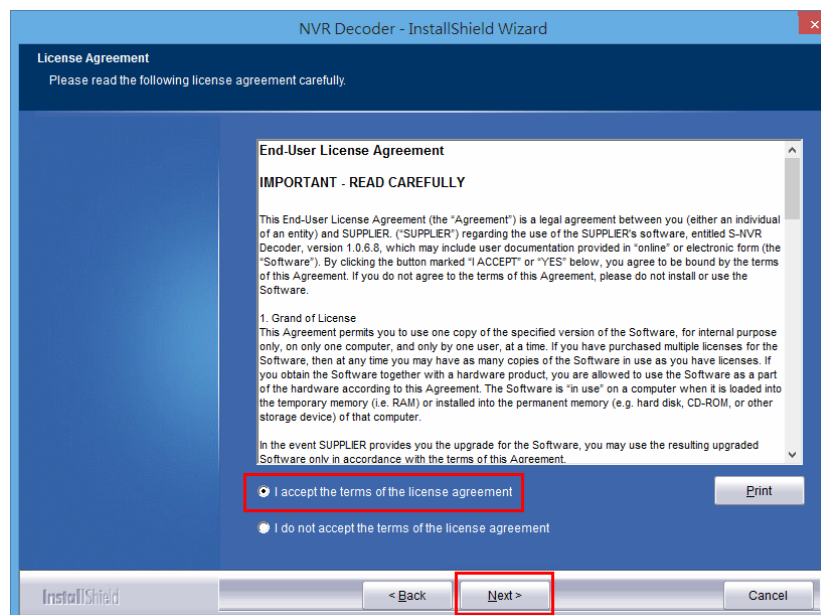


2.2.3 Install NVR Decoder

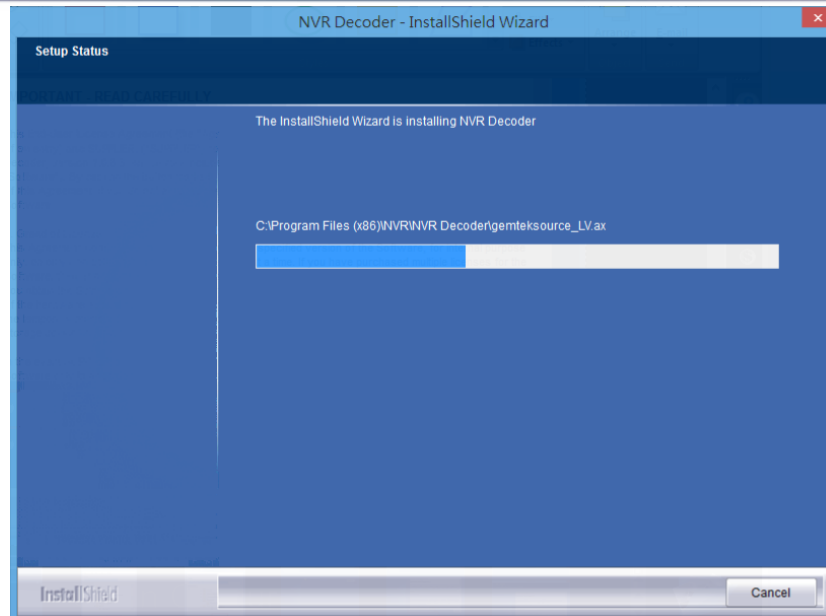
Click “Install S-NVR Decoder”  to install decoder and follow the instructions to setup.



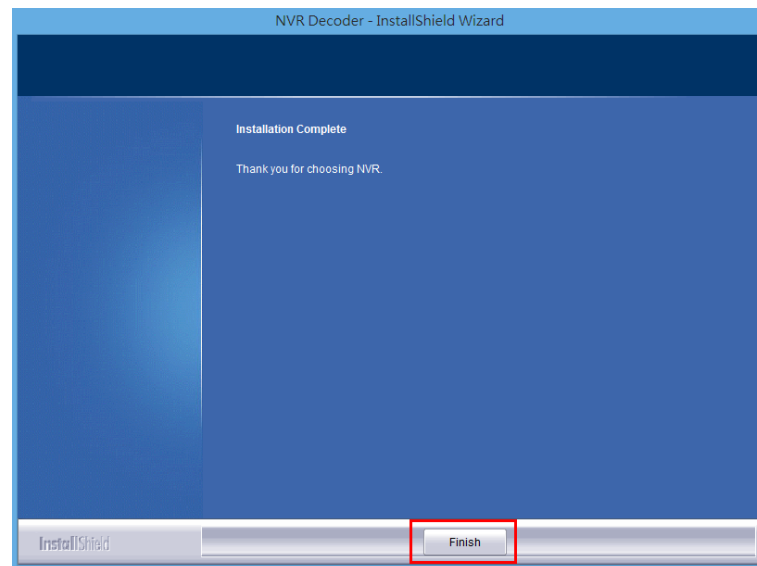
Install Shield Wizard window will pop up and please click “**Next**” to continue installation.



Read license agreement and click “**I accept the terms of the license agreement.**” Click “**Next**” to continue installation.



The installation Wizard is installing NVR Decoder.



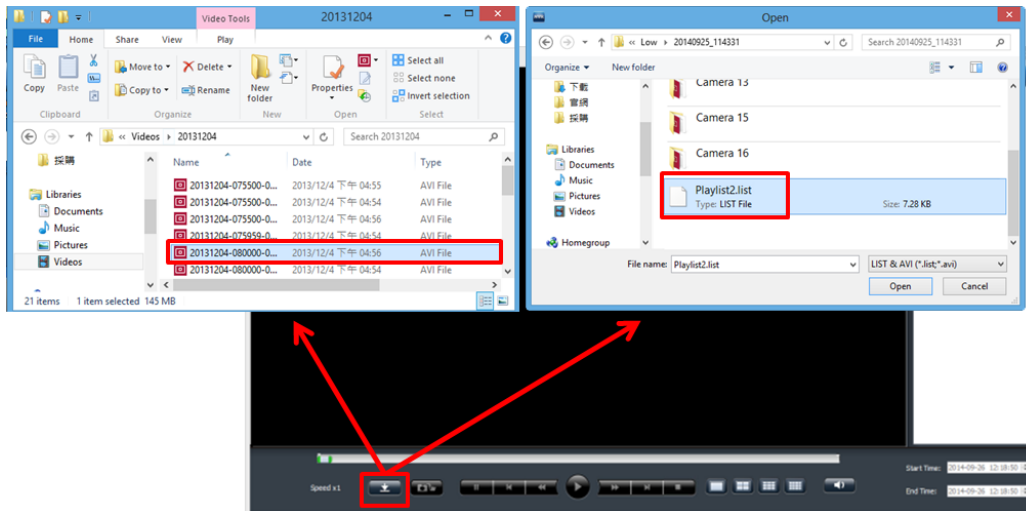
The installation is complete. Please click **“Finish”** to close the window.

2.2.4 NVRPlayer

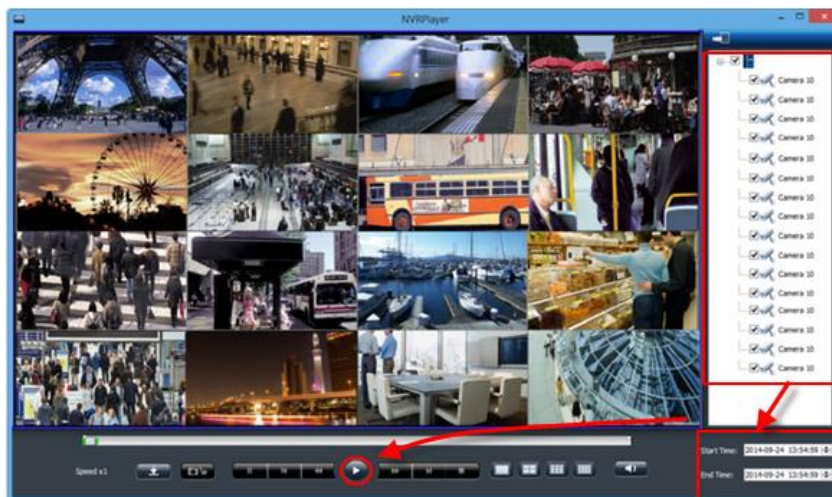
NVRPlayer allows users to view the recorded videos exported from NVR. It is a portable tool with no need to install on PC. NVRPlayer can play multi-channel videos via playlist which is exported from instant export.

Click **“Open File”** button to select a video or a playlist to play videos.

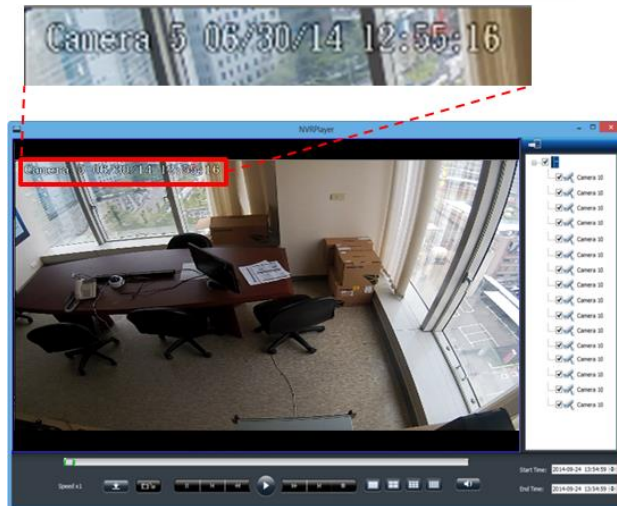
For more information about export videos to PC, please refer to **4.3.7 Export**.



If users select a playlist to play multi-channel videos, please select cameras, start/end time. Then, click **“Play”** button to play videos.



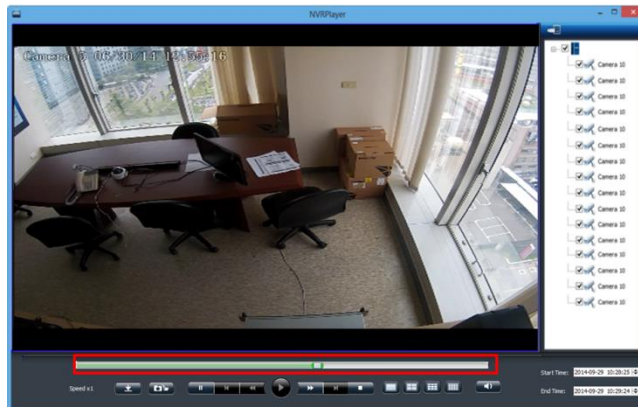
NVRPlayer will display playback video time on the top-left corner for time reference.



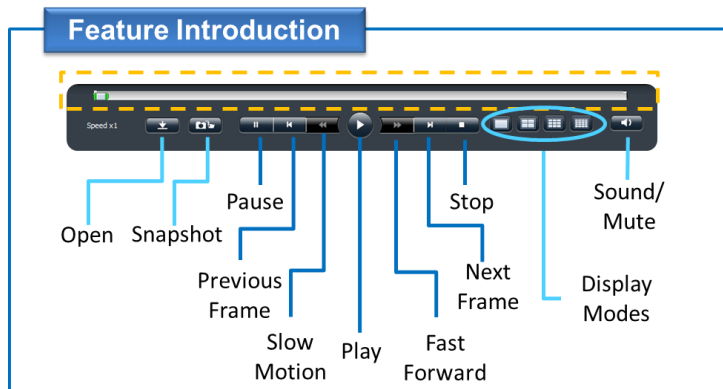
Right-click on the video to execute 360-degree ImmerVision dewarp.



Users can move "Time Bar" to desired time when playing recorded video.



Feature introduction




(1) Frame by Frame Playback

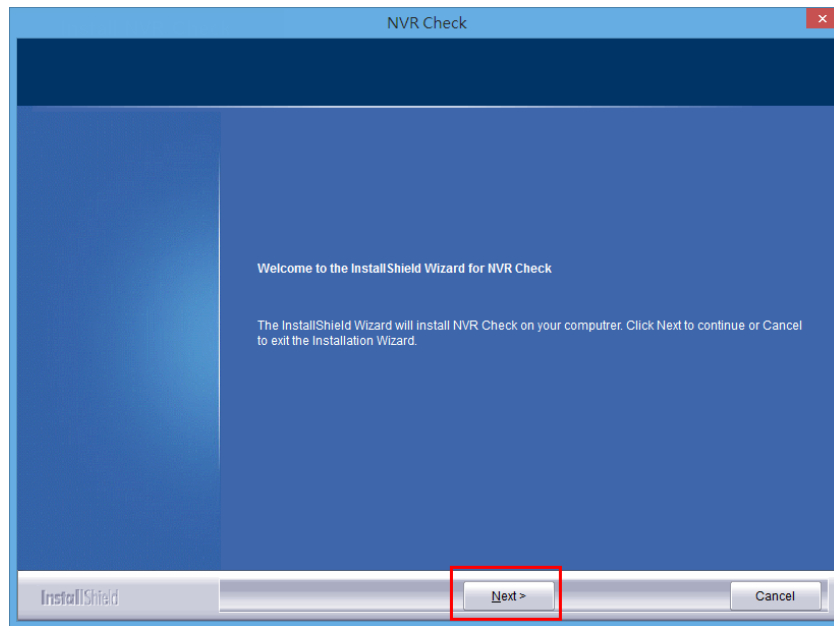
Please click **"Pause"** button and click **"Next Frame"** or **"Previous Frame"** to find the desired video precisely.

(2) Snapshot

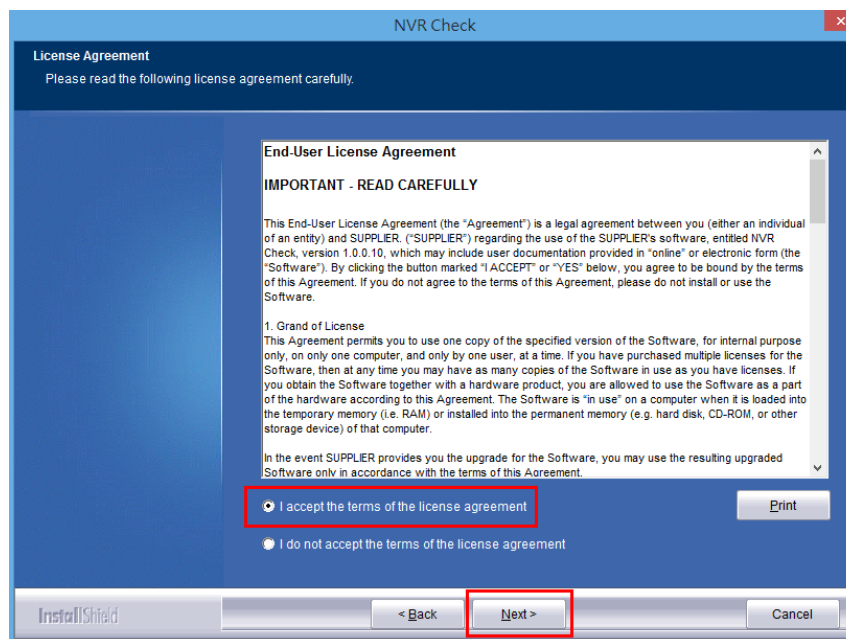
Please click **"Snapshot"** button to take a photo to your PC.

2.2.5 Install NVR Check

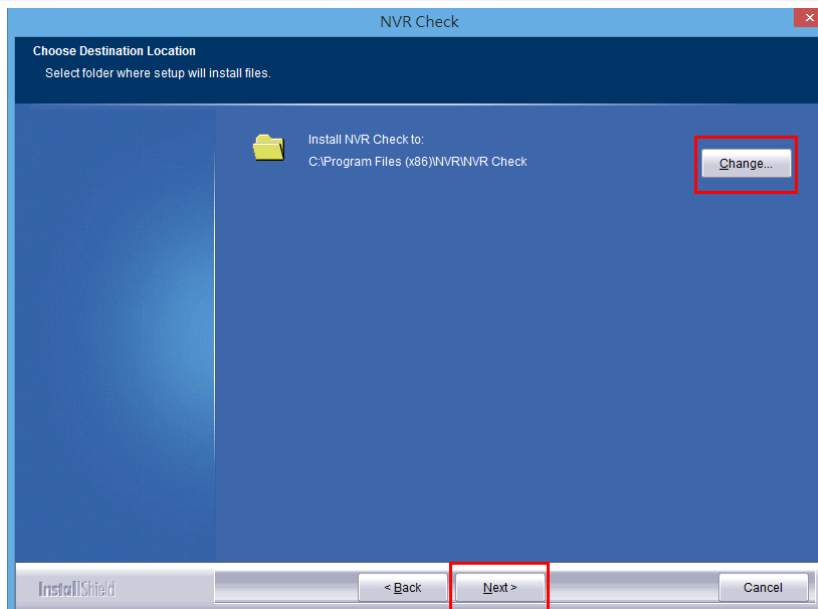
Click “Install NVR Check”  to open the folder and double-click on user manual file to read.



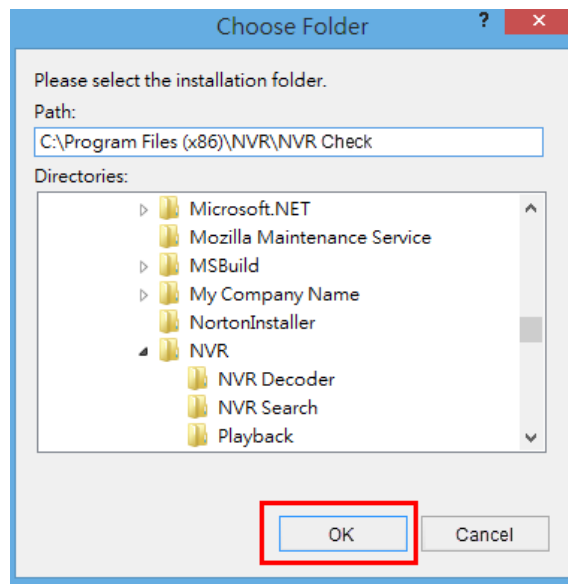
Install Shield Wizard window will pop up and please click “Next” to continue installation.



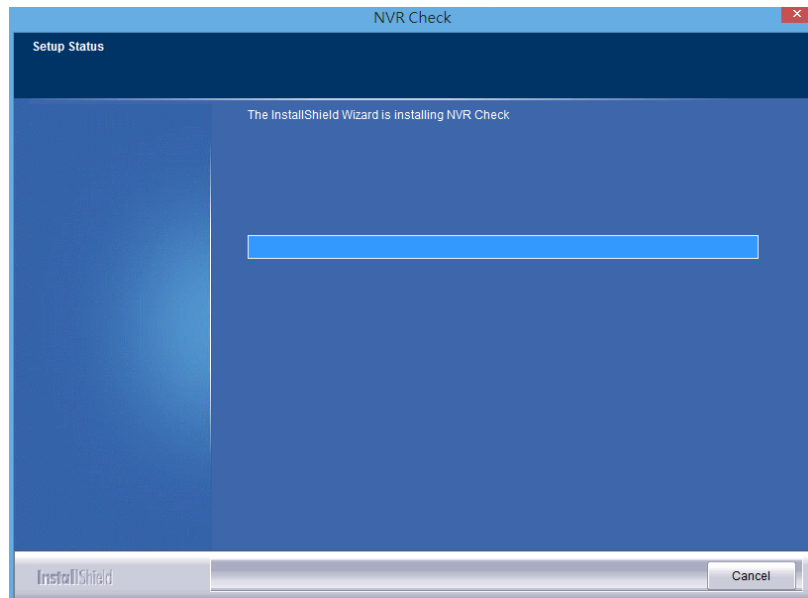
Read license agreement and click “I accept the terms of the license agreement.” Click “Next” to continue installation.



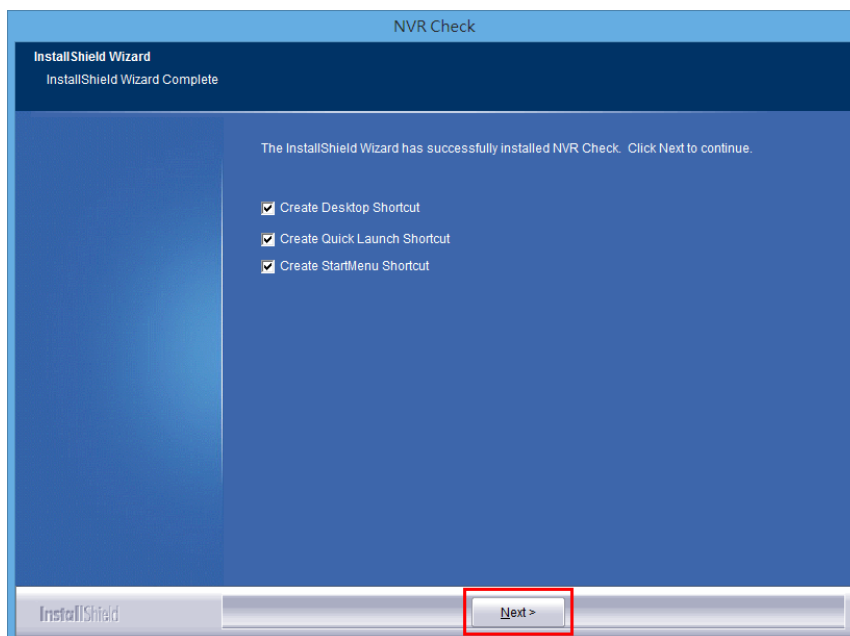
Select a location of destination and select a folder where the setup can install files. The default location is: **C:\Program Files (x86)\NVR\NVR Check**. Users can also install NVR Check in other folder by clicking “**Change**” and select a location as below. Click “**OK**” to save the setting.



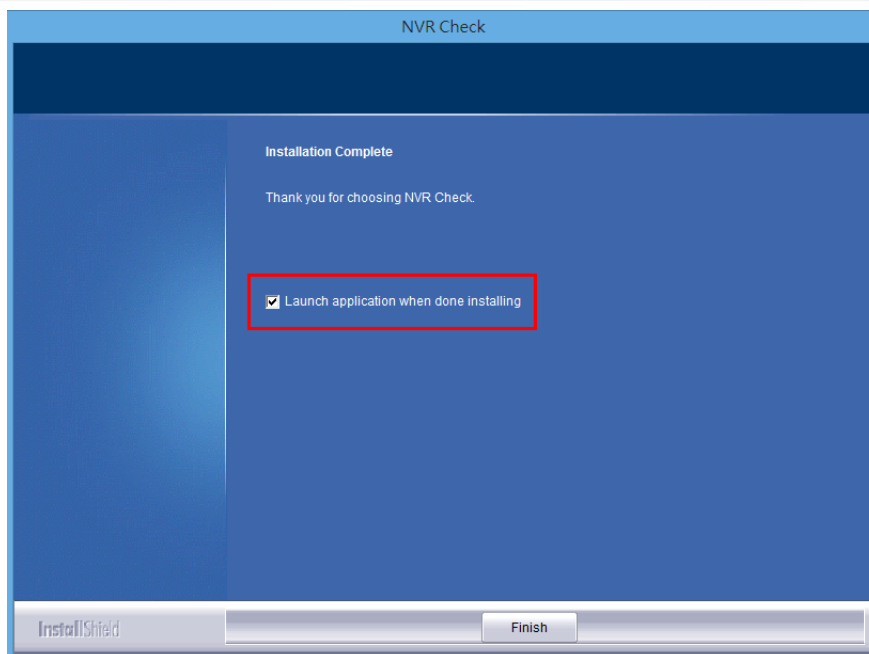
Once a folder is selected, please click “**OK**” to continue installation.



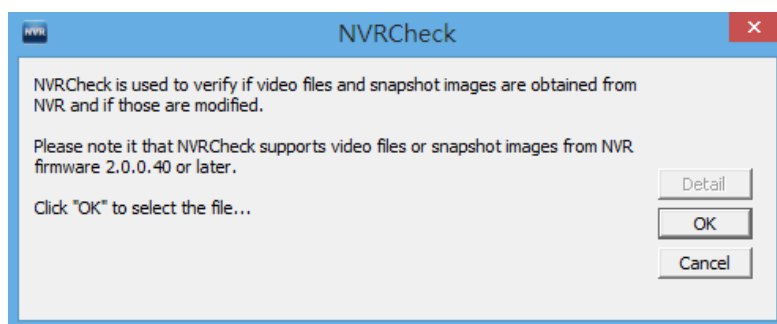
The window shows that the InstallShield Wizard is installing NVR Check. Please wait until the Wizard completes the installation.



The InstallShield has successfully installed NVR Check. Select **“Create Desktop Shortcut”**/ **“Create Quick Launch Shortcut”**/ **“Create Start Menu Shortcut”** and please click **“Next”** to continue.



The installation is complete. Please click “**Launch application when done installing**” to execute NVR Check.



After finishing the setup, the window of NVR Check will pop up.

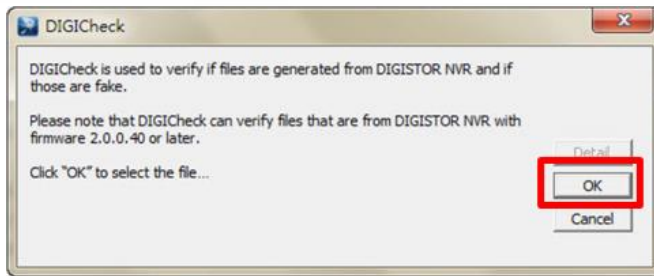
Introduction of NVR Check

While NVR is recording video and snapshot files, the digital watermark will be embedded automatically in the images.

To ensure the security of videos and snapshots, **NVR Check** is a useful tool to verify whether the files are originated from NVR.

Please double click the icon to start the application.

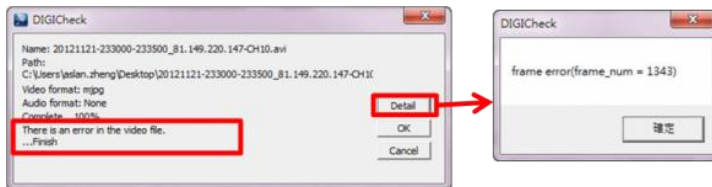
Click “OK” to choose the video clip or picture that wanted to be verified.



If the recording file is originated from NVR, the window will display “No error occur.”




If the recording file has been changed, the window will display “There is an error in the video file.”




To know more information, please ask the manufacturer by providing detailed information in “Detail” button.

2.2.6 User Manual

Click “User Manual”  to open the folder and double-click on user manual file to read.

2.2.7 Browse CD

Click “Browse CD”  to open the folder of current Autorun.exe file.

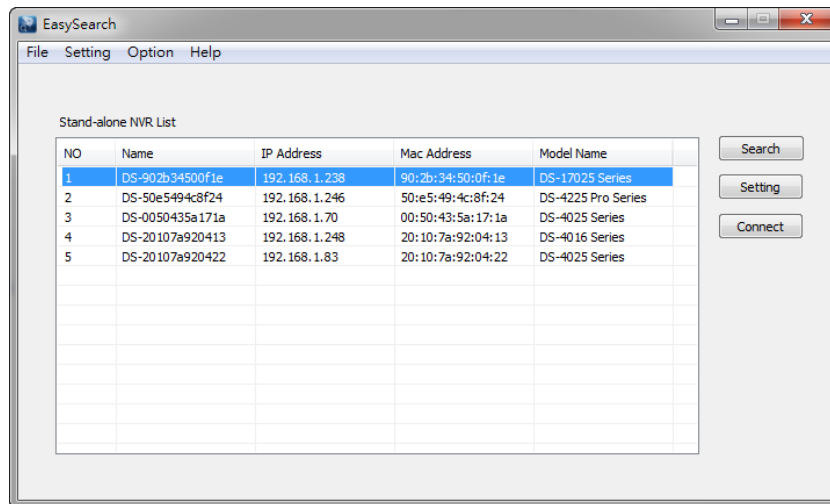
2.2.8 Activate Live View Service

1. Connect to NVR

After setting the EZ Search and S-NVR Decoder, users can connect to the web-based interface by the following two options: **EZ Search** or **IE browser**

1) EZ Search

Once you click **“Connect”** or **double click** the selected NVR list, the IE browser will pop up automatically.



2) IE browser

Log in to the system by entering its IP address in IE browser.

2. Enter username and password:

For first-time use, the default username and password are **“admin/admin.”**

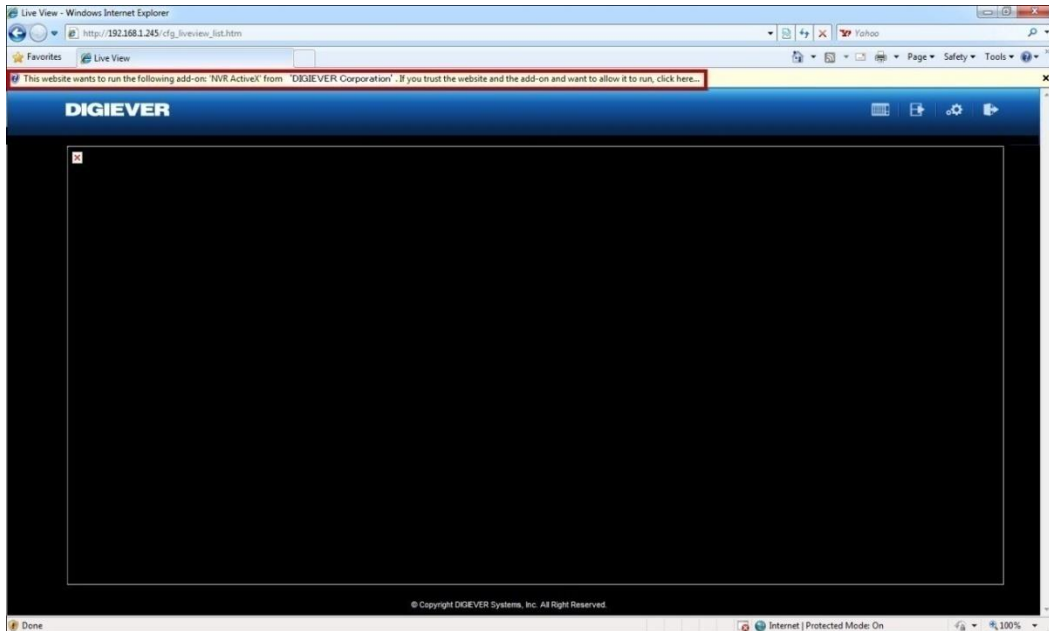
3. Select the languages for the UI.



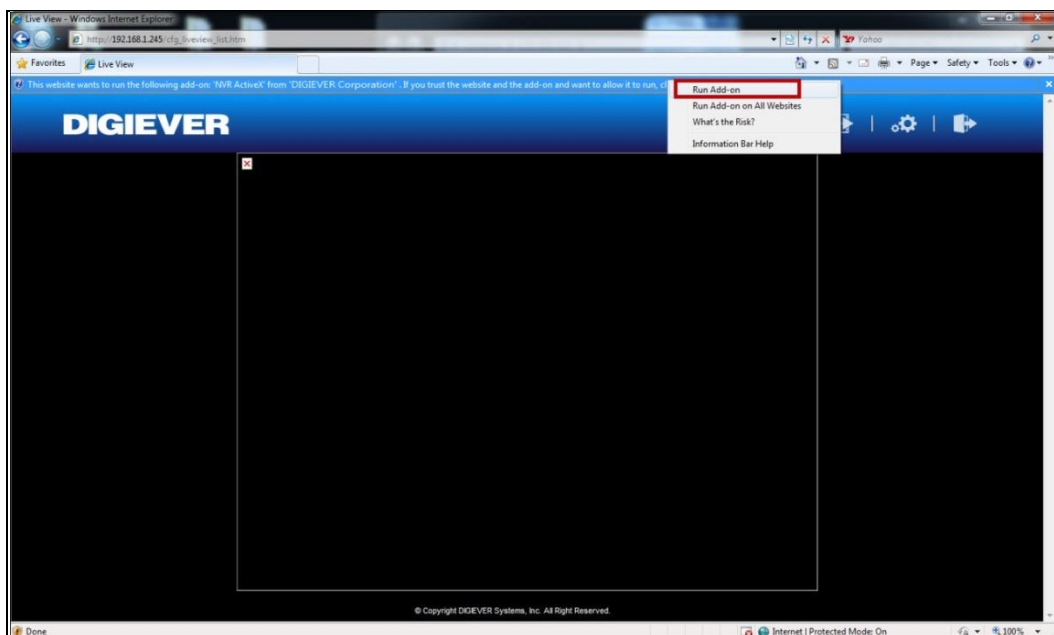
4. Allow ActiveX Control

After logging in the NVR, users are recommended to install **ActiveX control** for the first-time installation.

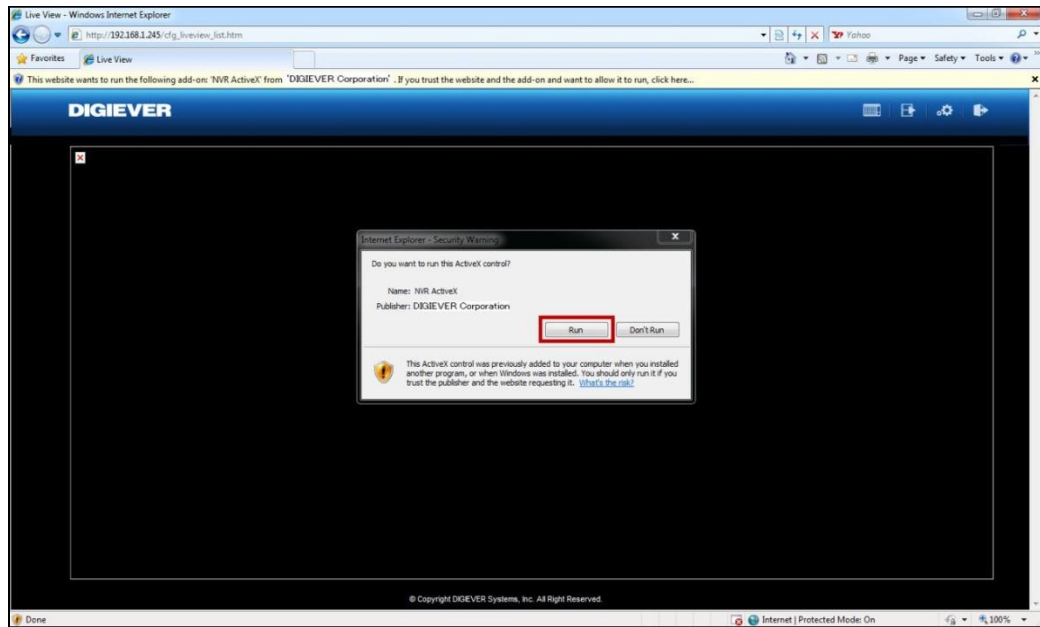
- 1) Left-click on the description **“This website wants to run the following add-on: ‘NVR ActiveX’ from.....”**



- 2) Left-click on the description **“Run Add on.”**



3) Left-click “Run” to use licensed ActiveX controls.



2.3 Quick Configuration

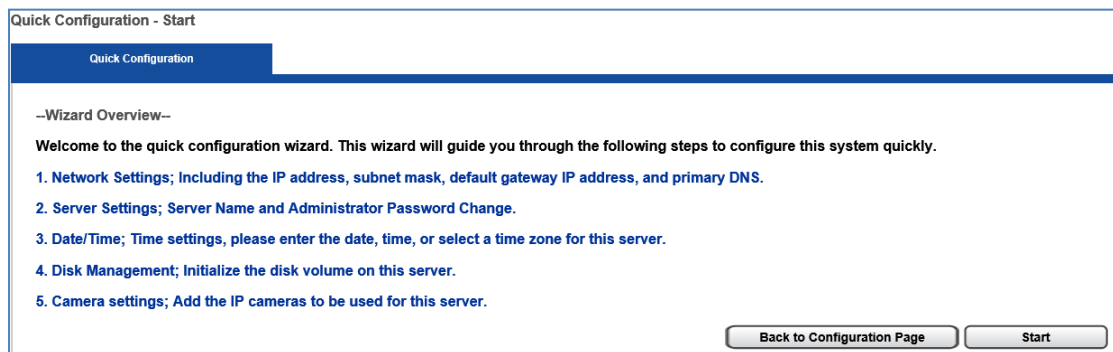
After users log in NVR and install the ActiveX control, the system will direct you to set Quick Configuration in five main steps. Follow the instructions of the **Overview of wizard** to complete system setup.

2.3.1 Start

System will lead you to **“Start”** from the drop-down menu of **Configuration Utility** to begin.



To initial the configuration, please study the **Overview of wizard** first. Through five steps, the wizard will guide you to set up the system quickly.



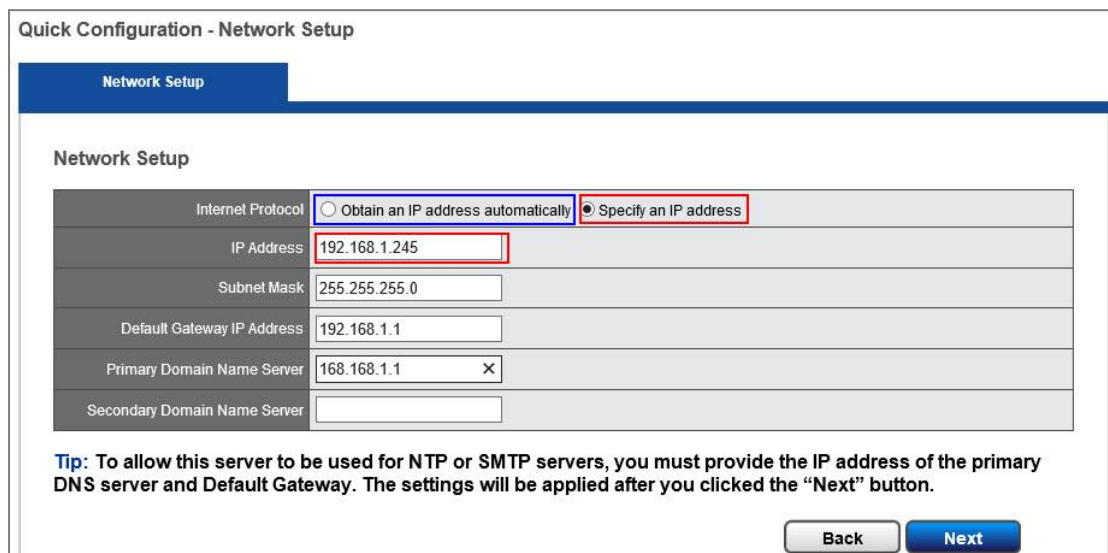
Click **“Start”** in Overview of wizard page to begin Quick Configuration.

2.3.2 Network Settings

Please select “**Network Settings**” from the drop-down menu of **Configuration Utility** to begin.



Users need to adjust the settings in the Network Setup page in order to let NVR work properly within network.



The image shows a screenshot of the 'Quick Configuration - Network Setup' page. The page has a blue header with the text 'Network Setup'. Below the header, there is a form titled 'Network Setup'. The form has several fields: 'Internet Protocol' with two radio buttons, 'IP Address' with a text input field containing '192.168.1.245', 'Subnet Mask' with a text input field containing '255.255.255.0', 'Default Gateway IP Address' with a text input field containing '192.168.1.1', 'Primary Domain Name Server' with a text input field containing '168.168.1.1' and a clear button (X), and 'Secondary Domain Name Server' with an empty text input field. Below the form, there is a tip: 'Tip: To allow this server to be used for NTP or SMTP servers, you must provide the IP address of the primary DNS server and Default Gateway. The settings will be applied after you clicked the “Next” button.' At the bottom right of the form, there are two buttons: 'Back' and 'Next'.

- **There are 2 methods to configure IP address**
 - 1. Obtain an IP address automatically (NVR Default)**

Obtain an available dynamic IP address assigned by a DHCP server. If this option is selected, NVR will automatically obtain an available dynamic IP address from the DHCP server once it connects to the network.
 - 2. Specify an IP address.**

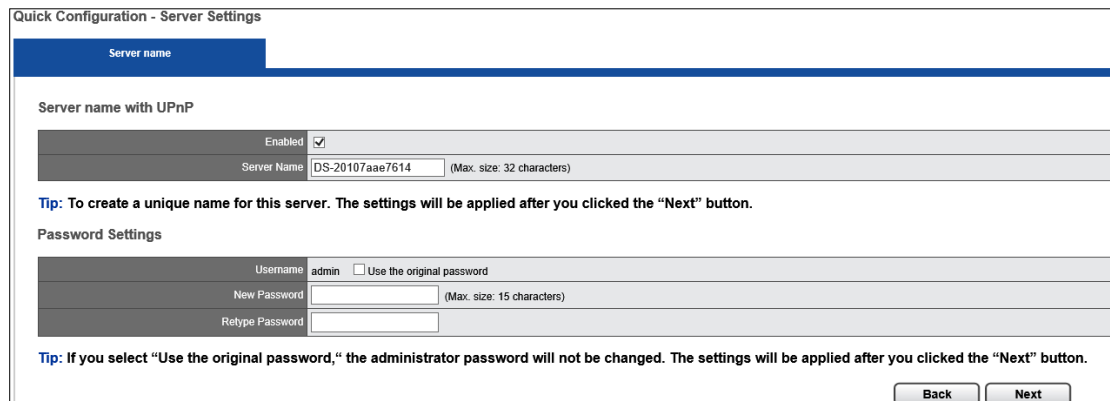
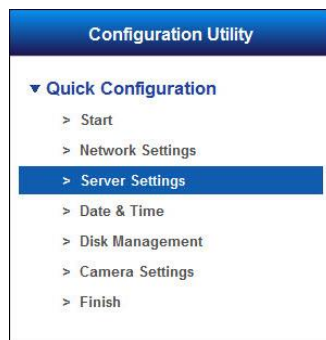
If there is no DHCP server existing in network environments, the static IP address will be given as **192.168.1.245**. It should be adaptable in most networking environment, and user can choose to maintain the default IP address or change it in this page. However, it's recommended setting different IP address of NVR if there is more than one NVR in the same LAN.

To assign a static IP address to the NVR:

1. Select “Specify an IP address”
2. Enter the IP address, Subnet Mask, Default Gateway IP Address and DNS server address.
3. If IP Address is changed, user needs to log out NVR and login in again.
Click “Next” to proceed with the configuration.

2.3.3 Server Settings

Please select “Server Settings” from the drop-down menu of Configuration Utility to begin.

A screenshot of the 'Quick Configuration - Server Settings' form. The form has a blue header with the text 'Server name'. Below the header, there is a section for 'Server name with UPnP'. This section includes a checkbox for 'Enabled' which is checked, and a text input field for 'Server Name' containing 'DS-20107aae7614' with a note '(Max. size: 32 characters)'. Below this is a tip: 'Tip: To create a unique name for this server. The settings will be applied after you clicked the "Next" button.' The next section is 'Password Settings', which includes a text input field for 'Username' containing 'admin' and a checkbox for 'Use the original password' which is unchecked. Below this are two text input fields for 'New Password' and 'Retype Password', both with a note '(Max. size: 15 characters)'. At the bottom of the form is another tip: 'Tip: If you select "Use the original password," the administrator password will not be changed. The settings will be applied after you clicked the "Next" button.' At the very bottom right of the form are two buttons: 'Back' and 'Next'.

(3) Server name with UPnP

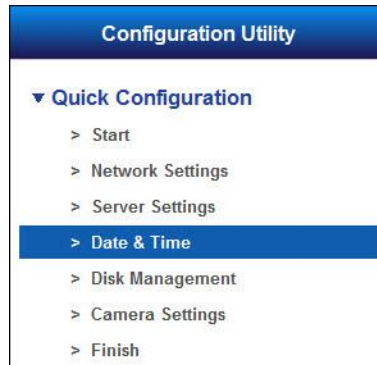
Universal Plug and Play (UPnP) simplifies the process of adding a NVR to a local area network. Once connected to LAN, the NVR will automatically appear on the internet. User can select to enable the function with UPnP and edit a sever name.

(4) Password Settings

Each NVR comes with a built-in “admin” account with password “admin.” It’s highly recommended to change the password upon the initial login. Enter a new password in the “New Password” field and enter it again in “Retype Password.” Since you confirm “Next,” the administrator password will be changed.

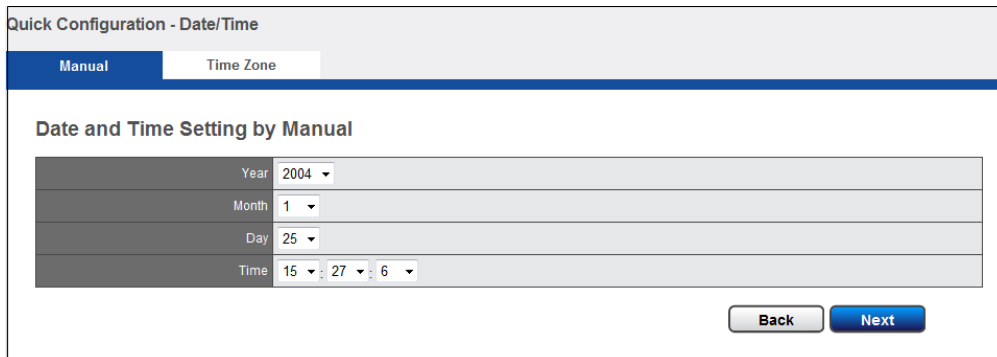
2.3.4 Date & Time

Please select “Date & Time” from the drop-down menu of **Configuration Utility** to begin.



1. Manual setting

Use the drop-down list and configure the time manually. Select the **Year, Month, Date and Time**. Time setting will be effective when you click “Next.”



The screenshot shows the 'Manual' tab of the 'Quick Configuration - Date/Time' utility. The 'Date and Time Setting by Manual' section contains the following fields:

Year	2004
Month	1
Day	25
Time	15 : 27 : 6

Buttons for 'Back' and 'Next' are located at the bottom right.

2. Time Zone: Synchronize with an Internet time server automatically.

Select the time zone of your area and update the date and time of the NVR automatically with an NTP server. User also has an option to automatically adjust daylight saving time.



The screenshot shows the 'Time Zone' tab of the 'Quick Configuration - Date/Time' utility. The 'Time Zone' section contains the following fields:

Time Zone	(GMT+08:00)Beijing, Chongqing, Hong Kong, Urumqi
	<input type="checkbox"/> Adjust clock for daylight saving changes +2 hours
NTP Server	time.stdtime.gov.tw

A 'network test' button is present, and a red box highlights the text 'NTP server is alive'.

Tip: Checked the network connection alive or not with Test. To ensure that the date and time of the network cameras is synchronized with this service, please set up all network cameras by entering the IP address of this service as their NTP server.

Buttons for 'Back' and 'Next' are located at the bottom right.

Configure the time and date by verifying and adjusting current local time and daylight saving to avoid the following errors:

- Incorrect display time for playback videos.
- Inconsistent display time of event logs and when they actually occur.

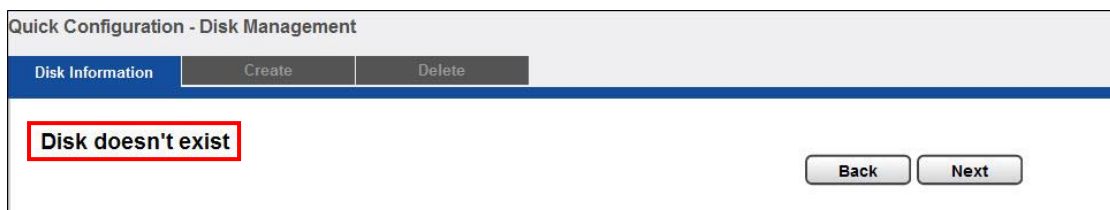
Please enter the hostname of a valid NTP server to synchronize the server time with an Internet time server. NTP (Network Time Protocol) is a protocol to synchronize the clocks of a computer system.

2.3.5 Disk Management

Please select “**Disk Management**” from the drop-down menu of **Configuration Utility** to begin.



If hard disk is not installed in NVR, the page will show “**Disk doesn't exist.**”



Once an available hard disk drive is inserted into the tray, Disk Information will show in **Device Information** and users can start to create new RAID Disk.

1. Disk Information

The screenshot shows the 'Disk Information' page with tabs for 'Create', 'Delete', and 'DIGIARRAY Management'. The 'Device List' column shows a RAID List containing an NVR 1 [raid6, 39123.25 GB] with HDD1 through HDD7 listed. The 'Device Information' column shows details for Slot Number 7: HDD Model ST6000VX0001-1SH17Z, Serial No. Z4D0K88E, Capacity 5589.02 GB, Status Ready, S.M.A.R.T. Setup Enabled, and S.M.A.R.T. Status Good.

Device Information provides details of the hard disk drive: **HDD Model**, **Serial NO.**, **Capacity**, **Status** and **S.M.A.R.T Status**.

⚠ Note: When a HDD encounters error, HDD in device list column will turn from **green** to **orange**. S.M.A.R.T status will turn from **good** to **bad**.

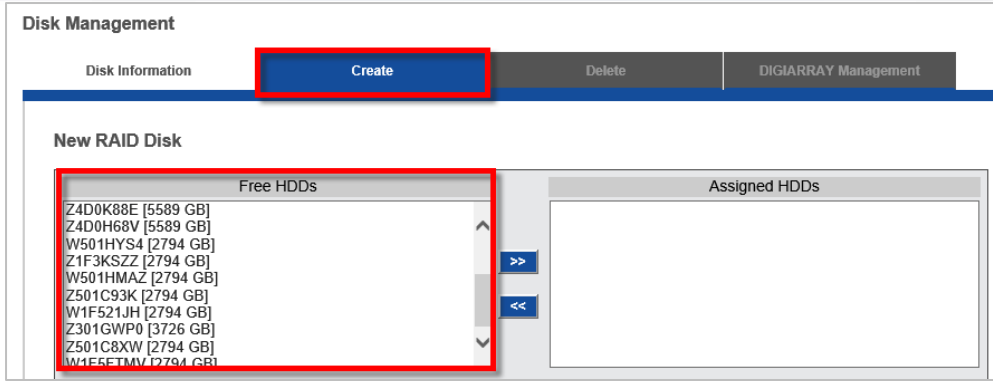
This block compares two states of the Disk Information page. On the left, 'HDD in Good Status' shows HDD7 in green with S.M.A.R.T. Status 'Good'. On the right, 'HDD Error' shows HDD7 in orange with S.M.A.R.T. Status 'Bad | Detail'.

2. Create

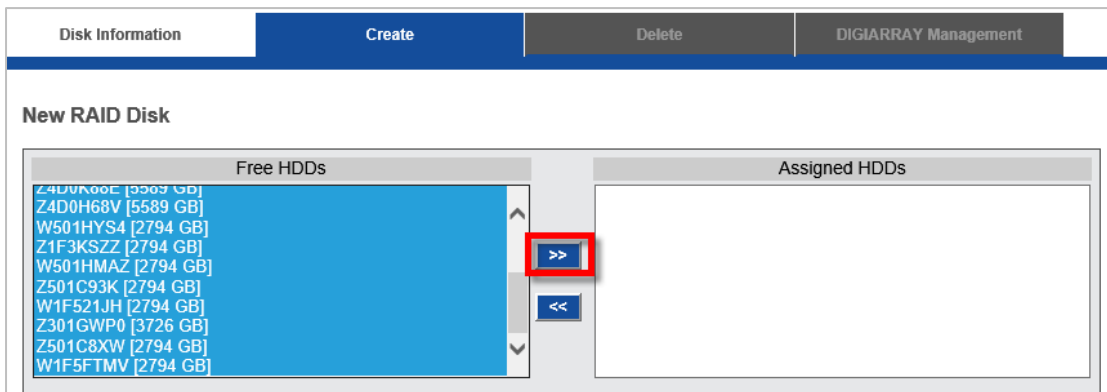
The screenshot shows the 'Quick Configuration - Disk Management' page with tabs for 'Disk Information', 'Create', and 'Delete'. The 'Device List' column shows an HDD List with 6VV49Y14 [465.76 GB]. The 'Device Information' column shows details for HDD Model ST3500312CS, Serial No. 6VV49Y14, Capacity 465.76 GB, and Status Ready. 'Back' and 'Next' buttons are visible at the bottom right.

As the hard disk drive is available, the status of Device Information shows “**Ready**,” which indicates the hard disk drive is **ready to be created**.

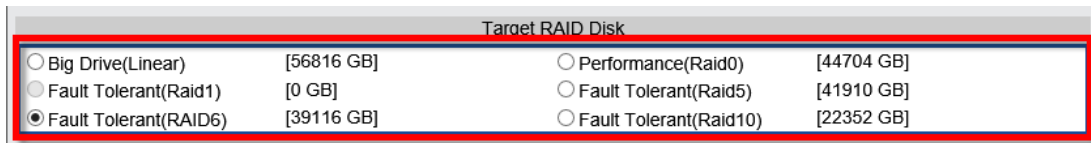
Please click “**Create**” to enter the window for building New RAID Disk and select the hard disk drive in the Free HDDs field.



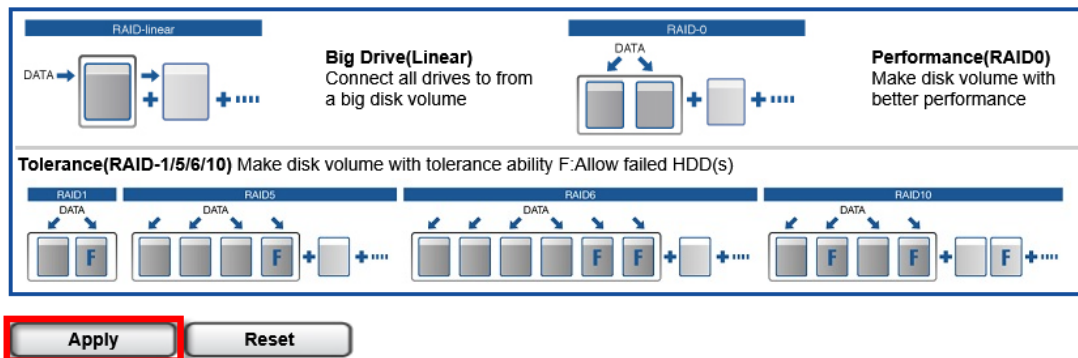
The selected hard disk drive in the Free HDDs field will be marked in blue and please click **>>** to recruit the hard disk drive into Assigned HDDs field.



Meanwhile, Target RAID Disk is ready to build RAID disk and it shows five types of disk configuration.



RAID Modes



Select a type of disk configuration, and click “**Apply**” to execute building new RAID disk.

⚠ Note: Don't turn off the server or unplug any hard drives when RAID Disk is in building process.

The introduction of disk configuration is in the below table.

Disk Configuration

Big Drive (Linear)	Big Drive is a collection of hard disk drives and does not provide any RAID protection. The data are written to the disks continuously.
Performance (RAID 0)	RAID0 is one larger volume with 2 or more hard disk drives. The data are written to the hard disk drives without any parity information. The total storage capacity is the sum of all hard disk drives.
Fault Tolerant (RAID 1)	2 hard disk drives are required to create a RAID1 array. RAID1 can provide disk mirroring by duplicating the data between two hard disk drives.
Fault Tolerant (RAID 5)	A minimum of 3 hard disk drives are required to create RAID5. The data are striped in all hard drives in a RAID5 array and the parity information is stored in each drive. If a hard disk drive fails, the array enters degraded mode. The data can be rebuilt from other member drives after installing a new drive to replace the failed one.
Fault Tolerant (RAID 6)	To have the best performance, a minimum of 6 hard disk drives are required to create RAID6. The data are striped in all hard drives in a RAID6 array and the parity information is stored in each drive. It tolerates failure of two hard drives. The data can be rebuilt from other member drives after installing a new drive to replace the failed one.
Fault Tolerant (Raid10)	Data are written in stripes across primary disks that have been mirrored to the secondary disks. A typical RAID 10 configuration consists of four drives, two for striping and two for mirroring

RAID 10 is supported in DS-8300-RM Pro+, DS-4300-RM Pro+, DS-4300 Pro+, DS-8200-RM Pro+, DS-4200-RM Pro+, DS-4200 Pro+, DS-8200-RM Pro, DS-4200-RM Pro and DS-4200 Pro Series.

RAID6 is supported in DS-16500-RM Pro+, DS-16400-RM Pro+, DS-16300-RM Pro+, DS-16200-RM Pro+, DS-8400-RM Pro+, DS-8300-RM Pro+, DS-8200-RM Pro+, DS-8200-RM Pro series.

Please wait. The disk configuration is in a process.

The screenshot shows the 'Disk Information' window with 'Create' and 'Delete' tabs. The 'Device List' on the left shows a tree structure: RAID List > RAID A [Big Drive, 465.75 GB] > HDD1. The 'Device Information' table on the right contains the following data:

Device Information.	
RAID Name	RAID A
Level	linear
Capacity	465.75 GB
Status	active
Action State	clean
Background Activity	none
Progress	formatting 20%

Buttons for 'Back' and 'Next' are visible at the bottom right.

The progress is under “formatting....20%”. Please wait till 100%.

The screenshot shows the 'Disk Information' window with 'Create' and 'Delete' tabs. The 'Device List' on the left shows a tree structure: RAID List > RAID A [Big Drive, 465.75 GB] > HDD1. The 'Device Information' table on the right contains the following data:

Device Information.	
RAID Name	RAID A
Level	linear
Capacity	465.75 GB
Status	active
Action State	clean
Background Activity	none
Progress	create swap

Buttons for 'Back' and 'Next' are visible at the bottom right.

The progress is in “Create swap” and is going to finish the disk building.

The screenshot shows the 'Disk Information' window with 'Create' and 'Delete' tabs. The 'Device List' on the left shows a tree structure: RAID List > RAID A [Big Drive, 465.75 GB] > HDD1. The 'Device Information' table on the right contains the following data:

Device Information.	
RAID Name	RAID A
Level	linear
Capacity	465.75 GB
Status	active
Action State	clean
Background Activity	none
Progress	none

Buttons for 'Back' and 'Next' are visible at the bottom right.

Finally, the RAID disk building is complete.

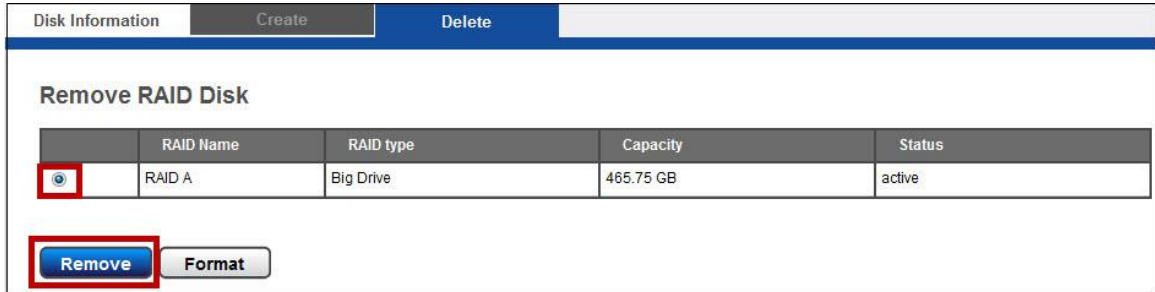
After the RAID disk is created, RAID List shows RAID Name and available storage

devices. Device Information provides status of the hard drive: **RAID Name, Level, Capacity, Status-Active, Action State, Background Activity** and **Progress-none**.

3. Delete

After the RAID Disk is created, “Delete” option is available.

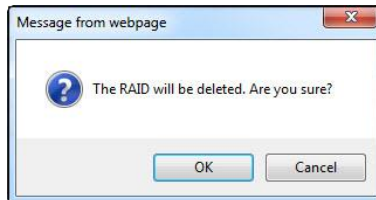
If user is going to delete RAID disk, please refer to following description.



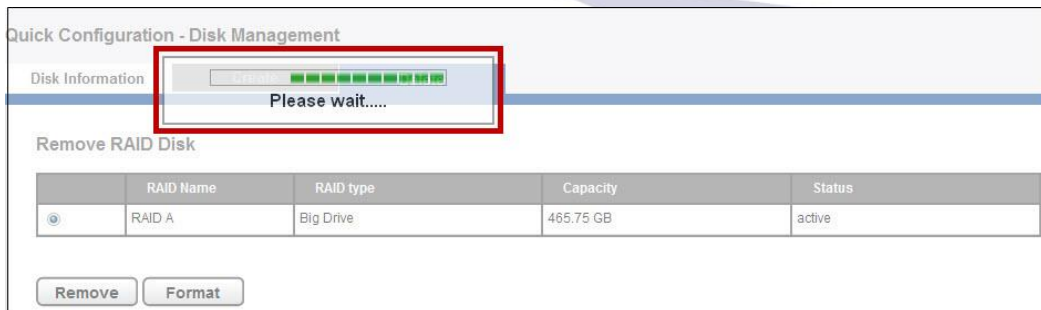
In “Delete” option, user can remove or format RAID disk by selecting the **RAID disk**. In the table, **RAID Name, RAID type, Capacity** and **Status** are shown.

- **Remove**

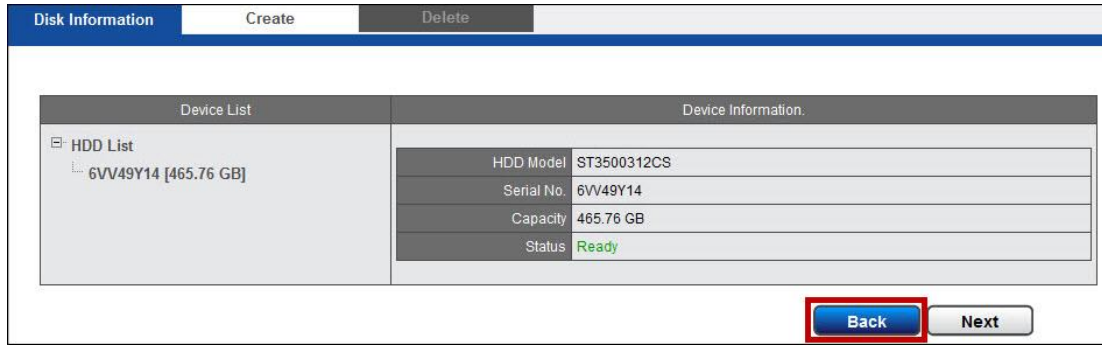
Click “Remove” to delete RAID Disk. Once “Remove” is clicked, a window will pop up to ensure the execution.




To delete RAID Disk, click “OK” to proceed.



Please wait. The deletion is in a process.

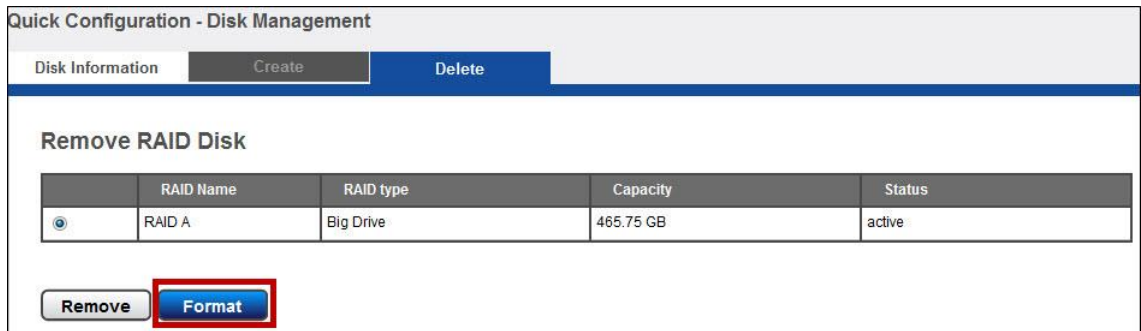


If users want to change the RAID level setting, please click “Remove.” After the RAID Disk is removed, the Status in Device information shows “Ready,” then users can go back to Create page to continue the new RAID level configuration.

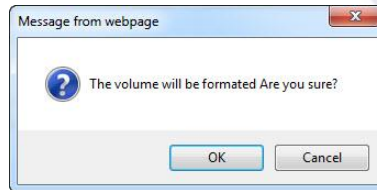
 **Note:** Once you remove the disk and continually create it, the recorded video will be formatted.

- **Format**

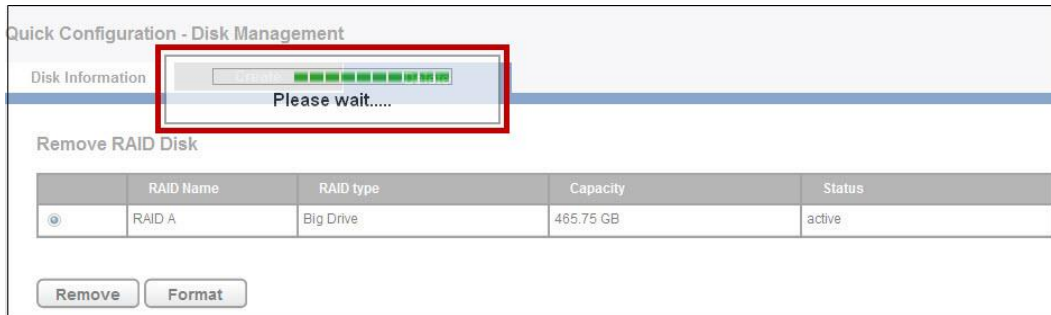
Click “Format” to format the RAID disk, all recorded videos will be deleted.



Once “Format” is clicked, a window will pop up to ensure the execution.

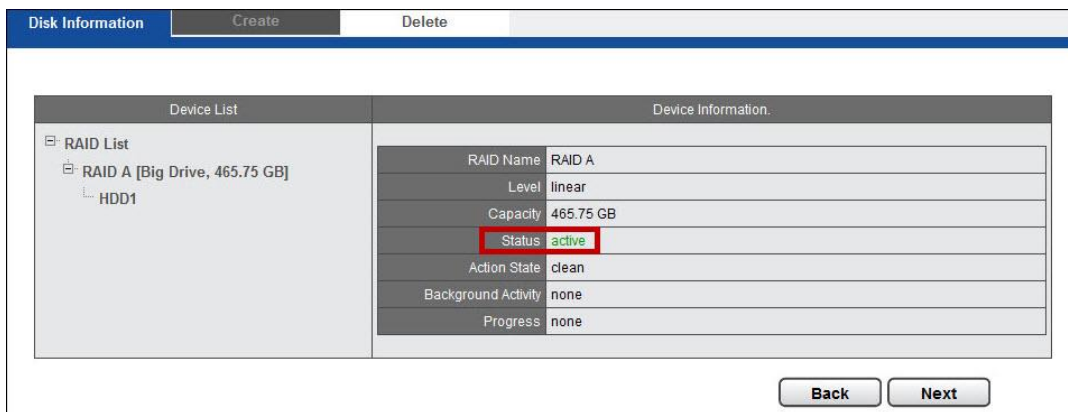


To format RAID disk, click “OK” to continue.



Hard disk drive is formatting.

Please wait for **formatting until 100%**.



2.3.6 Camera Settings

NVR provides two options to add new cameras: **Detect** and **UPnP Search**

Camera Settings

Camera No.	2	Streaming Parameters	<input checked="" type="radio"/> Optimization by NVR
Camera Name	Camera 2		<input type="radio"/> Settings from camera
IP Address	192.168.1.88	Port	80
Brand	Auto	Model	
Username	admin	Password	•••••
Generic URL		RTSP port	
Recording Enabled	<input checked="" type="checkbox"/> Enable recording on this camera		
Video Server	<input type="checkbox"/> Enabled 1CH	Immer/Vision SDK Default	<input type="checkbox"/> Enabled NONE

UPnP Search Apply

[Method1] Detect:

In this option, users are asked to enter **IP Address**. Check correct **username** and **password**. Then, click **“Apply”** button to start adding camera.

Camera Settings

Camera No.	1	Streaming Parameters	
Camera Name	Camera 1	<input checked="" type="radio"/> Optimization by NVR <input type="radio"/> Settings from camera	
1 IP Address	192.168.1.31	Port	80
Vendor	Auto	Model	
2 Username	admin	Password
Generic URL		RTSP port	
Recording Enabled	<input checked="" type="checkbox"/> Enable recording on this camera		
Video Server	<input checked="" type="radio"/> Disabled <input type="radio"/> Enabled 1CH		

UPnP Search **Apply** 3

After clicking “Apply” button, **vendor**, **username** and **password** will be automatically filled in by vendor’s default information.

Please wait for NVR processing. You may click “Cancel” button to stop adding cameras.

After successfully adding cameras, NVR will display camera information in camera list.

Camera List Delete

No.	Camera Name	IP Address	Port	Brand	Model	Added(0/3) All <input type="checkbox"/>
1	Camera 1	192.168.1.28	80	Brickcom Corporation	Brickcom-30xN	<input type="checkbox"/>
2	Camera 2	192.168.1.18	80	Brickcom Corporation	Brickcom-30xN	<input type="checkbox"/>
3	Camera 3	192.168.1.34	80	Brickcom Corporation	Brickcom-30xN	<input type="checkbox"/>
4			80			<input type="checkbox"/>

To delete camera, please click the check box and click “Delete” button. You can delete all cameras by clicking “All” check box.

Camera List Delete

No.	Camera Name	IP Address	Port	Brand	Model	Added(2/3) All <input type="checkbox"/>
1	Camera 1	192.168.1.28	80	Brickcom Corporation	Brickcom-30xN	<input checked="" type="checkbox"/>
2	Camera 2	192.168.1.29	80	Brickcom Corporation	Brickcom-30xN	<input checked="" type="checkbox"/>
3	Camera 3	192.168.1.44	80	Brickcom Corporation	Brickcom-30xN	<input type="checkbox"/>

A window will pop up to ensure the action.



To delete the camera, click "OK" to proceed.

[Method2] UPnP Search:

Camera Settings

Camera No.	6	Streaming Parameters	<input checked="" type="radio"/> Optimization by NVR <input type="radio"/> Settings from camera
Camera Name	Camera 6	Port	80
IP Address	192.168.1.1	Model	
Vendor	Auto	Password	*****
Username	admin	RTSP port	
Generic URL			
Recording Enabled	<input checked="" type="checkbox"/> Enable recording on this camera		
Video Server	<input checked="" type="radio"/> Disabled <input type="radio"/> Enabled 1CH		

UPnP Search Apply

Click "UPnPSearch" to find out UPnP devices within the LAN.

- ⚠ Please make sure IP camera supports UPnP Search function.
- ⚠ Please go to IP Camera web page to enable UPnP search function.



Please wait. The UPnP search is in a process. You may click "Cancel" button to stop search device.

The available cameras in the network will be displayed as below.

Click the camera that you would like to add in NVR, then click "Add" button.

Quick Configuration - Camera Settings

Group Add

Add

No.	IP Address	Port	Vendor	Model	Number	MAC	Added(5/16) All
1	192.168.1.1	80	Buffalo Inc.	Airstation	Beta3.1d	A9-16-A2-0E-DD-8A	<input type="checkbox"/>
2	192.168.1.11	80	Digiever Corporation	DS-bc5ff4ccd405	v2.1.0.52-rc9.9	31-3E-88-38-63-CE	<input type="checkbox"/>
3	192.168.1.15	80	Brickcom Corporation	Brickcom-30xN	v3.2.2.7	40-90-31-63-07-00	<input checked="" type="checkbox"/>
4	192.168.1.19	80	Brickcom Corporation	Brickcom-30xN	v3.2.2.7	00-40-8C-E4-C7-38	<input checked="" type="checkbox"/>
5	192.168.1.85	80	AXIS	AXIS M3005	M3005	00-22-F4-CE-47-DD	<input checked="" type="checkbox"/>
6	192.168.1.102	80	Brickcom Corporation	Brickcom-30xN	v3.2.2.4	00-0E-53-23-4C-89	<input checked="" type="checkbox"/>
7	192.168.1.111	80	Brickcom Corporation	Brickcom-30xN	v3.2.2.4	00-0E-53-EE-3D-5E	<input type="checkbox"/>
8	192.168.1.139	80	VIVOTEK INC.	Mega-Pixel Network Camera	FD8164	20-10-7A-5A-19-57	<input type="checkbox"/>
9	192.168.1.162	80	HIKVISION	HIKVISION DS-2CD7153-E	DS-2CD7153-E	00-22-F4-CE-47-C6	<input checked="" type="checkbox"/>
10	192.168.1.173	80	AVTECH Corporation.	Surveillance	IP CAMERA (Fixed) AVM457A-000E53EE3D5E	00-22-F4-81-D5-60	<input type="checkbox"/>
11	192.168.1.179	80	AVTECH Corporation.	Surveillance	IP CAMERA (Fixed) AVN813-000E53234C89	BC-5F-F4-CC-D4-05	<input type="checkbox"/>

⚠️ Note: Users can click “**All**” to add cameras in Added column.

⚠️ Note: The Added column will show two numbers to display the total channels of the NVR and the channel numbers that has been already added in the NVR.

Please check camera information in Group add page. Then, Click “**Add All**” button to start adding cameras.

The screenshot shows the 'Group Add' interface. At the top left is a 'Group Add' button. Below it is a form with various fields: 'No.' (dropdown with '1'), 'Camera Name' (input with 'Camera 1'), 'IP Address' (input with '192.168.1.47'), 'Username' (input with 'admin'), 'Brand' (input with 'Brickcom Corporation'), 'Recording Enabled' (checkbox checked), 'Video Server' (checkbox unchecked), 'Streaming Parameters' (radio buttons for 'Optimization by NVR' and 'Settings from camera'), 'Port' (input with '80'), 'Password' (input with '*****'), and 'Model' (input with 'Brickcom-30xN'). There are 'Add All' and 'Go to Camera Settings' buttons. Below the form is a table with the following data:

No.	Delete	Camera Name	IP Address	Username	Password	Brand	Model	Result
1	Delete	Camera 1	192.168.1.47	admin	admin	Brickcom Corporation	Brickcom-30xN	

⚠️ Note: NVR will automatically fill in default **username and password** of each vendor. **Camera Name, User Name and Password** can be modified by users.

You may click “**Cancel**” button to stop camera adding progress.

The screenshot shows the 'Group Add' interface with a 'Please wait...' dialog box overlaid on the form. The dialog box has a progress bar and a 'Cancel' button. The form fields are partially obscured by the dialog box. The table below the form shows the following data:

No.	Delete	Camera Name	IP Address	Username	Password	Brand	Model	Result
1	Delete	Camera 4	192.168.1.34	admin	admin	Brickcom Corporation	Brickcom-30xN	Setting

Status column in camera list will display “**Successful**” when cameras are successfully added in NVR.

Group Add

Add All Go to Camera Settings

No.	1	Streaming Parameters	<input checked="" type="radio"/> Optimization by NVR <input type="radio"/> Settings from camera
Camera Name	Camera 6	Port	80
IP Address	192.168.1.173	Password	All *****
Username	All admin	Model	Surveillance
Vendor	AVTECH Corporation.		
Recording Enabled	<input checked="" type="checkbox"/> Enable recording on this camera		
Video Server	<input checked="" type="radio"/> Disabled <input type="radio"/> Enabled 1CH		

No.	Delete	Camera Name	IP Address	Username	Password	Vendor	Model	Result
1	Delete	Camera 6	192.168.1.173	admin	admin	AVTECH Corporation.	Surveillance	Successful

Please click “Go to Camera Settings” button to check all camera information camera list that is successfully added in NVR.

UPnP Search

No.	Camera Name	IP Address	Port	Vendor	Model	Delete
1	Camera 1	192.168.1.15	80	Corporation	Beckcom-30N	Delete
2	Camera 2	192.168.1.19	80	Corporation	Beckcom-30N	Delete
3	Camera 3	192.168.1.85	80	AXIS	M3005	Delete
4	Camera 4	192.168.1.102	80	edcom Corporation	Beckcom-30N	Delete
5	Camera 5	192.168.1.162	80	HikVision	DS-2CD1933-E	Delete
6	Camera 6	192.168.1.173	80	AVTECH	AVM457A	Delete
7			80			

The Description of Camera Settings:

(1) Memorize modified username and password:

NVR can memorize username and password which is modified by users after users click “Apply” button. Then, the default username and password of that vendor will be replaced by the modified one. Next time when users add new camera of the specific vendor, username and password will be automatically filled in by new modified one.



Note: Each vendor has its own default username and password.



Note: When using UPnP Search to add cameras, NVR designs “All” option beside Username and Password to memorize modified username and password of that camera brand.

No.	Delete	Camera Name	IP Address	Username	Password	Vendor	Model	Result
1	Delete	Camera 1	192.168.1.173	admin	admin	AVTECH Corporation.	Surveillance	
2	Delete	Camera 2	192.168.1.179	admin	admin	AVTECH Corporation.	Surveillance	

As above example, NVR will modify default username and password of AVTECH camera and make the new username and password become AVTECH’s default username and password.

(2) Streaming Parameters

NVR provides two options to set up stream parameters: **Optimization by NVR** and **Settings from camera**.

⚠ Note: Streaming Parameters will not be applied when users change **Camera Name/ Username/ Password/ Recording Enabled**. This feature is designed for cameras that have been added to NVR so that camera parameter remains the same.

① Optimization by NVR

By selecting this option, NVR will optimize camera settings to execute the best surveillance performance.

② Settings from camera

If users have already set up camera settings from camera webpage, NVR can adopt camera setting by selecting “Setting from Camera.” This option can largely save users’ time and effort when users install surveillance systems.

⚠ Note: It is highly recommend to use “**Optimization by NVR**” to perform the best surveillance quality in both live-view and playback.

(3) Multi-channel Video Server

NVR supports multi-channel video server to connect analog cameras to NVR. Users are asked to enter **IP Address**. Please check correct **username** and **password**. Click **“Enable” Video Server** and choose the channel number. Then, click **“Apply”** button.

Camera Settings

Camera No.	1	Streaming Parameters	<input checked="" type="radio"/> Optimization by NVR <input type="radio"/> Settings from camera
Camera Name	Camera 1	Port	80
IP Address	192.168.1.55	Model	
Brand	Auto	Password
Username	admin	RTSP port	
Generic URL			
Recording Enabled	<input checked="" type="checkbox"/> Enable recording on this camera		
Video Server	<input checked="" type="checkbox"/> Enabled 4CH	ImmerVision SDK Default	<input type="checkbox"/> Enabled NONE

UPnP Search

(4) ImmerVision SDK Default

For ImmerVision 360-degree cameras, NVR allows users to pre-define suitable ImmerVision dewarping engine from six main SDK in advance with no need to remember ImmerVision SDK type.

Camera No.	1	Streaming Parameters	<input checked="" type="radio"/> Optimization by NVR <input type="radio"/> Settings from camera
Camera Name	Camera 1	Port	80
IP Address	203.67.94.	Model	
Brand	Auto	Password
Username	admin	RTSP port	
Generic URL			
Recording Enabled	<input checked="" type="checkbox"/> Enable recording on this camera		
Video Server	<input type="checkbox"/> Enabled 1CH	ImmerVision SDK Default	<input checked="" type="checkbox"/> Enabled NONE A8TRT A1UST B0QQV B4QQV B5SST B6SST

UPnP Search

(5) Generic RTSP/ Generic MJPEG (for Detect method only)

For cameras without native integration, NVR allows users to add cameras **via Generic RTSP (H.264) and Generic MJPEG** to receive the video streaming from IP camera. The streaming will be applied to monitoring, recording and playback.

Camera Settings

Camera Settings

Camera No. 1

Camera Name sasdeur

IP Address 192.168.0.51

Brand Generic RTSP (H264)

Username admin

Generic URL

Stream2 Generic URL

Recording Enabled Enable recording on this camera

Video Server Enabled 1CH

Streaming Parameters

Optimization by NVR Settings from camera

Port 80

Model DS-2CD2712F-1

Password

RTSP port

Stream2 RTSP port

Immervision SDK default Enabled A8TRT

UPnP Search

Generic RTSP (H264)

Generic MJPEG

Please select **Generic RTSP** or **Generic MJPEG** on brand column.

Camera Settings

Camera Settings

Camera No. 1

Camera Name sasdeur

IP Address 192.168.0.51

Brand Generic RTSP (H264)

Username admin

Generic URL

Stream2 Generic URL

Recording Enabled Enable recording on this camera

Video Server Enabled 1CH

Streaming Parameters

Optimization by NVR Settings from camera

Port 80

Model DS-2CD2712F-1

Password

RTSP port 554

Stream2 RTSP port 554

Immervision SDK default Enabled A8TRT

Tip: If the path is <http://192.168.1.5/channel1>. The Generic URL should be filled out as **channel1**.

UPnP Search

Apply

Please enter proper **Generic URLs** when selecting Generic RTSP/ MJPEG.

If Generic RTSP is selected, RTSP port should be filled out too.

Click **“Apply”** button to save setting.

The most correct URLs should be provided from each camera vendors.

Users may also refer to websites

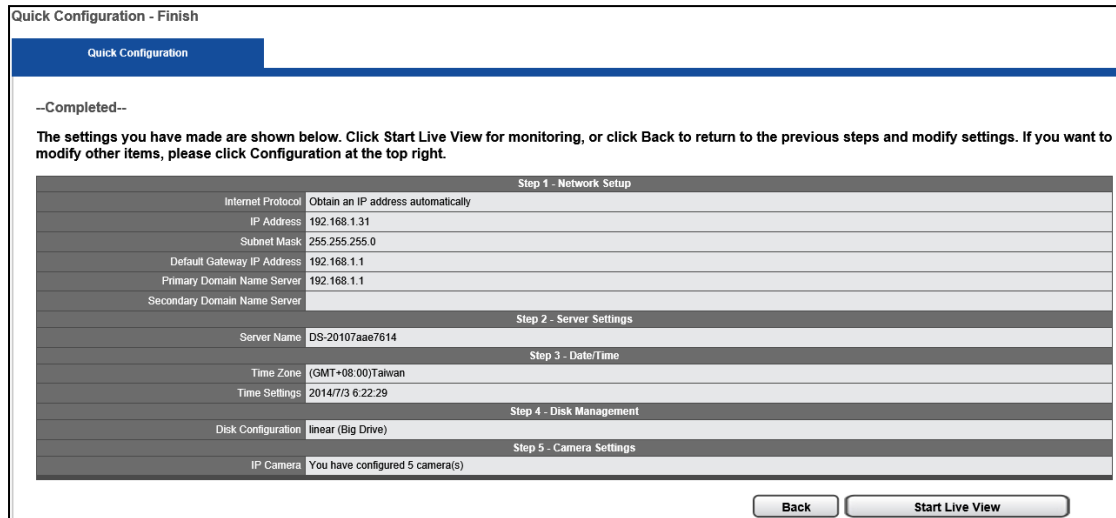
- <https://www.solertec.com/rtsp/>
- <http://www.ispyconnect.com/sources.aspx>

2.3.7 Finish

Please select “**Finish**” from the drop-down menu of **Configuration Utility** to begin.



Once five steps of Quick Configuration are completed, the window will show the completed status. You can click “**Back**” to return to the previous steps to modify the configuration or click “**Start Live view**” to start monitoring.




To review the setting or information of Quick Configuration, user can also select “**Quick Configuration**” in the left of the Configuration main page.



Chapter 3. Use NVR by Local Display

NVR can be connected to a monitor via HDMI/VGA/DVI-I port to execute quick configuration and display live view.

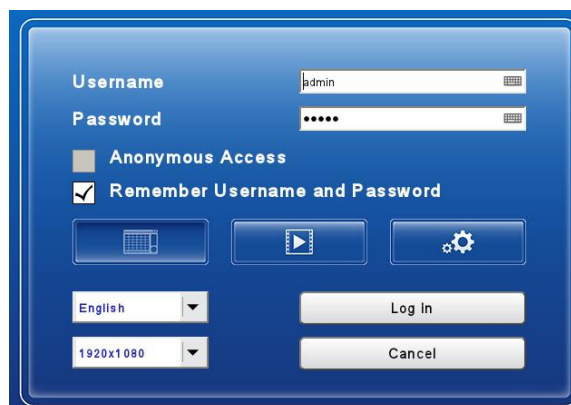
 **Note:** Local display feature is supported in Pro and Pro+ series.

To start local display, please check the steps below:

1. Please install at least one hard disk drive in your NVR.
2. Connect NVR and IP cameras to the network.
3. Make sure the monitor is connected to the port (HDMI /VGA/ DVI-I) of NVR rear panel.
4. Please connect a USB mouse to the USB port of NVR.
5. Please connect power cord and connector to turn on NVR.
6. When you enter the log in interface of NVR, please enter default user name “admin” and password “admin” and select languages.

3.1 Log in NVR

You have to key in the correct username and password to login NVR.



Resolution:

User can select the resolution 1920x1080 or 1024x768 in login page, when the monitor supports both types of resolution.

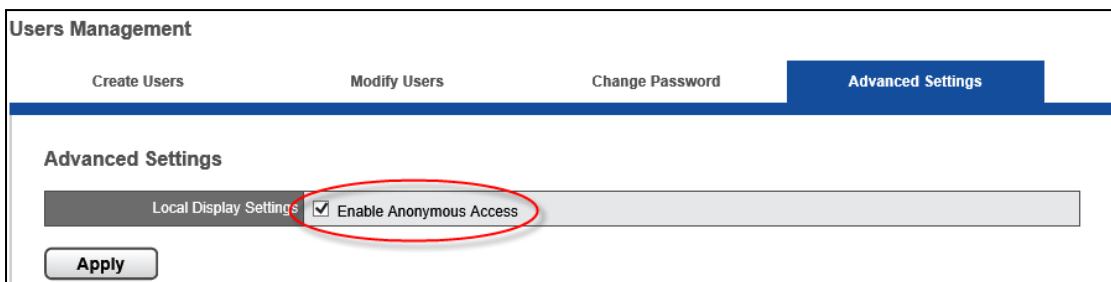
3.1.1 Anonymous login

Anonymous login allows users to login without username and password.

Anonymous user can only view live monitoring and playback page on local monitor; however, the configuration page will be disabled. While anonymous login is applied, system will automatically log in without authorization process after boot up.

Start to setup the anonymous login

- A. Please go to "Configuration->Management->Users Management->Advance Settings"
- B. Check the "Enable Anonymous Access."



- C. Enable the "Anonymous" at the local display login page, and then log in.



3.1.2 Virtual Keyboard

Users can choose to use USB keyboard for typing in local display of NVR, or fill out columns with virtual keyboard. The virtual keyboard in local display can be enabled from the right side of each column.



There are 3 types of virtual keyboard can be chosen, including Upper case, Lower case and Symbols.

-Upper case

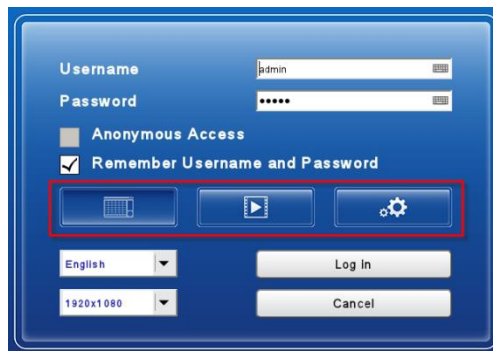
-Lower case




-Symbols



3.1.3 Selectable Login Entry

Selectable Login Entrance enables user to directly access desired interface among liveview, playback and configuration page.



Icon	Description
	Liveview: Click "Liveview" to control the monitoring instantaneously.
	Playback: Click "Playback" to play recorded video files.
	Configuration: Click "Configuration" to configure camera, recording, event, management, network, quick configuration and system.

3.2 Quick Configuration

After you log in local display of NVR, the system will direct you to set Quick Configuration in five main steps. Follow the instructions of the Overview of wizard to complete the system setup. For further information, please refer to chapter **2.3 Quick Configuration**.





3.3 Liveview

After the Quick Configuration is complete, users can successfully monitor IP cameras. In live view page, users can monitor cameras in various display modes and control PTZ cameras.

3.3.1 Select View Modes on Liveview Page



On top right of live view, users can select four view modes.

Mode	Description
	Liveview: Click “ Liveview ” to control the monitoring instantaneously.
	Playback: Click “ Playback ” to play and to export the recorded video files.
	Configuration: Click “ Configuration ” to configure camera, recording, event, management, network, quick configuration and system.
	Logout: Click “ Logout ” to leave NVR.

3.3.2 Main Functions of Liveview



1. Camera status

Icon	Description
	Camera name: The name of the camera is located in the top left corner in each video window. Users can rename the camera via the path "Configuration->IP Camera->Camera Settings."
	Video compression format: M-JPEG/MPEG-4/H.264
	Audio: Once camera supports audio, NVR shows audio in blue. Vice versa, NVR shows audio in grey.
	Event: When event happens, NVR shows warning to user for instant alert.
	Recording status: The red icon shows whether camera is recording or not. If there is a temporary no recording situation, the icon will be blinking.
	Blue border: The outline border surrounds the selected window to highlight the focus image.

2. NVR information

(1) Firmware version

User can easily find out the firmware version in the live view page.

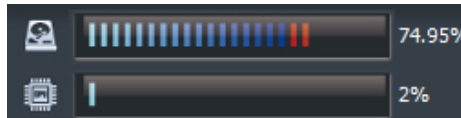


(2) Disk and CPU loading indicator:

Users can find out Disk and CPU loading directly without entering configuration page.



Disk and CPU loading indicator shows blue when loading is 70% or under, and shows red as a warning when it reach to more than 70%.



With changing the video configuration, like resolution, FPS and video quality or changing RAID type, can influence the CPU loading, and users can easily find the best balance in NVR.











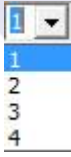
3. Basic functions

Icon	Description
	Snapshot: Take a snapshot on the camera that you select. The snapshot will be saved in “Public ->liveview_snapshot.” It can be access through Windows Networking or FTP service at File Sharing service in Configuration page.
	Digital zoom in/ out: Select a channel to enable digital zoom function
	Drop: Drop the camera from monitoring.
	Drop all: Drop all cameras from monitoring.
	Add all: Add all cameras from monitoring.
	Mute: Alter sound instrument from camera.
	Date & Time: Showthe specific day and time.

4. Display mode

NVR supports multi-display modes for monitoring. Click the icon of display mode to

monitor live view. When you click a display mode, the mode icons will turn into blue.








Icon	Description
	1 screen
	4 screen
	9 screen
	12 screen
	16 screen
	20 screen
	3/5/25/30/36/42/49/56/64 screen
	5+1 screen
	8 screen
	10 screen
	12+1 screen
	Full Screen
	Sequential mode
	<p>Click  to choose the page of liveview </p>

5. PTZ Control Panel


If the IP camera supports PTZ function, user can use the control panel or joystick to adjust the viewing angle. The following functions are available depending on the camera models.


⚠ Note: Please check the compatible list before using joystick to adjust PTZ

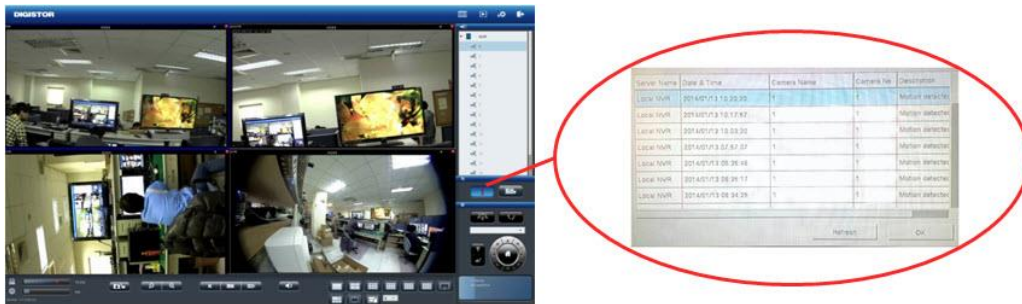
cameras.

Icon	Description
	<p>PTZ panel:</p> <p>PTZ allows users to monitor large areas with a single network camera. Pan, tilt, and zoom functions can be controlled remotely by users. If device supports PTZ control, users can click on the arrows to pan and/ or tilt the camera. The house in the middle can take you back to original monitoring position.</p>
	<p>Preset positions:</p> <p>Select the preset positions which are defined in PTZ camera and the camera will move to the position that user selects.</p>
	<p>Optical zoom in/ out:</p> <p>If camera supports optical zoom in/ out, users can adjust PTZ camera to zoom out or zoom in.</p>
	<p>Focus near / far:</p> <p>If camera supports PTZ control, users can adjust the focus of the PTZ camera to focus near or focus far.</p>
	<p>Auto Focus:</p> <p>To automatically focuses the camera lens on a subject.</p>
	<p>Schedule for PTZ:</p> <p>Select “Set” to set camera preset position.</p> <p>It can open the dialog to set how many times PTZ cruise to repeat and how many seconds stay between each preset point.</p> <div data-bbox="523 1323 1114 1518" style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p>Repeat(1~999 times, 1000:infinite): <input type="text" value="1000"/></p> <p>Interval(3~1200 seconds): <input type="text" value="5"/></p> <p style="text-align: right;"> <input type="button" value="OK"/> <input type="button" value="Cancel"/> </p> </div>
	<p>Schedule for PTZ:</p> <p>Click “Go” to start PTZ patrol schedule.</p>

6. Event Log

Event Log is designed to instantly notify users of **external events**. When an event is triggered, the icon will start blinking in **red** exclamation mark. 

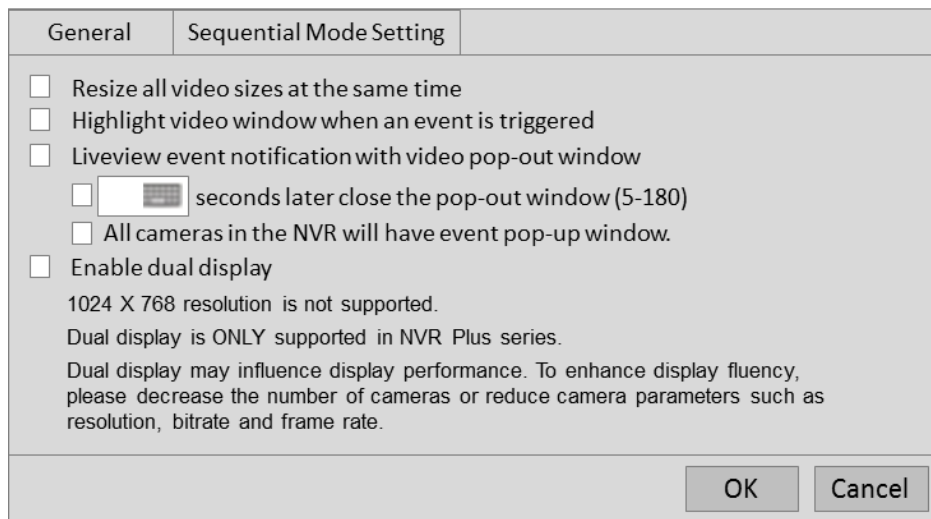
After clicking the button, a window will pop up to display the list of event log as below. At the same time, the icon will stop blinking. 



7. Option

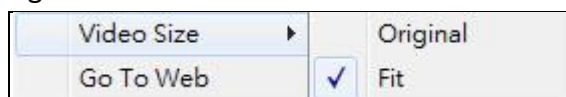
Option button can let users directly to do live-view setting such as warning setting, windows setting and sequential mode setting.

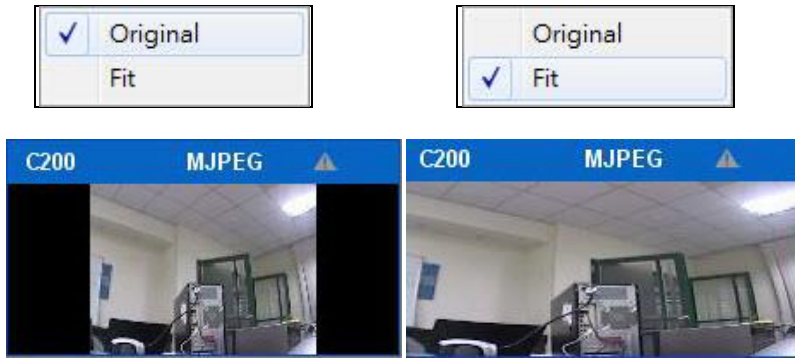
1) General



① Resize all video sizes at the same time

Only a right click on the video, users can set "all" video size either in original size or fit size.





② **Highlight video window when event is triggered**

The option of “Highlight video window when event is triggered” is a warning frame which will pop out on the channel when an event is detected.

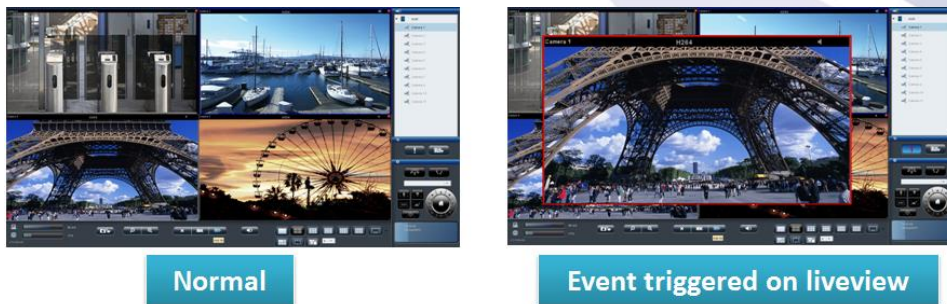


When the motion event is awarded, user can simply click on the channel with mouse, the warning frame will be stopped.



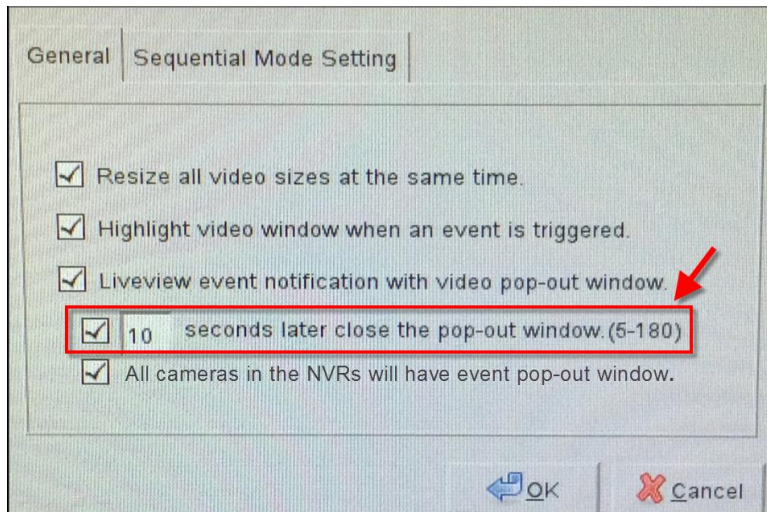
③ **Liveview event notification with video pop-out window**

Once the feature is enabled, a new window will pop out when an event is triggered so as to inform users of event happened at the very first time.



By clicking the pop-out window, users can manually close the window.

Users can select an optional feature to make the pop-out window automatically close after users assigned seconds. (Default is 10 seconds)



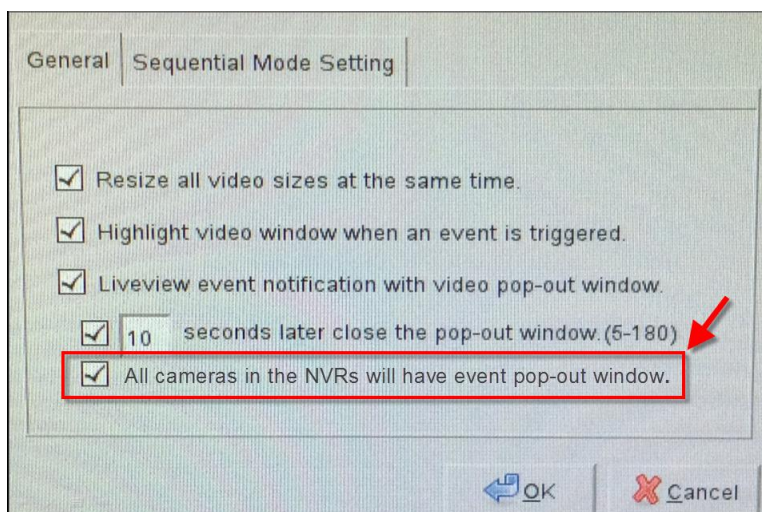
If user enable **event pop-out window for all cameras**, all channels in NVR camera list will pop-out a video when events happen.



Normal



Event triggered from NVR's Camera List



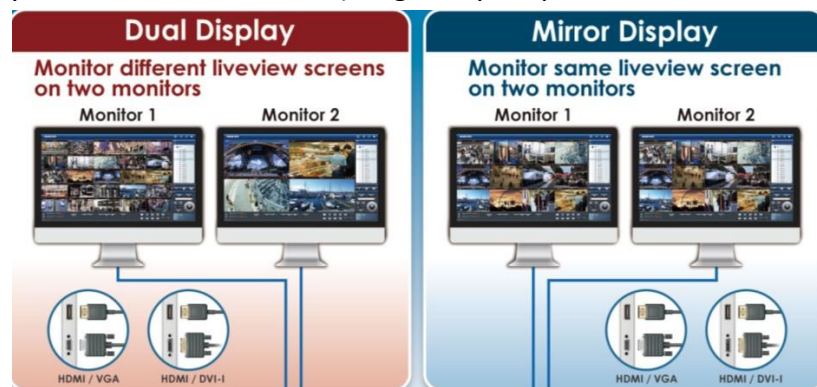
⚠ Note: NVR will pop-out video event window once a time, depending on which event is triggered earlier when more than one event one event is triggered at the same time.

④ Enable dual display

Via HDMI/ VGA/ DVI-I video output, NVR supports **dual display for liveview monitoring** allowing users to flexibly monitor your place in different display modes at two places.

Users can individually design display mode and camera channels on each monitor via camera list and add/drop button. NVR also allows users to **click and drag** one camera channel from monitor1 to monitor2.

Without installing extra PC, users can use either **mirror display** (same liveview display mode on two monitors) or **dual display** (different liveview display modes on two monitors) to guard your place.



- ⚠ **Note1:** Dual display is supported in NVR Pro+ series.
- ⚠ **Note2:** Monitor connected with HDMI is monitor1 while monitor connected with VGA or DVI-I is monitor2.
- ⚠ **Note3:** 1024 X 768 resolution is not supported.
- ⚠ **Note3:** Dual display may influence display performance. To enhance display fluency, please decrease the number of cameras or reduce camera parameters such as resolution, bitrate and frame rate.
- ⚠ **Note4:** NVR adopts **mirror display** in default.

When enable dual display, you can check display connector type in the bottom right corner

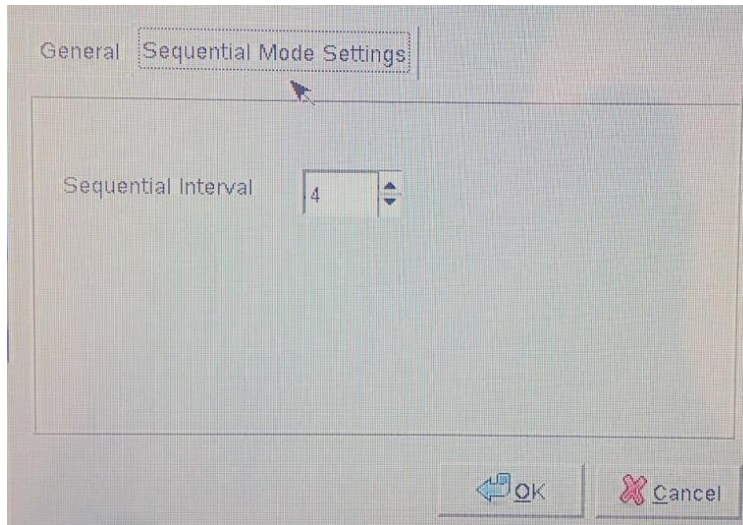


- ⚠ **Note:** One camera can be ONLY added on one monitor. Camera name

marked in **gray** means it has been added on the monitor.

2) Sequential mode setting

Click sequential interval to set the numbers of user-defined seconds for sequential mode.

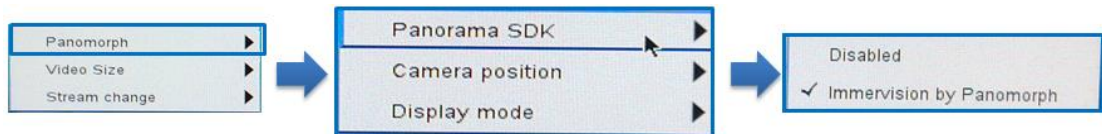


3.3.3 Right Click Functions on Video Window

1. Panomorph (Software Dewarp):

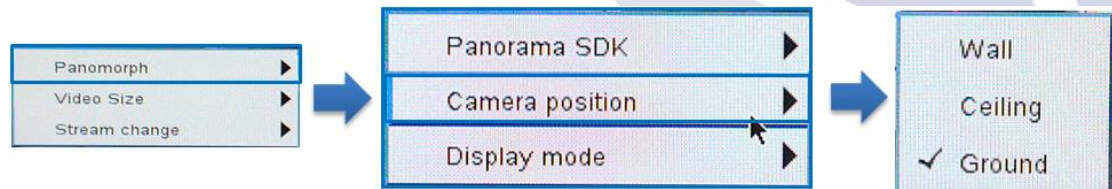
NVR Pro+ series can **dewarp up to 5 MP Panomorph IP cameras** on local display.

(1) Choose dewarp type

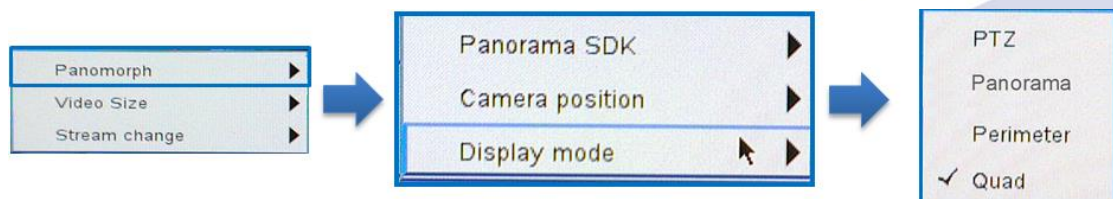


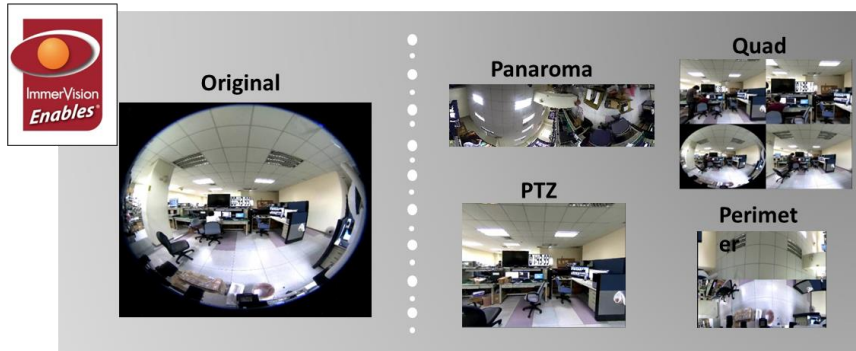
⚠ Note: NVR supports IP cameras equipped with Immersion's Lens and VIVOTEK dewarping engine now.

(2) Choose camera position

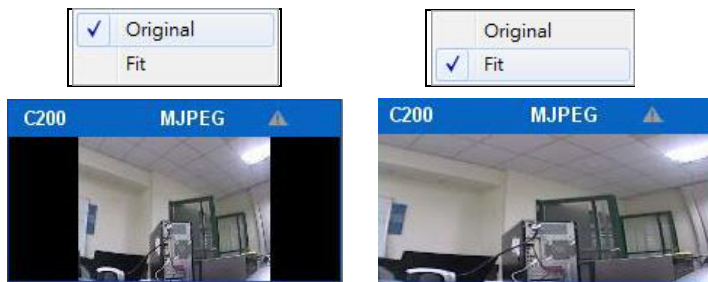


(3) Choose display mode





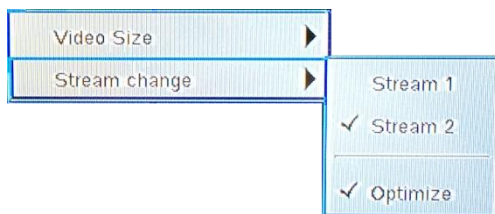
2. Video Size: Original or Fit



3. Streaming change:

NVR allows users to setup the dual streaming configurations in camera parameter page if cameras support dual stream. It is suggested stream 1 is set for higher resolution and stream 2 for lower resolution, which helps users to choose the proper streaming in live view with intuitive control.

To switch the different streaming, users can select the channel in live view page and right click the mouse to show the list.



When "Optimize" is enable, streaming type is adjusted automatically in different display modes. When users select the display mode with **more than 16ch**, NVR will automatically change to stream2 for smooth real time viewing experiences

- (1) 1/3/4/5+1/8/9/10/12/12+1-ch display mode:
liveview image automatically show the main stream(stream1)



- (2) 16/20/25/30/36/42/49/56/64-ch display mode:
liveview image automatically show the sub stream(stream2)



When “Optimize” is disabled, users can manually adjust streaming type, which will be memorized in different display modes.

4. Display Camera Status Bar:

Users can hide or display camera status bar depending on user preference.



3.3.4 Zooming with Mouse Scroll

In addition to digital zoom in/out button, users can use mouse scroll to prevent potential crisis in live-view monitoring.

⚠ Note: For PTZ cameras, zooming with mouse in live-view is adopted optical zoom in/out. If users would like to view more detailed image, please **use zooming with mouse scroll first** and then click **digital zoom in/out button**.

Please click on the video window and use mouse scroll to zoom in or zoom out image



To press and hold left mouse button, drag the image to the place that you would like to monitor.



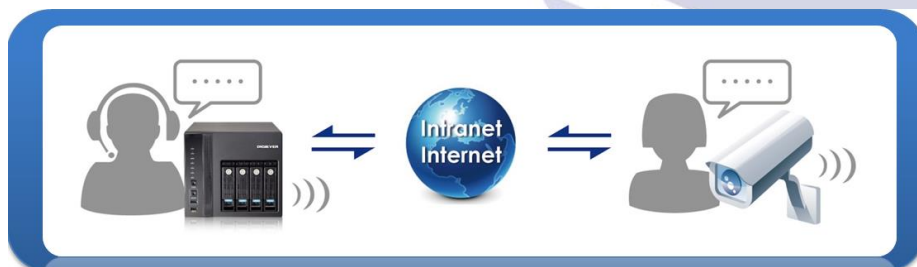
3.3.5 Two-way Audio

Two-way audio allows user to **remotely communicate via NVR and IP cameras**.

Through **external audio sound adapter**, users can connect speaker and microphone to NVR to verbally communicate with people around cameras.

Applications:

- (1) Via speaker, users can hear sounds captured from remote camera sites to have the latest update.
- (2) Via microphone, users can reply it back to remote camera sites.



3.4 Playback

Playback is a function that allows users to view recorded videos from cameras connected to NVR. NVR offers synchronized playback up to four cameras and easy steps provided to help user sort through the recorded videos quickly.



3.4.1 Steps to Playback Videos

Users can easily search recorded videos by following playback steps. Frame by frame playback and rewind feature can also help users to minimize searching time.

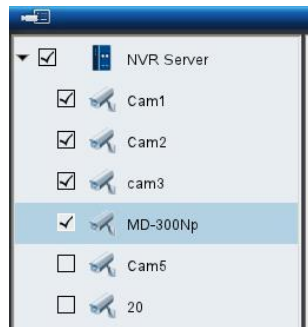


Please follow the following four steps to start playback:

- 1 Select cameras from camera list
- 2 Select date and time period
- 3 Select recording type
- 4 Click "Play"

1. Select cameras from camera list

Users can select up to four cameras to play the recorded video.



2. Select date and time

Users can designate the specific date and time to playback video.

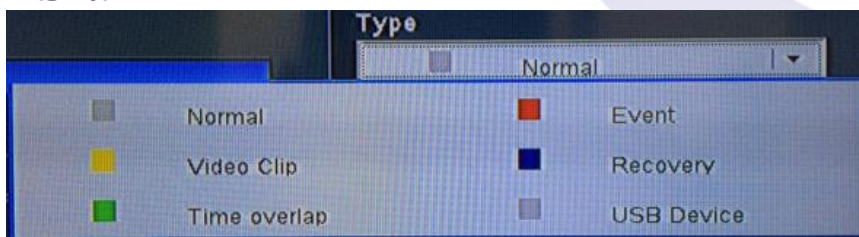
If the selected cameras have recorded videos, the date will be shown in a blue background in default (Normal Record).



Users can select the date from calendar to start playback for a specific day. Or users can set up specific date and time in Start Time and End Time column.

3. Select recording type

There are six types of recorded videos in different colors: **Normal Record (gray)**, **Event (red)**, **Video Clip (yellow)**, **Recovered File (blue)**, **Time Overlap (green)** and **USB Device(gray)**.



The date will change the color of background when users select different recording type.

4. Click "Play"

Please click play button  to start playback.

Frame by Frame Playback

- 1 Follow above four steps to playback
- 2 Click "Pause" button
- 3 Click "Previous frame" or "Next frame" button



3. Previous frame

3. Next frame

2. Pause

3.4.2 Description of Recording Types

1. Normal Record (gray):

Normal Record means there is no special conditions happened such as event, time overlap. It helps users to know at that time whether NVR has recorded videos or not.

2. Event (red):

Event means an event is triggered at that time, which helps users to efficiently find event recorded video. Please set up event setting in advance. For more information, please refer to **5.2.4 Event & Action Management**

3. Video Clip (yellow):

Video Clip means a brief video clip set by user to manage on event triggered recording file, allowing to be sent by E-mail as well and user can change the Pre-time (up to 10 sec.) and Post-time (up to 10 sec.) in Configuration Page> Recording & Event> Event & Action Management > Advanced Settings as below:

The screenshot shows the 'Advanced Settings' configuration page. The 'Video Clip' section is highlighted with a red box, showing 'Seconds before event being triggered' set to 3 and 'Seconds after Event' set to 3. Below it, 'Recording Settings' shows 'Seconds before event being triggered' set to 300 and 'Seconds after Event' set to 300. The 'Event Triggered with Audio' checkbox is unchecked. A tip at the bottom states: 'Tip: When 'Event Triggered with Audio' is enabled, the audio of all cameras will be disabled to do recording until the event is triggered. And when the event stops, the audio will be disabled again accordingly. All above will not influence the audio function in liveview.'

4. Recovered File (blue):

Recovered File is generated once the NVR server resumes working once the power electric back. This is special unique and advanced feature of NVR.

For an example, when the premises was broken into and the main power switch was cut, there was a period of critical time of recording files were captured by IP camera but it was not insufficient time to be converted the temp video files to be wrote into hard disk drive. Once the NVR server gets power resume, the NVR is able to generate a so-called Recovered File and save on hard disk drive. User can then find out the critical evidence clips if the camera successful captured the scenario.

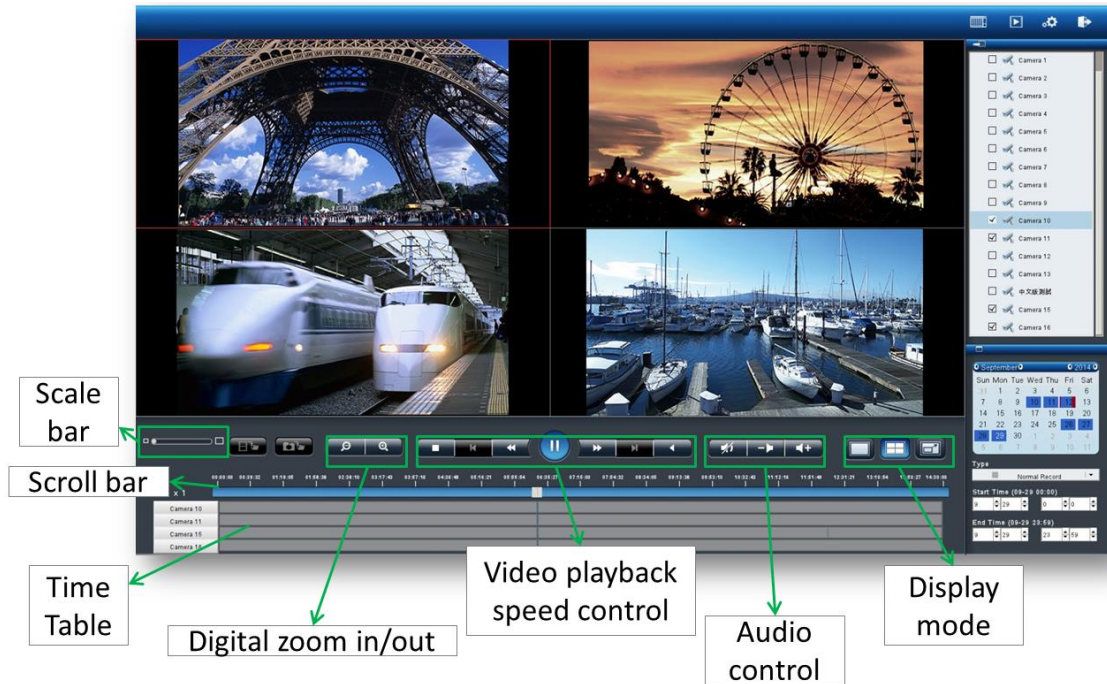
5. Time Overlap (green):

Time Overlap file is generated once NVR server's time is changed during recording task. For examples, using NVR's built-in NTP server to synchronize a required time, or alter the NVR server time manually, or change the time zone and enable daylight saving time.

6. USB Device(gray)


USB device will show when you insert USB device to NVR's USB backup port. Users can directly playback videos exported in "original video files" format on NVR playback page. For more information, please refer to **3.4.4 Export Files**.

3.4.3 Main Functions of Playback



1. Display mode




The screen shows the recording time of each channel in the top of each grid.

Click  to view the video in full screen.

One-screen  and four-screens  are also provided to display playback.

2. Audio control

The audio will be played according to the channel selected on the screen.

Icon	Description
	Mute: Disable audio for all playback channels.
	Volume down: volume less than the normal volume setting
	Volume up: volume more than the normal volume setting

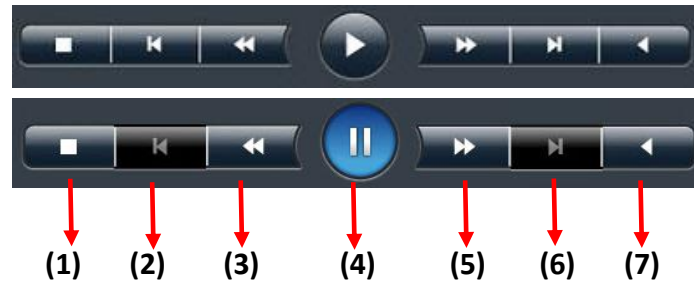
3. Digital zoom in and digital zoom out



The image can be enlarged by clicking digital zoom-in button.

The image can also return to previous sizes by clicking the digital zoom out button.

4. Video playback speed control



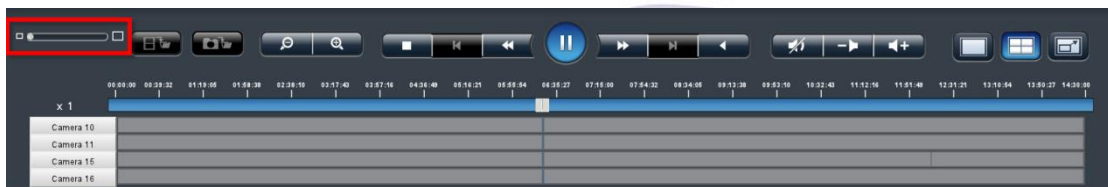
- (1) **Stop:** to clear playback videos
- (2) **Previous frame:** to show the earlier frame
- (3) **Slow motion:** to play in slower speed
- (4) **Play/ Pause:** to play video file or to temporarily stop the playback
- (5) **Fast forward:** to play in faster speed
- (6) **Next frame:** to show the next frame
- (7) **Rewind:** to let video automatically wind backward

Playback speed status is beside scroll bar.



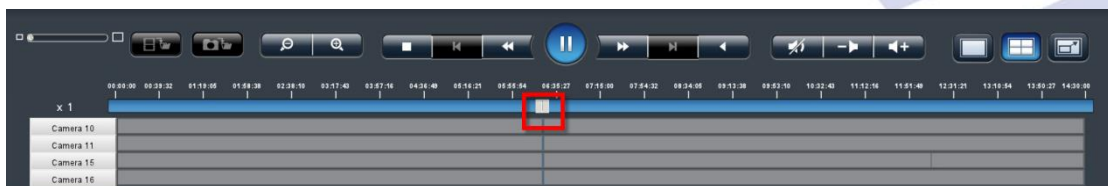
5. Scale bar

Users can move the bar to enlarge or narrow down time period to check video footage in time table.



6. Seek bar

By moving seek bar, users can go to the specific recording time directly. Date and time are shown above seek bar to provide time reference.



3.4.4 Export Files

Export function allows users to export file to **USB device** or **USB type DVD burner** directly.



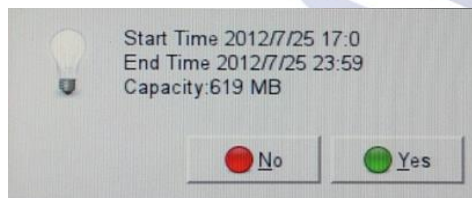
Please select cameras, video file types, date and the time period first, and then click the export button to copy the files.

⚠ Note: NVR offers 3 formats to export recorded videos depending on different security level. More information, please refer to 5.6.4 USB Backup -> 3. **Advance Settings**

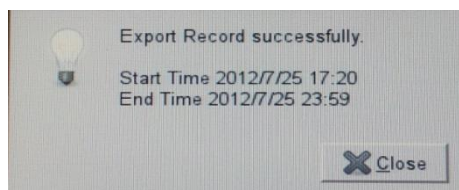
Users will be asked whether NVRPlayer and NVRCheck should be downloaded with video files.

⚠ Note: NVRPlayer is the player to view video files from NVR.

⚠ Note: NVRCheck is the verification tool to verify if the recorded files are originated from NVR.



Users can check start time, end time and capacity before implement the files export.



If the export is successful, the message will be shown as above.

3.4.5 Snapshot

Users can have the snapshot while having the playback in local display. It needs to plug in **USB device** for the export of snapshot images and it will have 10 sequential images to be saved in the USB dongle.




3.4.6 Zooming with Mouse Scroll


In addition to digital zoom in/out button, users can use mouse scroll to find out crucial proof in incident site in playback

Please click on the video window and use mouse scroll to zoom in or zoom out image
To press and hold left mouse button, drag the image to the place that you would like to monitor.

3.5 Others

3.5.1 Screenshot on Local Display

Press "PrtSc SysRq"  the image of full screen in local display can be pictured in the NVR HDDs. The image will be saved in the folder "Public." Users can reach the folder from remote web browsers and access the file by a remote PC's Windows Networking and FTP Service.

 **Note:** To use Windows Networking and FTP Service, please enable both in "File Sharing Service" in configuration page. Please refer to chapter 5.3.3 File Sharing Service.

3.5.2 System Upgrade on Local Display

NVR supports system upgrade in local display. For more information, please refer to Chapter 5 - 5.7.2 System Upgrade.

⚠ Note: System upgrade in local display is supported in Pro series and Pro+ series.

3.5.3 USB Backup by Hardware or Software USB BACKUP Buttons

Users can easily back up recorded video by clicking “USB Backup” button on NVR or software USB BACKUP virtual button on local configuration page. Depending on different requirements, users can insert **USB dongle or USB type DVD burner** to export confidential videos. For more information, please refer to **5.6.4 USB Backup**.

Chapter 4. Use NVR by Remote Web Browser

Users can use multiple web browsers (IE/ Firefox/ Opera/Opera browser in Windows) to monitor the network camera and view playback.

4.1 Liveview

After the Quick Configuration is complete, NVR will guide you to live view. Users can view live video stream from IP camera via network and monitor the instantaneous view remotely.







Liveview displays the video according to the camera list which has been configured in camera settings of Quick Configuration.



4.1.1 Select View Modes on Liveview Page



On top right of live view, users can select four view modes.

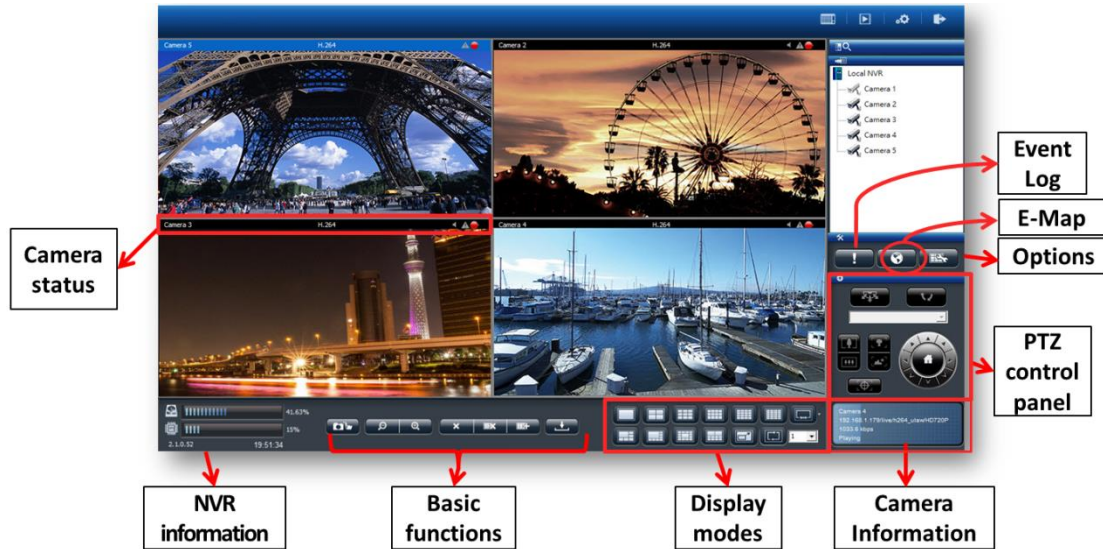
Mode	Description
	Liveview: Click “ Liveview ” to control the monitoring instantaneously.
	Playback: Click “ Playback ” to play and to export the recorded video files.
	Configuration: Click “ Configuration ” to configure camera, recording, event, management, network, quick configuration and system.
	Logout: Click “ Logout ” to leave NVR.

Multi-window Operation:

Multi-window operation allows users to individually execute liveview, playback and configuration in different web pages to operate multi-task monitoring to enhance surveillance efficiency.



4.1.2 Main Functions for Liveview



1. Camera status

Icon	Description
	Camera name: The name of the camera is located in the top left corner in each video window. Users can rename the camera via the path "Configuration->IP Camera->Camera Settings."
	Video compression format: M-JPEG/MPEG-4/H.264
	Audio: Once camera supports audio, NVR shows audio in blue when you select the window. Vice versa, NVR shows audio in grey.
	Event: When event happens, NVR shows warning to user for instant alert.
	Recording status: The red icon shows whether camera is recording or not. If there is a temporary no recording situation, the icon will be blinking.
	Blue border: The outline border surrounds the selected window to highlight the focus image.

2. NVR information:

(1) Firmware version:

Users can find out the firmware version directly without entering configuration page.



(2) Current time

Users can find out current time directly.

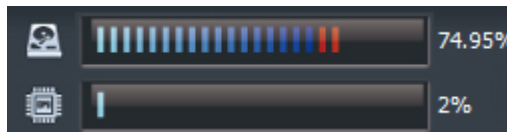


(3) Disk and CPU loading indicator:

Users can find out Disk and CPU loading directly without entering configuration page.





Disk and CPU indicator shows blue when loading is 70% or under, and shows red as a warning when it reach to more than 70%.






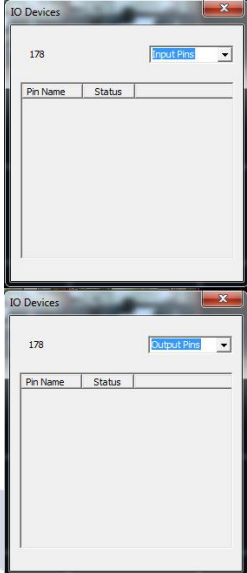




With changing the video configuration, like resolution, FPS and video quality or changing RAID type, can influence the CPU loading, and users can easily find the best balance in NVR.

3. Basic function:

The function of each button will be briefly described below:

Icon	Description
	<p>Snapshot: Click on the “Snapshot” to save snapshots. Then, a window will pop up to display the image.</p>  <p>There are three functions for snapshot:</p> <p>1) Clipboard: To copy image to computer’s temporary memory. User can paste image to graphics painting program such as Paint for advanced editing.</p>

	<p>2) Save: To save image to desired path.</p> <p>3) Cancel: To cancel snapshot.</p>
	<p>Digital zoom in/ out: Select a channel to enable digital zoom function</p>
	<p>Drop: Drop the camera from monitoring.</p>
	<p>Drop all: Drop all cameras from monitoring.</p>
	<p>Add all: Add all cameras from monitoring.</p>
	<p>Remote IO: Check camera DI/DO control for its input pins and output pins.</p> <p>⚠ Note: This feature supports Brickcom cameras for now.</p> <p>(1) Camera Input: Directly check camera input status (On or Off)</p> <p>(2) Camera Output: Directly check and enable/disable camera output setting</p> <p>If camera does not support DI/DO feature, a window will pop up as below.</p>  
	<p>Camera information: Consist of Camera Name, IP address, bit rate, and status.</p>

4. Display mode

NVR supports multi-display modes for monitoring. Click the icon of display mode to monitor live view. When you click a display mode, the mode icons will turn into blue.

Icon	Description
	1 screen
	4 screen
	9 screen
	12 screen
	16 screen
	20 screen
	3/5/25/30/36/42/49/56/64 screen
	5+1 screen
	8 screen
	12+1 screen
	10 screen
	Full Screen
	Sequential mode








Click  to choose the page of liveview


 1
 2
 3
 4


5. PTZ Control Panel


If IP camera supports PTZ function, users can use the control panel to adjust the viewing angle. The following functions are available depending on the camera models.

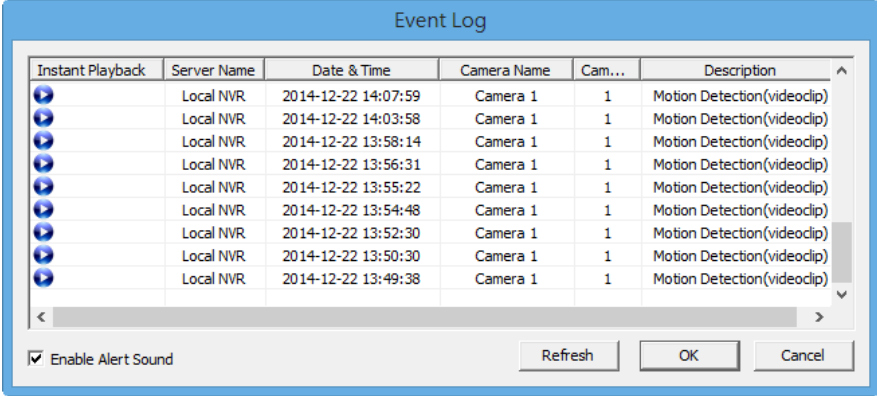
⚠ Note: Please check the compatible list before using joystick to adjust PTZ cameras.

Icon	Description
	<p>PTZ panel:</p> <p>PTZ allows users to monitor large areas with a single network camera. Pan, tilt, and zoom functions can be controlled remotely by users. If device supports PTZ control, users can click on the arrows to pan and/or tilt the camera. The house in the middle can take users back to original monitoring position.</p>
	<p>Preset positions:</p> <p>Select the preset positions which are defined in PTZ camera and the camera will move to the position that user selects.</p>
	<p>Optical zoom in/ out:</p> <p>If camera supports PTZ control, users can adjust PTZ camera to zoom out or zoom in.</p>
	<p>Focus near / far:</p> <p>If camera supports PTZ control, users can adjust the focus of the PTZ camera to focus near or focus far.</p>
	<p>Auto Focus:</p> <p>To automatically focuses the camera lens on a subject.</p>
	<p>Schedule for PTZ:</p> <p>Select “Set” to set camera preset position. (reserved)</p> <p>It can open the dialog to set how many times PTZ cruise to repeat and how many seconds stay between each preset point</p> <div data-bbox="523 1610 1115 1805" style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p>Repeat(1~999 times, 1000:infinite): <input type="text" value="1000"/></p> <p>Interval(3~1200 seconds): <input type="text" value="5"/></p> <p style="text-align: right;"><input type="button" value="OK"/> <input type="button" value="Cancel"/></p> </div>
	<p>Schedule for PTZ:</p> <p>Click “Go” to start PTZ patrol schedule.</p>

6. Event log:


- (1) **Event Log:** to instantly notify users of **external events**. When an event is triggered, the icon will start blinking in **red** exclamation mark. 


After clicking the button and select **“Event Log”**, a window will pop up to display the list of event log as below. At the same time, the icon will stop blinking. 

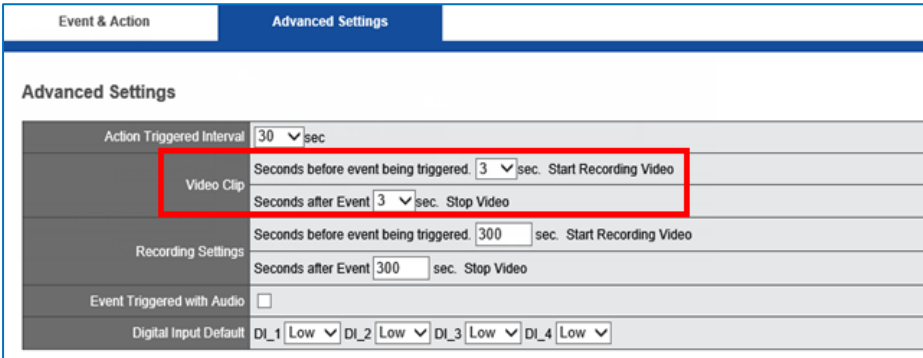


The screenshot shows a window titled "Event Log" with a table of event entries. Each entry has a play button icon in the "Instant Playback" column. Below the table are checkboxes for "Enable Alert Sound" and buttons for "Refresh", "OK", and "Cancel".

Instant Playback	Server Name	Date & Time	Camera Name	Cam...	Description
	Local NVR	2014-12-22 14:07:59	Camera 1	1	Motion Detection(videoclip)
	Local NVR	2014-12-22 14:03:58	Camera 1	1	Motion Detection(videoclip)
	Local NVR	2014-12-22 13:58:14	Camera 1	1	Motion Detection(videoclip)
	Local NVR	2014-12-22 13:56:31	Camera 1	1	Motion Detection(videoclip)
	Local NVR	2014-12-22 13:55:22	Camera 1	1	Motion Detection(videoclip)
	Local NVR	2014-12-22 13:54:48	Camera 1	1	Motion Detection(videoclip)
	Local NVR	2014-12-22 13:52:30	Camera 1	1	Motion Detection(videoclip)
	Local NVR	2014-12-22 13:50:30	Camera 1	1	Motion Detection(videoclip)
	Local NVR	2014-12-22 13:49:38	Camera 1	1	Motion Detection(videoclip)

Users can easily read detailed event information and playback recorded video (video clip) by clicking  in instant playback column.

-  **Note:** The default length of video clip for instant playback is 6 seconds. Users can edit the length of video clip by visiting configuration page: Recording & Event > Event & Action Management > Advanced Settings



The screenshot shows the "Advanced Settings" page for "Event & Action Management". A red box highlights the "Video Clip" settings, which include "Seconds before event being triggered" (3) and "Seconds after Event" (3).


Section	Setting	Value	Action
Video Clip	Seconds before event being triggered	3	Start Recording Video
	Seconds after Event	3	Stop Video
Recording Settings	Seconds before event being triggered	300	Start Recording Video
	Seconds after Event	300	Stop Video
Event Triggered with Audio	<input type="checkbox"/>		
Digital Input Default	DI_1	Low	DI_2 Low DI_3 Low DI_4 Low

- **Enable Alert sound**

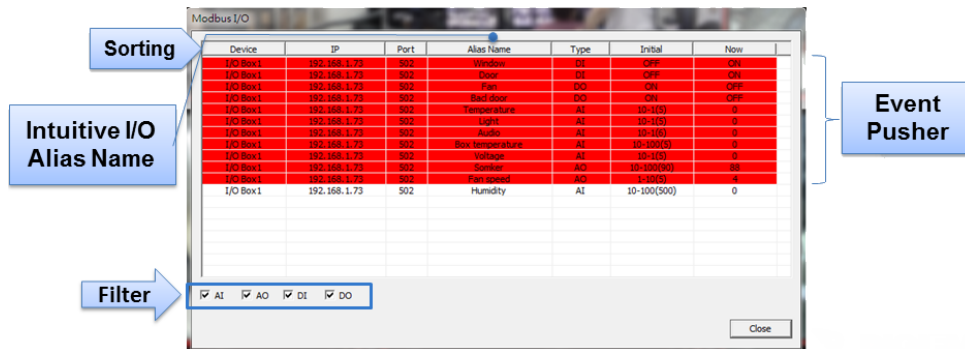
If users enable the function, the PC will sound the alarm to notify users when an event is triggered.

(Alert sound can also be set in Option>General.)

- (2) **Modbus I/O Box Status:** to display and notify all Modbus I/O boxes' information and status without entering configuration page.

Once Modbus I/O event is triggered, event log icon will blink in **yellow** exclamation mark. 

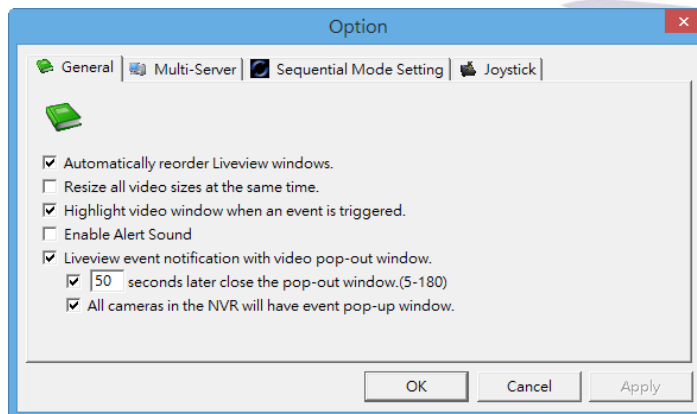
After clicking the button and select “**Modbus I/O**”, a window will pop up as below. It will stop blinking when the event is solved or stop.



- ① **Intuitive I/O alias name:** User-defined I/O name to indicate what kind of event is triggered.
- ② **Event pusher:** Event will be pushed on the top of window and blink in red color when I/O is triggered.
 - ⚠ Note: If there is more than one event are triggered, NVR will arrange them in I/O type order. (DI->DO->AI->AO)
- ③ **Sorting:** to view I/O information in desired order by clicking top panel
- ④ **Filter:** to display or hide I/O type.

7. Option:

1) General:

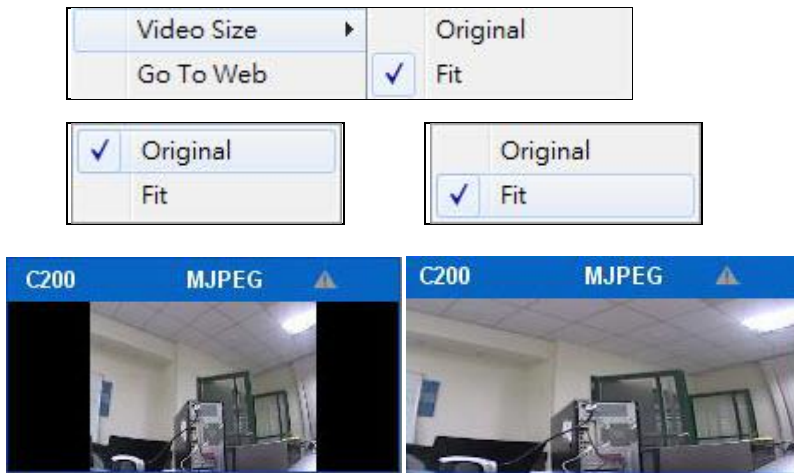


① **Automatically reorder Liveview windows**

To rearrange video in order without blank grid after users drop video from live-view.

② Resize all video sizes at the same time

Only a right click on the video, users can set "all" video size either in original size or fit size.



③ Highlight video window when event is triggered

The option of "Highlight video window when event is triggered" is a warning frame which will pop out on the channel when an event is detected.



When the motion event is awarded, user can simply click on the channel with mouse, the warning frame will be stopped.



④ Enable Alert sound


If users enable the function, the remote web browser will sound the alarm to notify users when motion detection is triggered.

⑤ Liveview event notification with video pop-out window

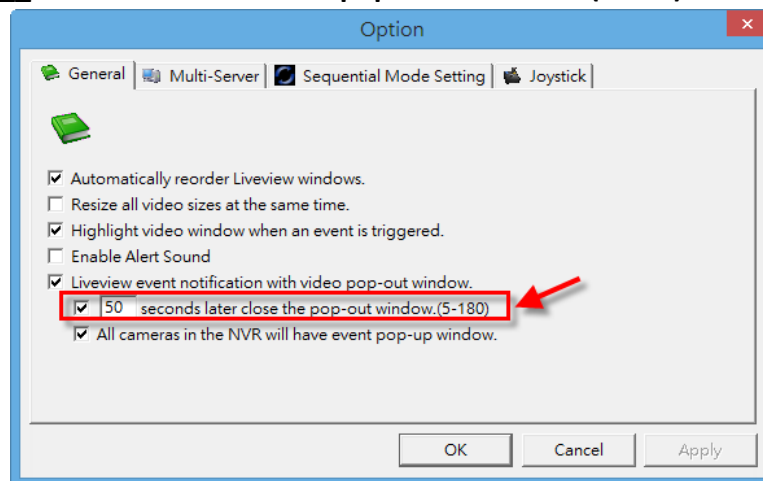
Once the feature is enabled, a new window will pop out when an event is

triggered so as to inform users of event happened at the very first time.



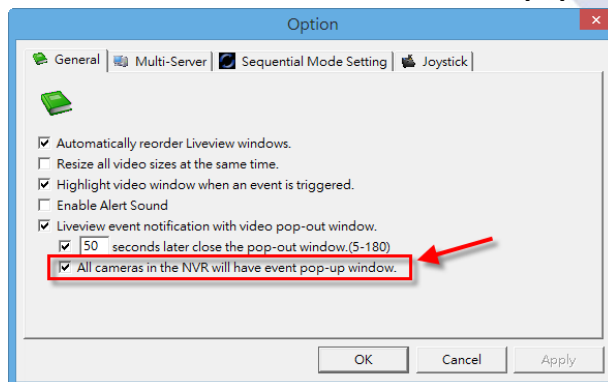
By clicking  button at the top-right corner, users can manually close the pop-out window.

 seconds later close the pop-out windows. (5-180)




Users can select an optional feature to make the pop-out window automatically close after users assigned seconds. (Default is 10 seconds)

All cameras in the NVR will have event pop-out window.

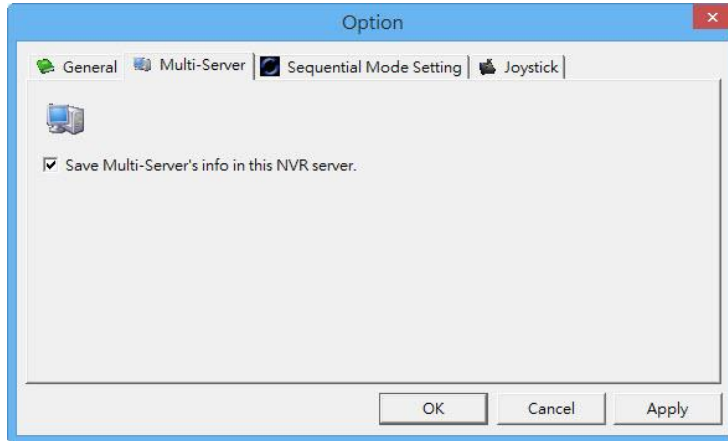


If user enables **event pop-out window for all cameras**, all channels in NVR camera list will pop-out a video when an event is triggered.

 **Note:** NVR will pop-out video event window once a time, depending on which event is triggered earlier when more than one event is triggered at the same time.

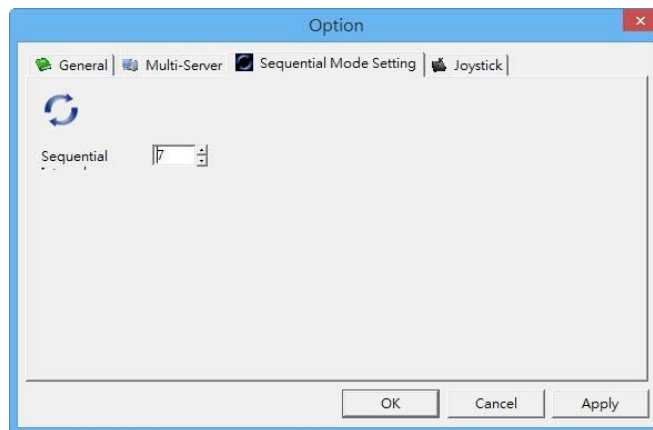
2) Multi-Server:

Users can save the camera list of multi-server on live-view page.



3) Sequential Mode Setting:

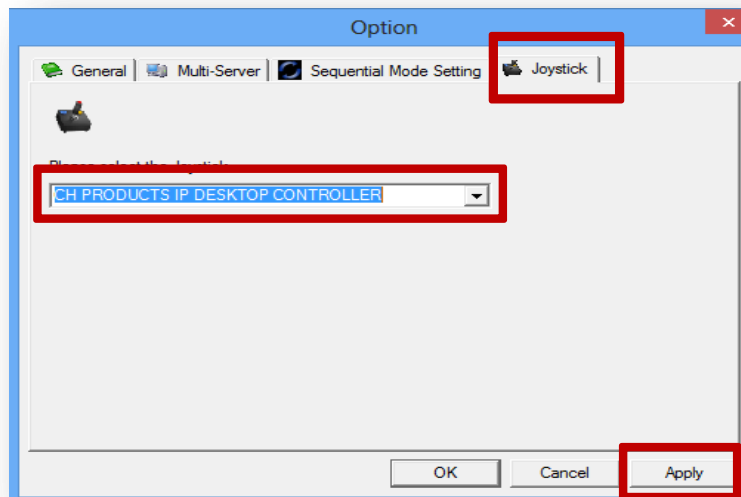
Click sequential interval to set the numbers of user-defined seconds for sequential mode.



4) Joystick

Users are able to manipulate PTZ camera with USB joystick.

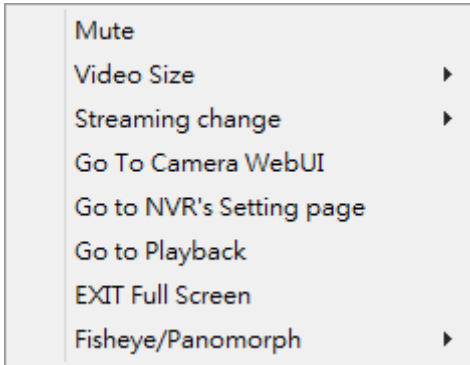
Choose the joystick column and select joystick model then press **“Apply”**



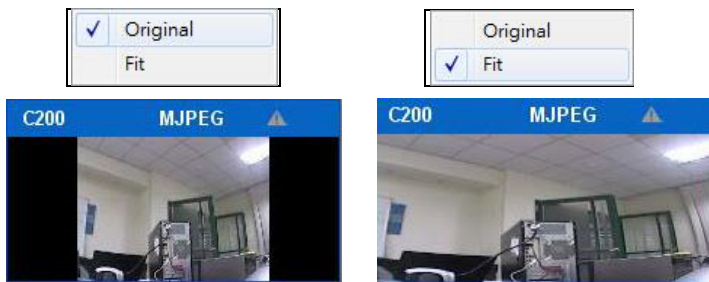
Joystick can work on PTZ cameras as the status bar is with PTZ icon.



4.1.3 Right Click Functions on Video Window



1. **Mute:** To mute the audio of the video
2. **Video Size:** Original or Fit

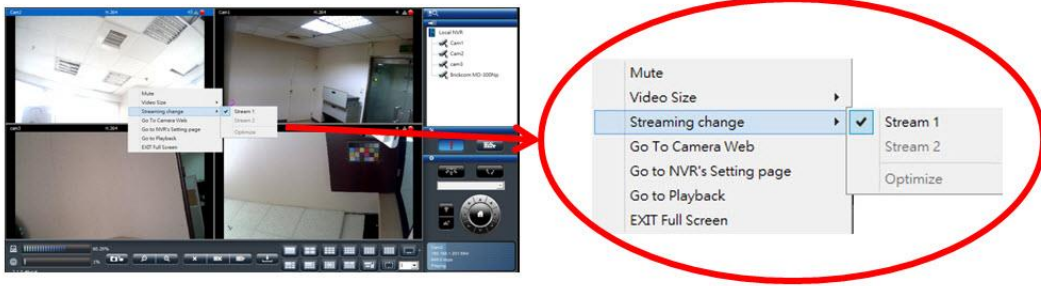


3. **Streaming change:** To exchange the streaming resource.

(1) Exchange Streaming

NVR allows users to setup the dual streaming configurations in **cameras parameters** page if cameras support dual stream. It is suggested stream 1 is set for higher resolution and stream 2 for lower, which helps users to choose the proper streaming in live view with intuitive control.

To switch different streaming, users can select the channel in the live view page and right click the mouse to show the list.



(2) Optimize

When "Optimize" is enable, streaming type will be adjusted automatically for different display modes. When users select the display mode with **more than 16ch**,

NVR will automatically change to stream2 for smooth real time viewing experiences.

- (1) 1/3/4/5+1/8/9/10/12/12+1-ch display mode:
liveview image automatically show the main stream(stream1)



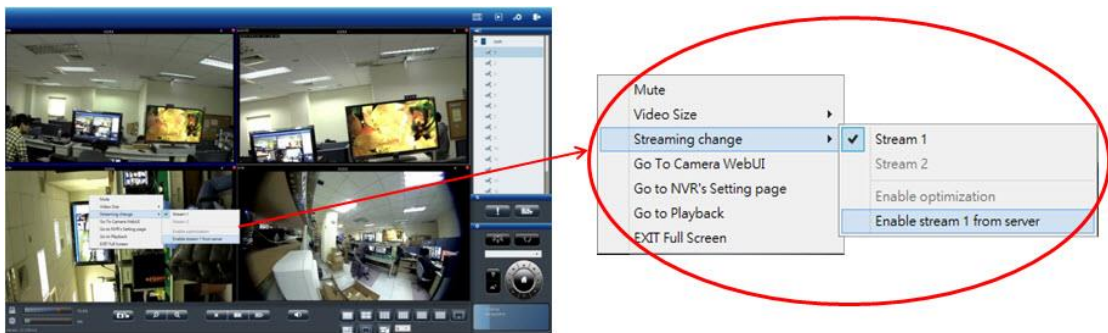
- (2) 16/20/25/30/36/42/49/56/64-ch display mode:
liveview image automatically show the sub stream(stream2)



When “Optimize” is disabled, users can manually adjust streaming type, which will be memorized in different display modes.

(2) Stream from Server

In case that NVR performance is violated by camera limitation, stream from server is an optional choice for users to view video images. It is highly recommend to use “**Enable Optimization**” to perform real-time monitoring



⚠ Note: Enable stream 1 from server may influence the efficiency of NVR.

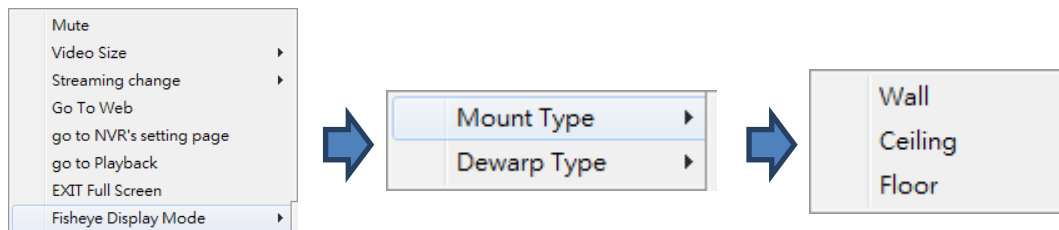
4. **Go To Web:** Go to camera configuration page.
5. **Go to NVR's Setting page:** To open a new browser to camera configuration page.
6. **Go to Playback:** To open a new browser to Playback.
7. **EXIT Full Screen:** To exit full screen

8. Fisheye Display Mode: To view the best image quality by choosing use the proper engine of fisheye cameras or cameras with Immervision lenses.

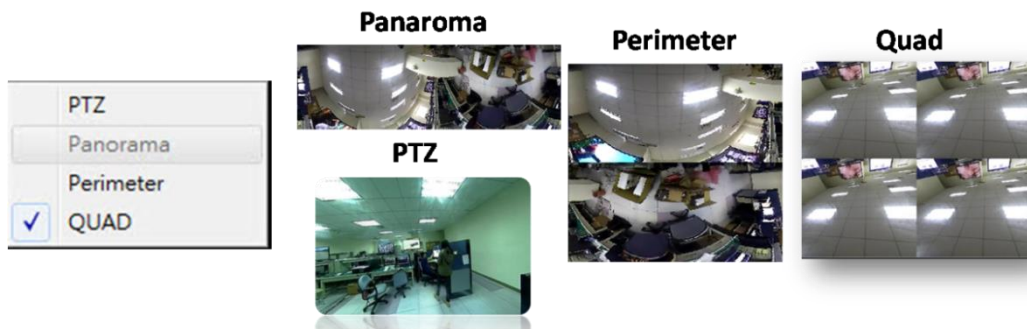
a. Choose dewarp type:



b. Choose mounting type:



c. Chosse display mode:



4.1.4 Zooming with Mouse scroll

In addition to digital zoom in/out button, users can use mouse scroll to prevent potential crisis in live-view monitoring.

⚠ Note: For **PTZ cameras**, zooming with mouse in live-view is adopted optical zoom in/out. If users would like to view more detailed image, please **use zooming with mouse scroll first** and then click **digital zoom in/out button**.

Zoom in/out: To click on the video window and use mouse scroll to enlarge the image.



View enlarged images:

To press and hold left mouse button, drag the image to the place that you would like to monitor.

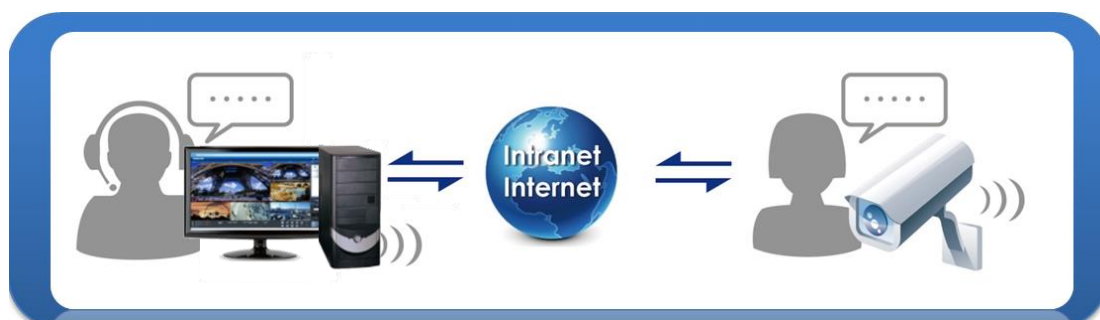


4.1.5 Two-way Audio

Two-way audio allows user to **remotely communicate via PC and IP cameras**, which provides more flexibility in diverse surveillance applications.

Applications:

- (1) Via speaker, users can hear sounds captured from remote camera sites to have the latest update.
- (2) Via microphone, users can reply it back to remote camera sites.



4.1.6 Built-in Mini-CMS Server

NVR can be a mini-CMS server to connect to other NVR in LAN and WAN by clicking “Search NVR” button. It becomes a convenient method to help users protect their regions by simultaneously monitoring other remote sites without installing any other extra VMS software. Users can select a maximum of up to 256 channels to add them into camera list.

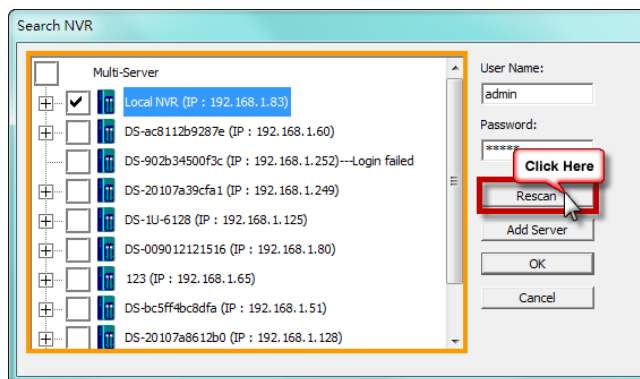


1. Add NVR

NVR offer two methods to remotely add other NVRs: Rescan and Add Server

[Method1] Rescan

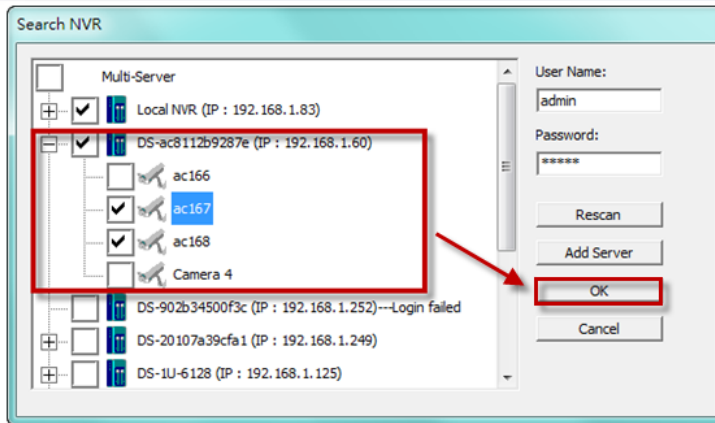
Please enter proper username and password of new adding NVR and click “Rescan” button to search NVR in LAN.



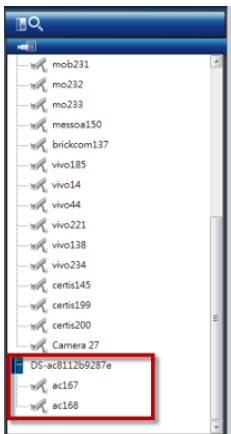
NVR in LAN will appear, including the local NVR.

⚠ Note: Rescan only supports NVR in LAN.

Please choose NVR and camera which you are going to add to the local server, and click “OK” button.

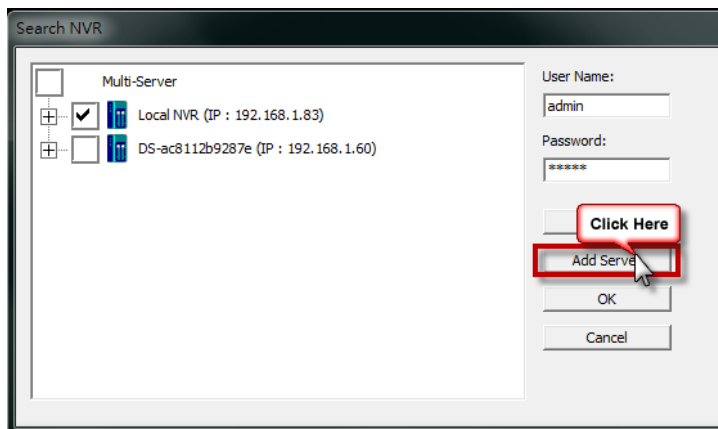


New added channels will display in the cameras list on remote liveview webpage as below.

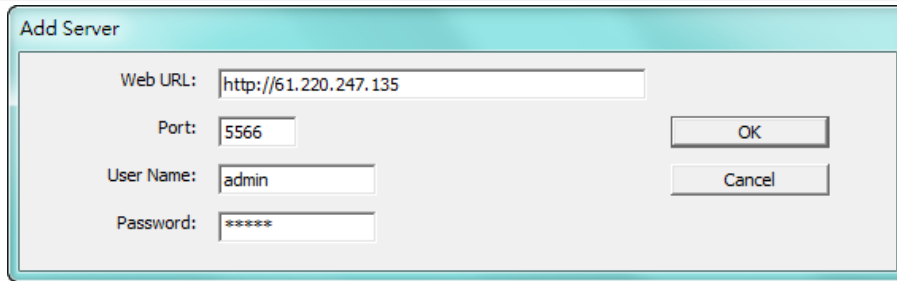


[Method2] Add Server

Please click “Add Server” button to add NVR.




Please enter IP address, port, username and password, then click “OK” to apply.

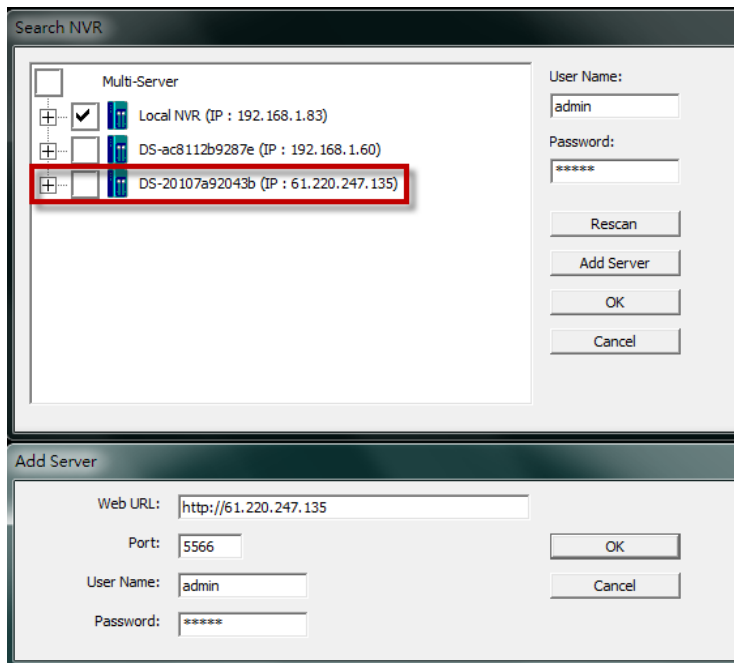


The 'Add Server' dialog box contains the following fields and buttons:

- Web URL:
- Port:
- User Name:
- Password:
- Buttons: OK, Cancel

 Note: NVR can be manually added in WAN or LAN.

You can see the NVR in mini-CMS list.



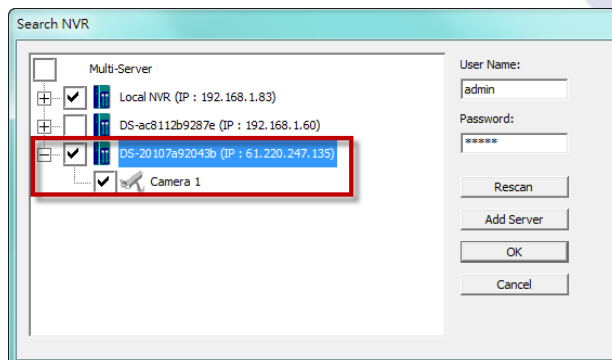
The 'Search NVR' dialog box shows a list of NVRs with the following details:

- Multi-Server:
- Local NVR (IP : 192.168.1.83)
- DS-ac8112b9287e (IP : 192.168.1.60)
- DS-20107a92043b (IP : 61.220.247.135)

The 'Add Server' dialog box below it contains the same fields as the first image:

- Web URL:
- Port:
- User Name:
- Password:
- Buttons: Rescan, Add Server, OK, Cancel

Please choose NVR and camera which you are going to add to the local server and Click "OK" button. Then, new added channels will display in the cameras list on remote liveview webpage.



The 'Search NVR' dialog box shows the following selection:

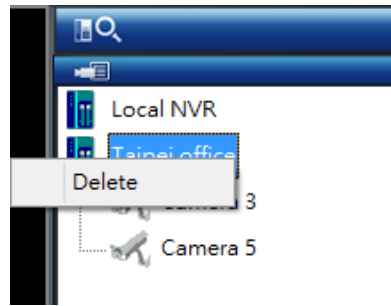
- Multi-Server:
- Local NVR (IP : 192.168.1.83)
- DS-ac8112b9287e (IP : 192.168.1.60)
- DS-20107a92043b (IP : 61.220.247.135)
- Camera 1

The 'Add Server' dialog box below it contains the same fields as the first image:

- Web URL:
- Port:
- User Name:
- Password:
- Buttons: Rescan, Add Server, OK, Cancel

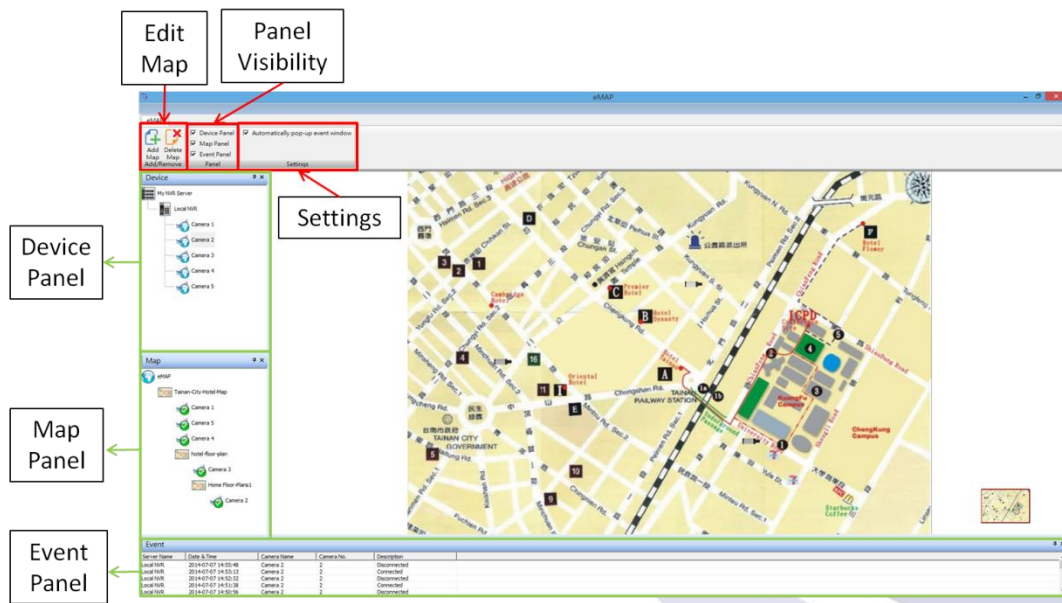
2. Delete NVR

Right-click the NVR on camera list. Click “Delete” to delete NVR



4.2 Multi-layer Dynamic E-Map

NVR provides **multi-layer E-Map feature** on liveview monitoring as a quick navigation to indicate the physical location of cameras. Users can drag and drop camera icons to multi-layer E-Maps and enable pop-out event window to receive the latest event situation once event occurs.



Please click “E-Map” button to start monitoring via dynamic E-Map. An E-Map window will pop-out as below picture.


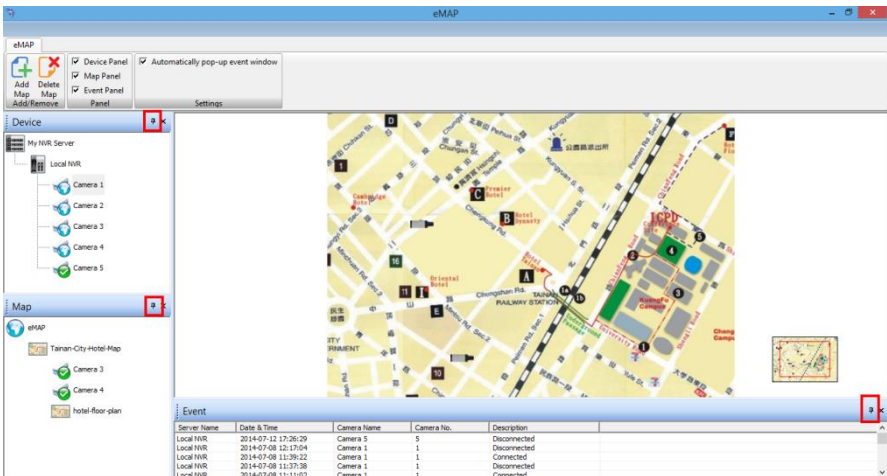

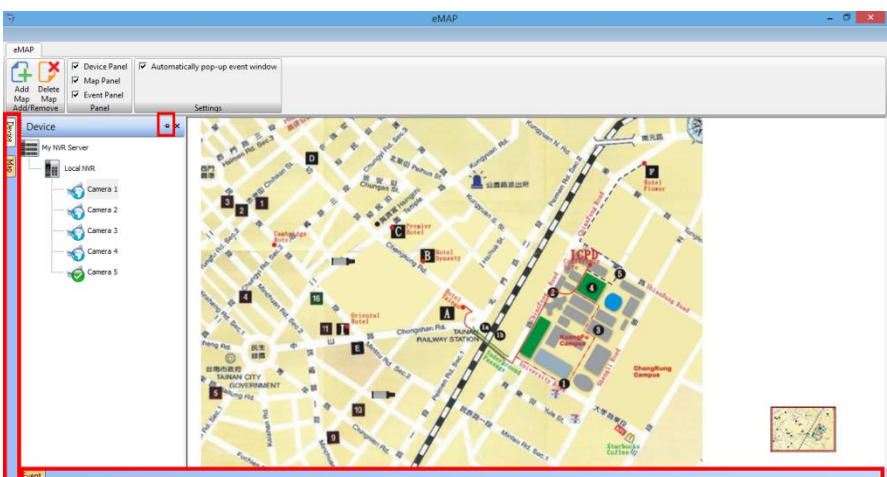



4.2.1 Feature Introduction

1. Introduction of each column





E-Map offers three columns for general setting: **Edit map**, **Panel visibility** and **Settings**. Users can drag the panels to the suitable place.

- (1) **Edit map**: please refer to 4.2.2 Add or Delete Multi-layer E-Maps for more information.
- (2) **Panel visibility**: to decide whether to show or to hide panels, including device panel, map panel and event panel.

Icon	Description
	<p>Pin to Fasten: To display and fasten the panel.</p> 
	<p>Pin to Hide: To hide the panel to the edge of the window. Click the panel name to display the panel when needed.</p> 
	<p>Delete: To close the panel.</p>

- (3) **Settings:** to enable or disable automatically pop-up event window. Please refer to 4.2.4 Enable/ Disable Automatically Pop-up Event Window for more information.

2. Introduction of icons

Icon	Description
	Add Map: Add an E-Map
	Delete Map: Delete an E-Map
	Available Camera: Camera in device panel is available to drag to map.
	Camera on Map: Camera in device panel is unable to drag to map since the camera has already added to one of maps.

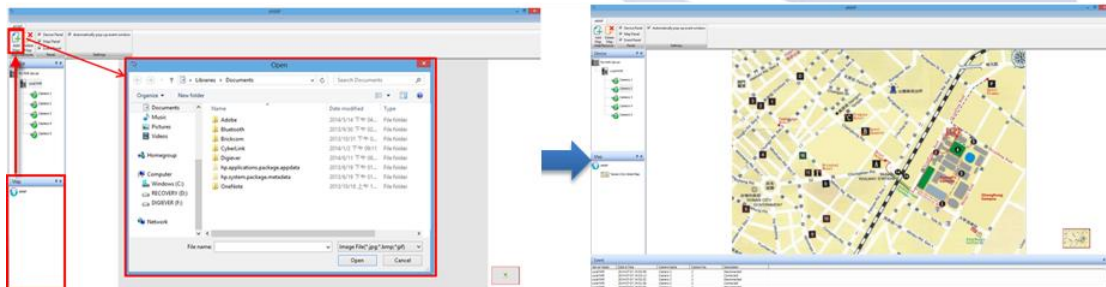
4.2.2 Add or Delete Multi-layer E-Maps


E-Map allows users to expand multi-layer maps in different perspectives and deploy cameras on the maps.

1. Add a Map

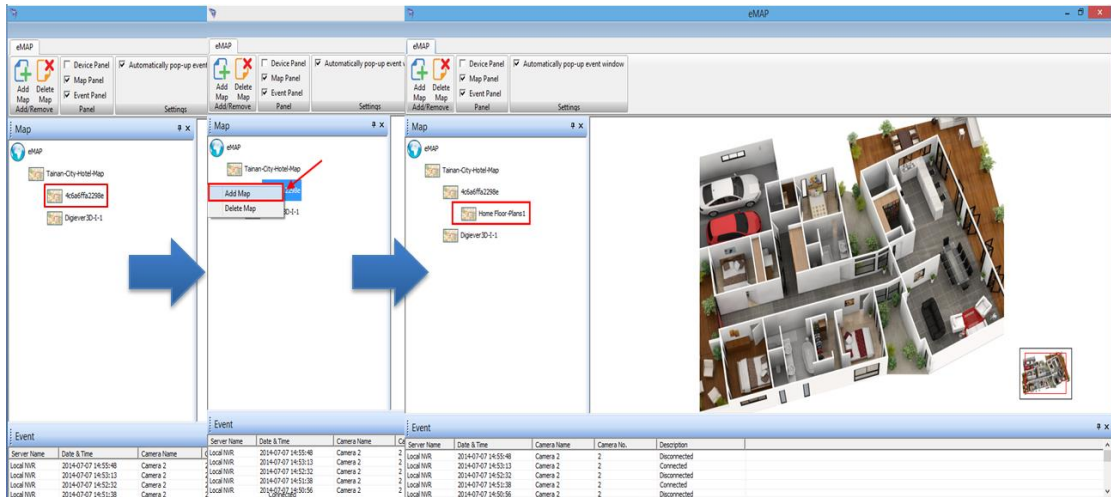
NVR provides two methods to quickly add a map:

- (1) **Add Map Button:** To add a map, please click the map on map panel and click “Add Map” button in Add/Delete column to build sub-layer of map. A window will pop out for you to select a map to add in NVR.



 **Note:** The accepted image formats are **PNG, BMP and JPEG**.

(2) Right-click on Map Panel: Right-click on the map to build sub-layer of map.



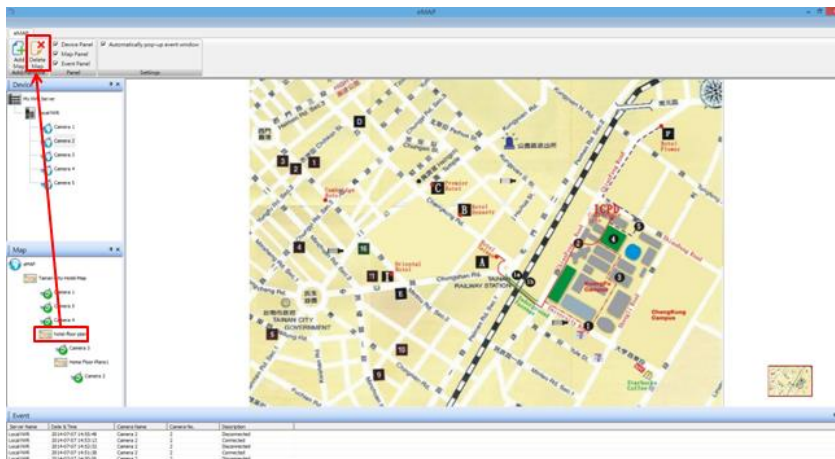
2. Zoom in / out the E-Map

To zoom in or zoom out the E-Map, users can use the mouse scroll to enlarge or reduce the view of E-Map.

3. Delete a Map

NVR provides two methods to quickly delete map and its camera.

(1) Delete Map Button: Select a map and click “Delete Map” button.





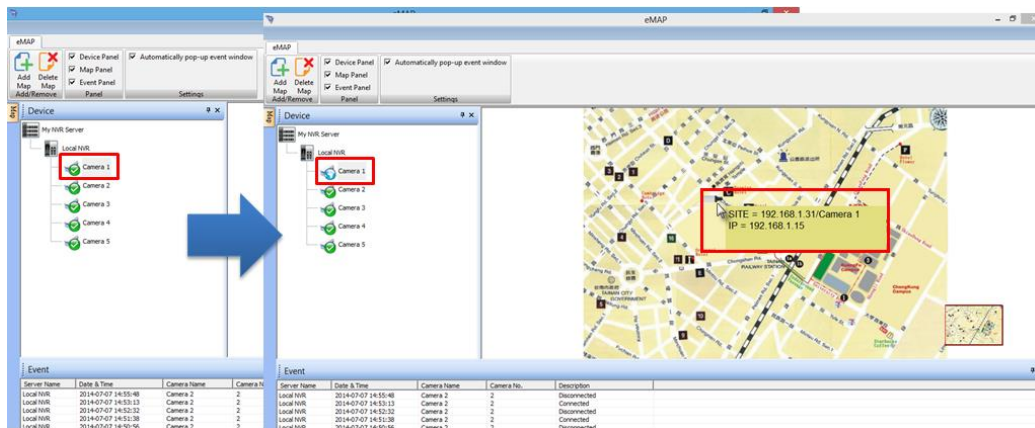
(2) **Right-click on Map Panel:** Right-click on one of the map to delete the map.



4.2.3 Deploy Cameras


1. Add and delete camera on the map

(1) **Add a camera:** Please drag and drop the camera icons in device list to the map to indicate camera location. After successfully adding camera on the map, camera icon in device pane will turn from  (available camera) into  (camera on map). A camera icon will be displayed on the map.

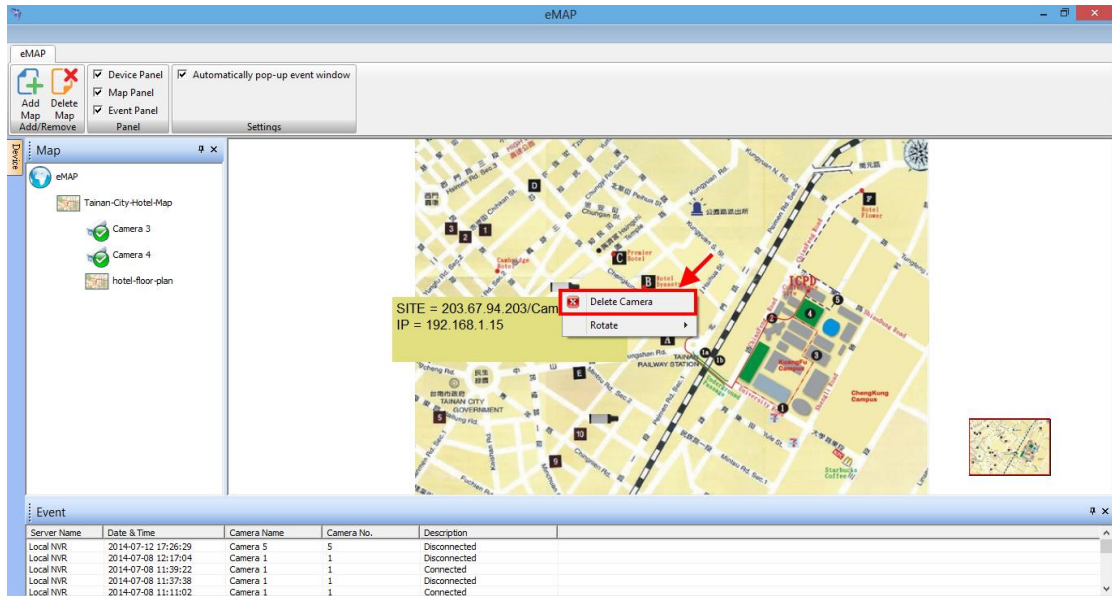


(2) **Camera Information:**

When you move the mouse cursor on a camera icon, camera information will display in a yellow column such as **NVR IP address**, **Camera name** and **Camera IP address**.

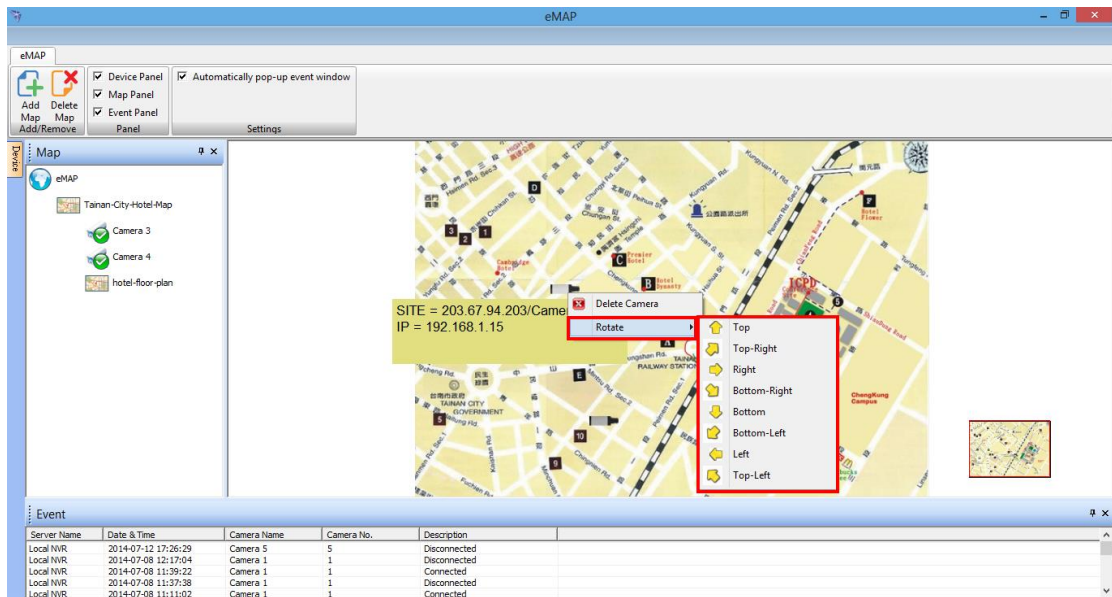
 **Note:** Users can use the mouse scroll to zoom in/ out the map to enlarge or reduce the view of the E-Map when deploying IP cameras on the map.

(2) **Delete a camera:** to delete the camera on the map, please right click on the camera icon. A right-click menu will appear. Click **“Delete Camera”** to delete the camera on the map.



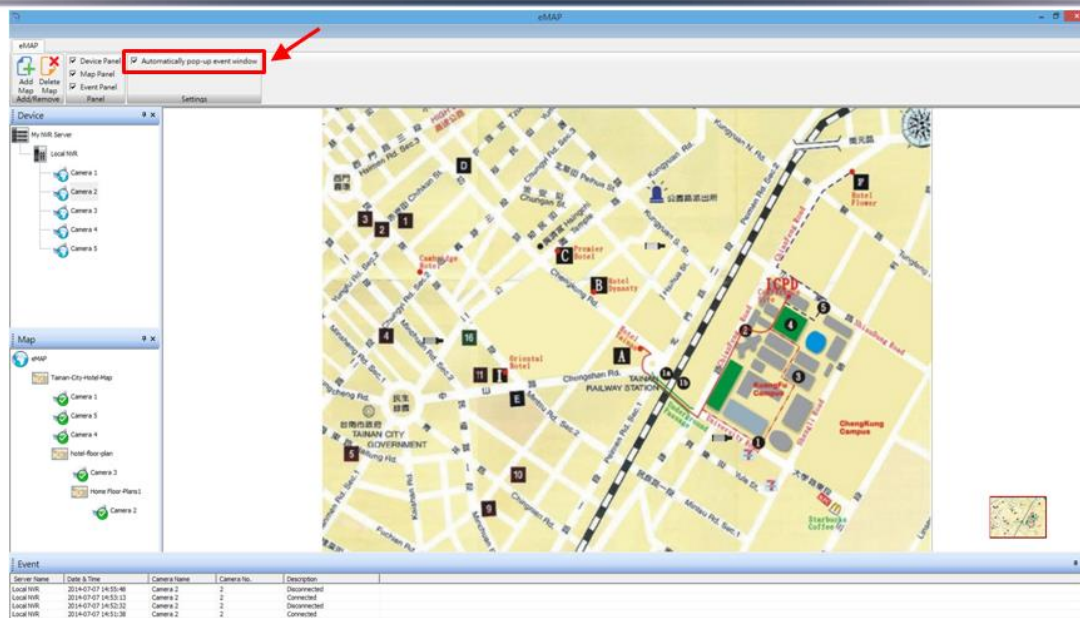
2. Rotate camera direction

Please right click on the camera icon to modify camera direction.



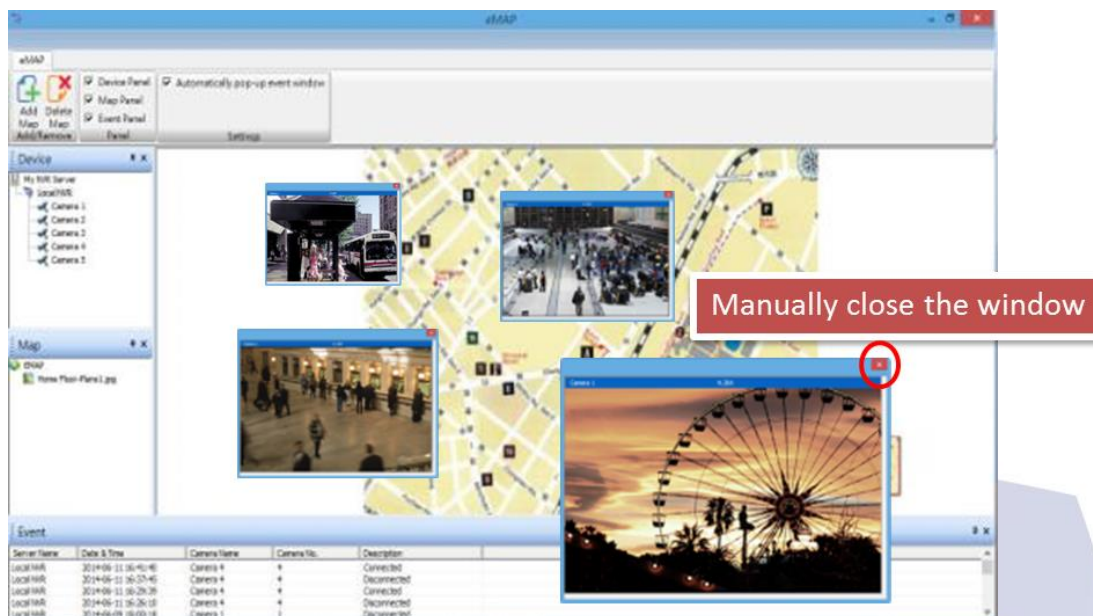
4.2.4 Enable/ Disable Automatically Pop-up Event Window

When a motion is triggered from IP camera on the map, a window will pop out to notify users and to display recording video. To enable or disable automatically pop-up event window on E-Map, please click the option.



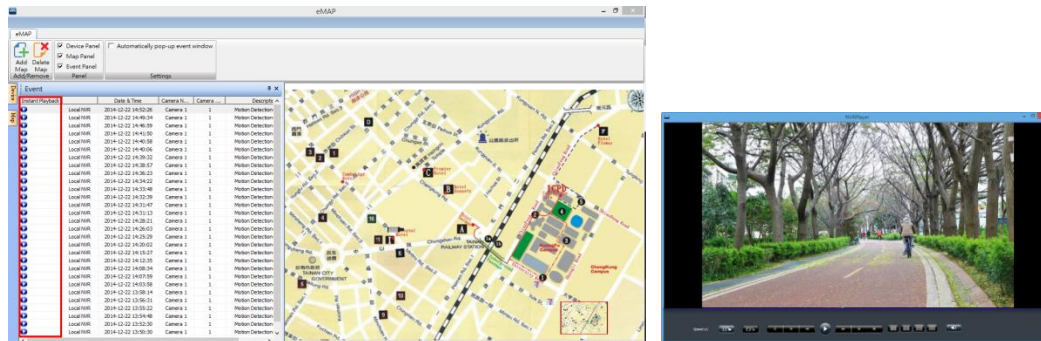
⚠ Note: The maximum of pop-out event window is 4.


To close the window, users can manually close the pop-out event window.




4.2.5 Event Log History

Event log history offers a detailed and latest list of event history in event panel to make users easily control event situation. The event panel includes **Instant Playback**, **Server Name**, **Date & Time**, **Camera Name**, **Camera No.** and **Description (Camera Connected, Camera Disconnected or Motion Detection.)**



By clicking  in Instant Playback column, NVRPlayer will pop out to let users view event situation.

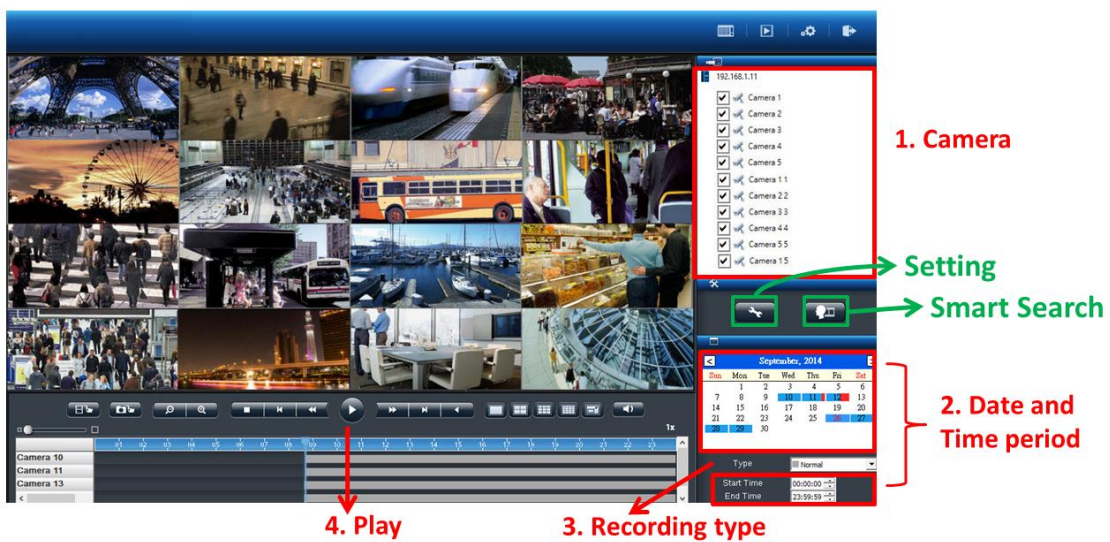
-  **Note:** The default length of video clip for instant playback is 6 seconds. Users can edit the length of video clip by visiting configuration page: Recording & Event > Event & Action Management > Advanced Settings


4.3 Playback

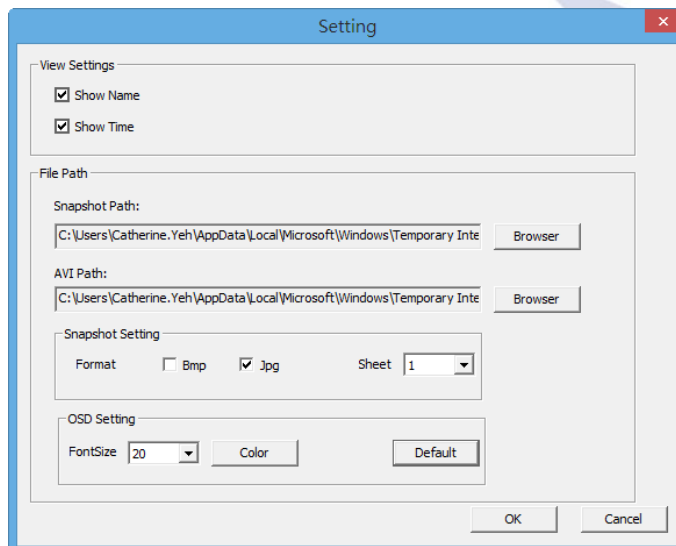
Playback is a function that allows users to view recorded videos from cameras connected to NVR. NVR offers synchronized playback up to 16 cameras and easy steps to help users sort through the recorded videos quickly. Playback video can be viewed in full screen; snapshots can be taken and saved during a video playback.

4.3.1 Steps to Playback Videos

Before viewing recorded videos, “Setting”  button is offered to set recorded videos for playback.



- Setting:**  Please click the button to set view settings and file path such as snapshot path and format, AVI path, and OSD setting. For more instructions, please refer to **4.3.5 Main Functions on Playback.**

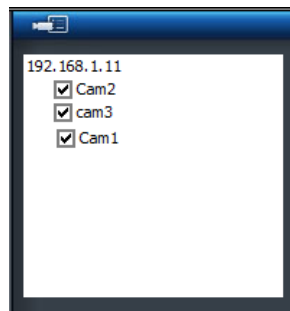


Please follow four steps below to quickly search recorded videos:

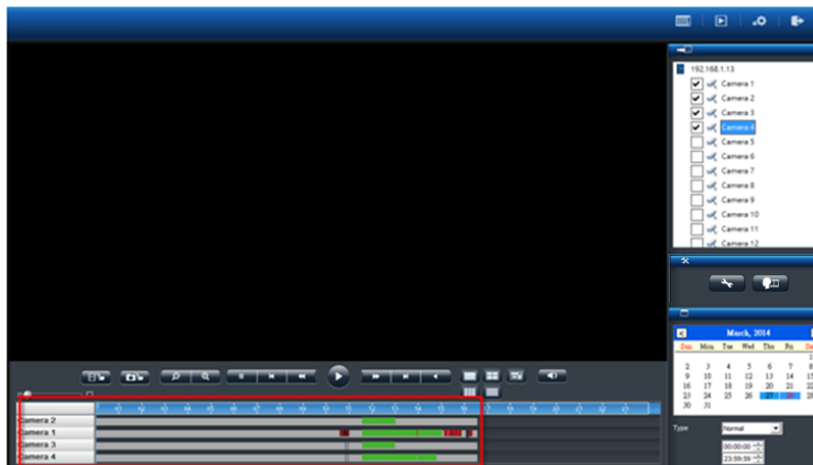
1. Select cameras from camera list
2. Select date and time period
3. Select recording type
4. Click "Play"

1. Select cameras from camera list

Please select channel number from channel list to search recorded videos. Up to 4 channels can be selected at the same time.

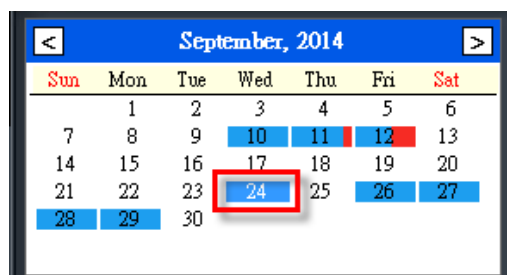


Once the camera is selected, the time line will be shown on time table

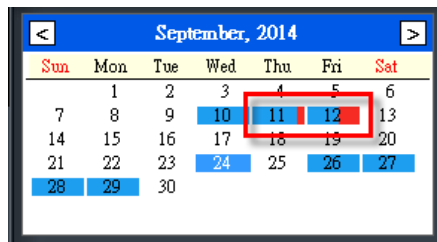


2. Select date and time

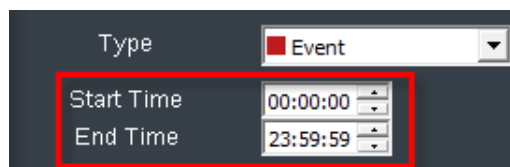
Please select the date to search recorded videos. The date marked in blue background and white words has recorded video.



If there is an event recording in the specific date, the date will be remarked as blue with red stripe aside.

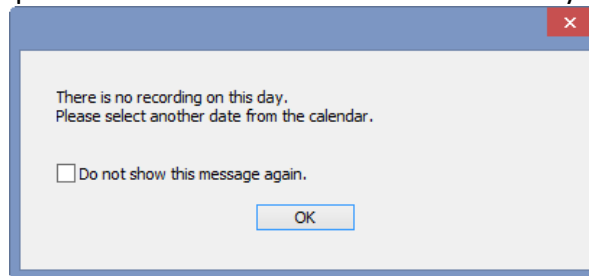


Users can also select specific time period from time searching list (start time to end time.) Start time and end time layout is **Hour: Minute: Second**.



The default time period is from 00:00:00 to 23:59:59.

A window will pop up when there is no recorded file at that day.

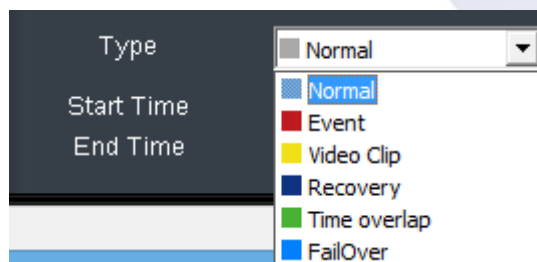


3. Select recording type

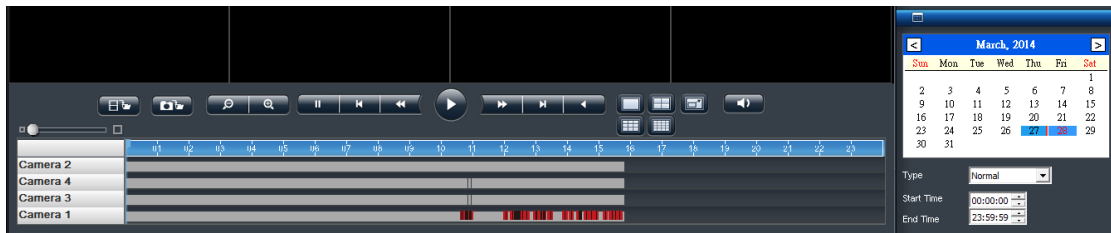
Users can select five types of video file which is also displayed in Time table.

These five types of video file are distinguished from different colors in time table:

Normal(Gray), **Event(Red)**, **Video Clip(Yellow)**, **Recovery(Blue)**, **Time overlap(Green)** and **Failover(Light Blue)**.



With the changing of recording types, time table will present in different color in remote browser.

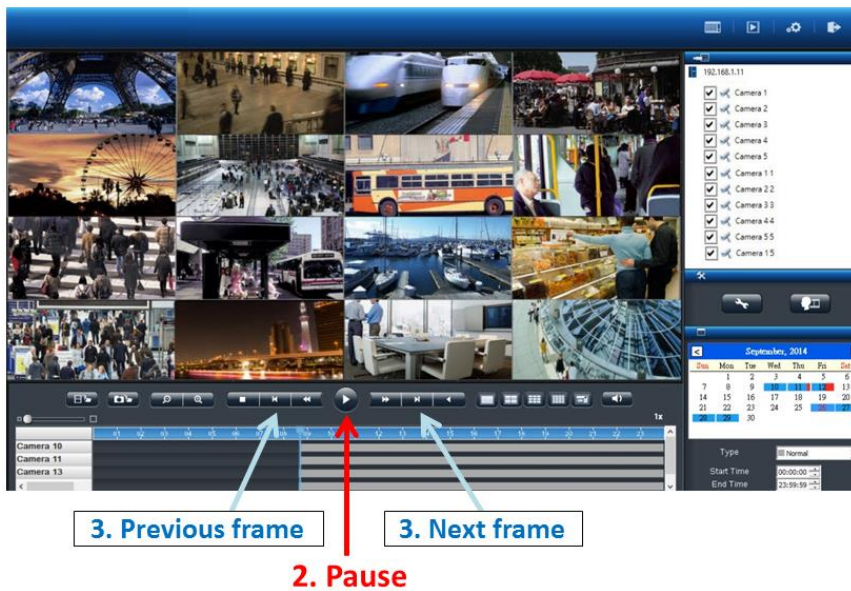


4. Click "Play"

Please click the play button  to start playback.

Frame by Frame Playback

- 1 Follow above four steps to playback
- 2 Click "Pause" button
- 3 Click "Previous frame" or "Next frame" button



4.3.2 Description of Recording Types

- 1. Normal (gray):**
Normal Record means there is no special conditions happened such as event, time overlap. It helps users to know at that time whether NVR has recorded videos or not.
- 2. Event (red):**
Event means at least an event is triggered at that time, which helps users to efficiently find event recorded videos. To save videos in event type of recording videos, please set up event setting in advance. For more information, please refer to **5.2.4 Event & Action Management**.
- 3. Video Clip (yellow):**
Video Clip means a brief video clip set by user to manage on event triggered recording file, allowing to be sent by E-mail as well and user can change the Pre-time (up to 10 sec.) and Post-time (up to 10 sec.) in Configuration Page > Recording & Event > Event & Action Management > Advanced Settings as below:

Event & Action Management

Event & Action **Advanced Settings**

Advanced Settings

Action Triggered Interval	30	sec		
Video Clip	Seconds before event being triggered	3	sec	Start Recording Video
	Seconds after Event	3	sec	Stop Video
Recording Settings	Seconds before event being triggered	300	sec	Start Recording Video
	Seconds after Event	300	sec	Stop Video
Event Triggered with Audio	<input type="checkbox"/>			

Tip: When 'Event Triggered with Audio' is enabled, the audio of all cameras will be disabled to do recording until the event is triggered. And when the event stops, the audio will be disabled again accordingly. All above will not influence the audio function in liveview.

Apply Reset

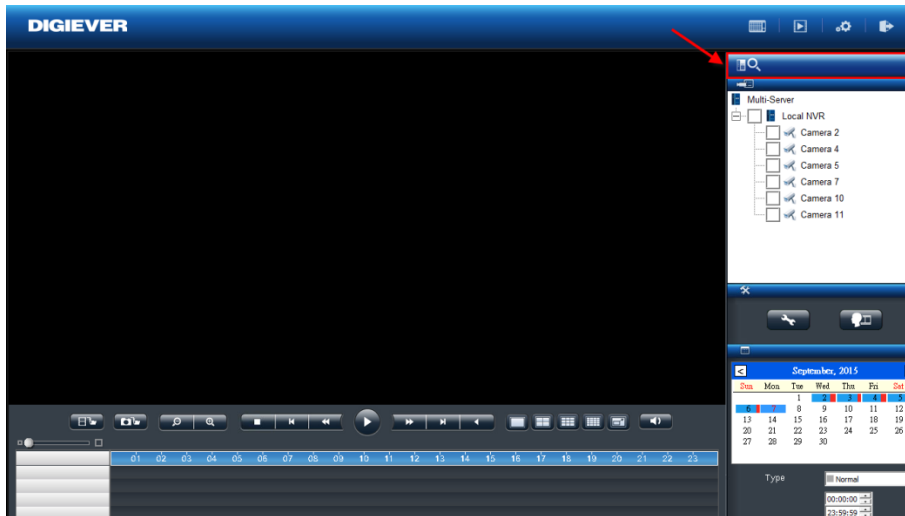
- 4. Recovery (blue):**
Recovery file is generated once the NVR server resumes working once the power electric back. This is special unique and advanced feature of NVR.

For an example, when the premises was broken into and the main power switch was cut, there was a period of critical time of recording files were captured by IP camera but it was not insufficient time to be converted the temp video files to be wrote into hard disk drive. Once the NVR server gets power resume, the NVR is able to generate a so-called Recovered File and save on hard disk drive. User can then find out the critical evidence clips if the camera successful captured the scenario.

- 5. Time Overlap (green):**
Time Overlap file is generated once NVR server's time is changed during recording task. For examples, using NVR's built-in NTP server to synchronize a required time, or alter the NVR server time manually, or change the time zone and enable daylight saving time.
- 6. Failover (light blue):**
Failover means videos are recorded in failover server.

4.3.3 Multi-NVR Playback

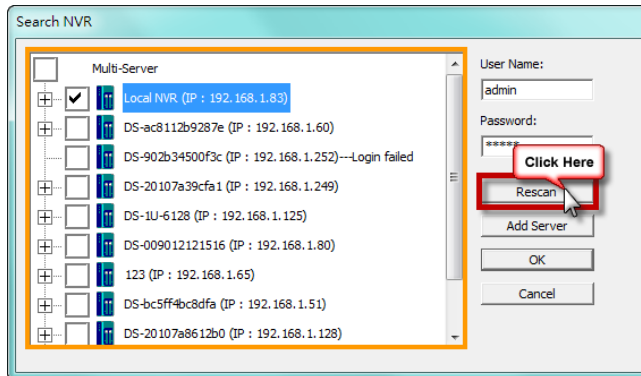
Multi-NVR playback allows users to cross multiple NVRs to playback up to 16-channel of videos. Users can easily obtain the path of moving objects via tracking videos from multiple sites of NVR. During executing Multi-NVR playback, users can also export videos and take a snapshot.



NVR offer two methods to remotely add other NVRs: **Rescan** and **Add Server**

[Method1] Rescan

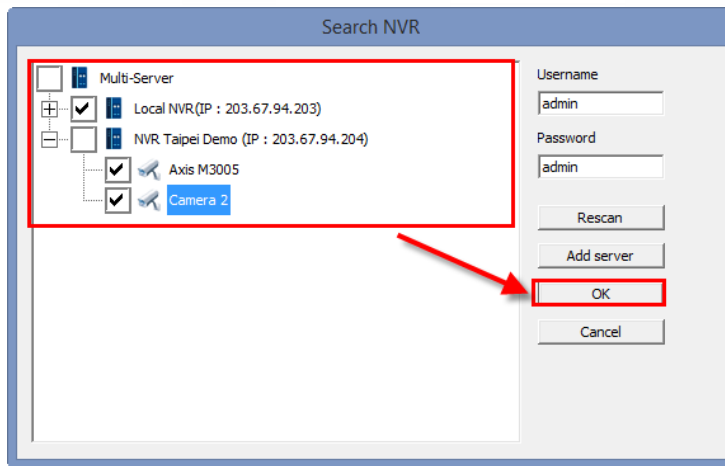
Please click “Rescan” button to search NVR in LAN.



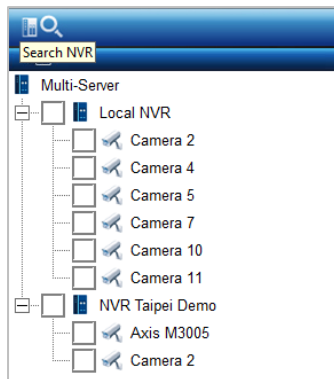
NVR in LAN will appear, including the local NVR.

⚠ Note: Rescan only supports NVR in LAN.

Please choose NVR and camera which you are going to add to the local server and click “OK” button.

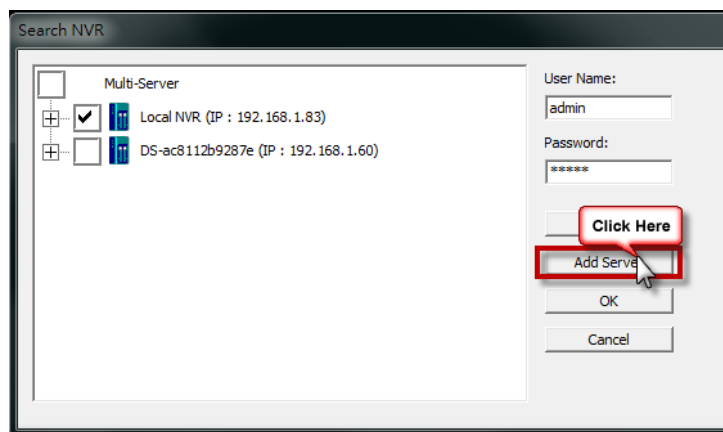


New added channels will display in the cameras list as below.

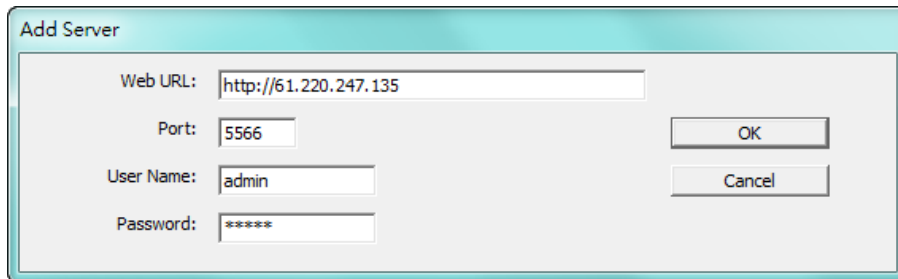



[Method2] Add Server

Please click "Add Server" button to add NVR.

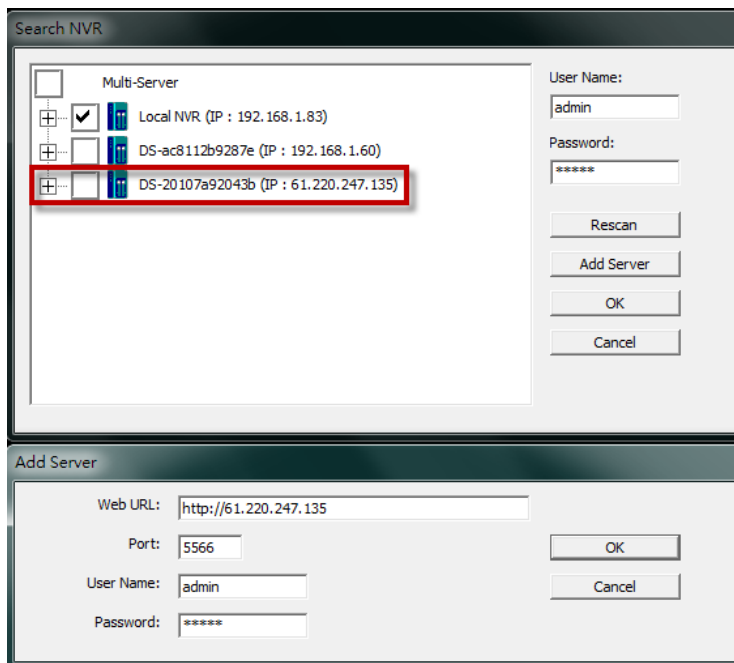


Please enter IP address, port, username and password, then click “OK” to apply.

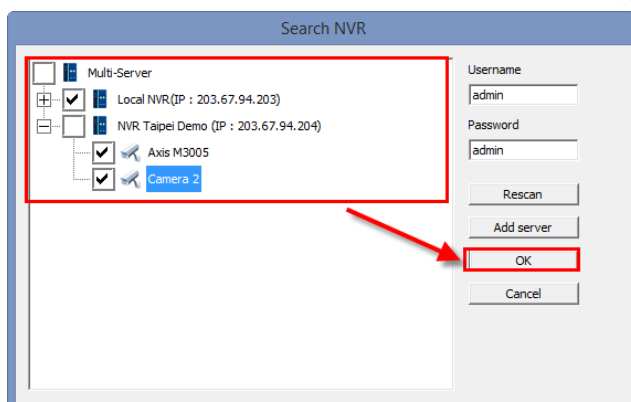


 Note: NVR can be manually added in WAN or LAN.

You can see the NVR in the list.



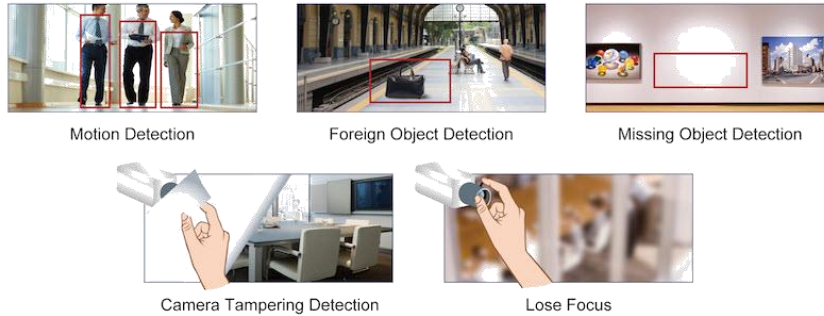
Please choose NVR and camera which you are going to add to the local server and Click “OK” button. Then, new added channels will display in the cameras list.



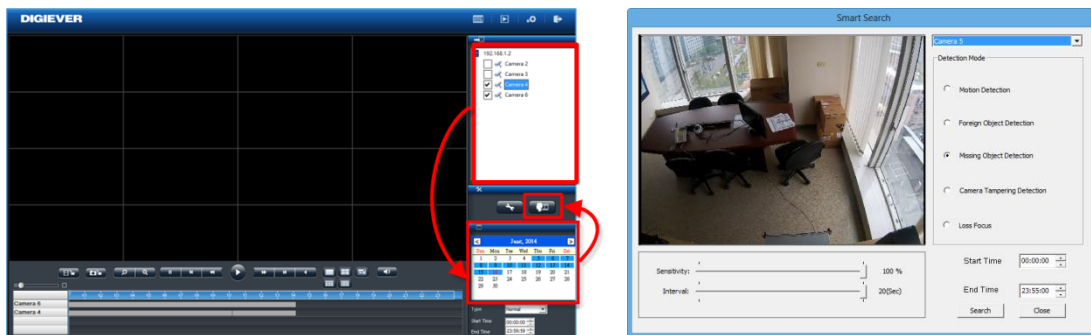
4.3.4 Smart Search

Smart Search can efficiently save users' precious time to find out key video moment without wasting extra effort and energy. Smart Search offers five quick search modes: **motion detection**, **foreign object detection**, **missing object detection**, **camera tampering detection** and **lose focus**.

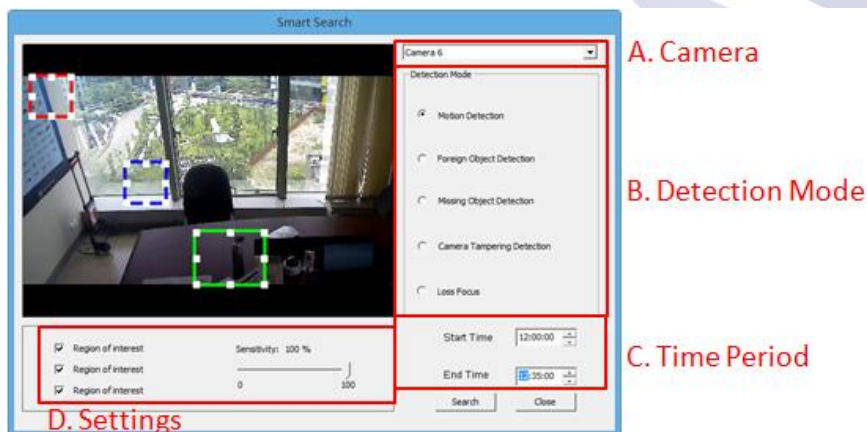
Smart Search



Please select cameras from camera list and the date that you would like to execute smart search. Then, click **“Smart Search”** button. A window will pop up to start smart search configuration.

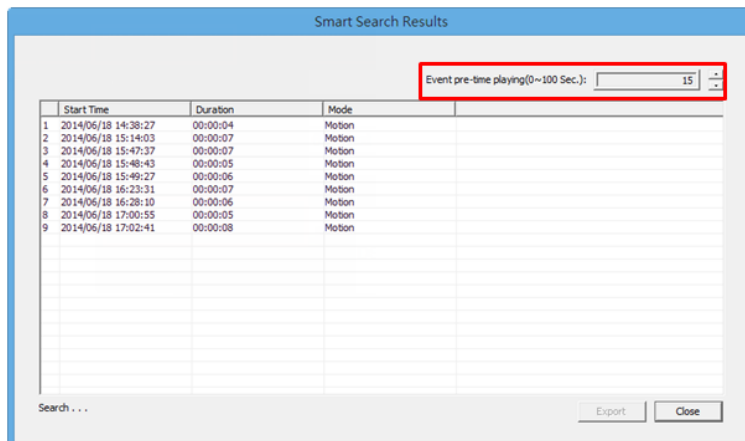


Select a specific camera, detection mode, time period and settings. Then, click **“Search”** button to start smart search.



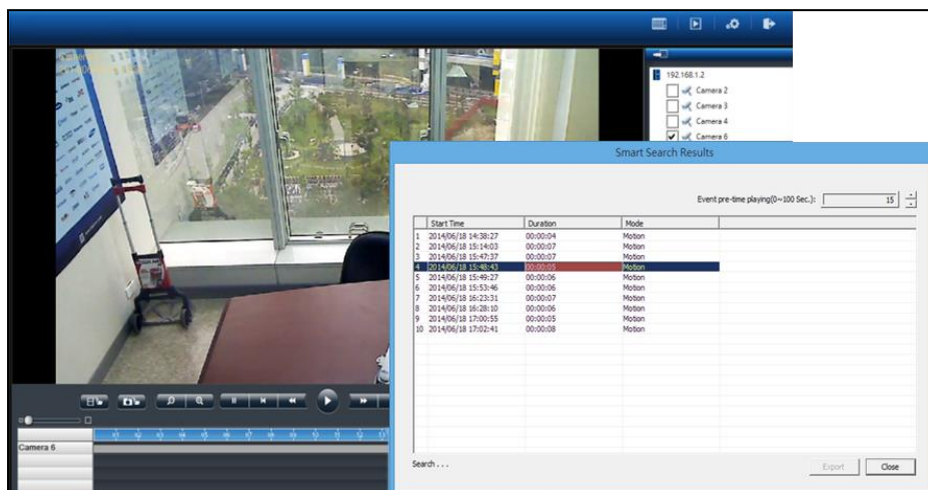
Introduction of settings:

- (1) **Region of interest:** the location for quick detection. **Motion detection**, **foreign object detection** and **missing object detection** are needed to arrange region of interest. (Motion detection has 3 region of interest, and others have one region of interest.)
- (2) **Sensibility:** the capability to detect event
- (3) **Interval:** the amount of time that the object exists in the region



The smart search result window will pop-out. Users can set up **event pre-time playing** to playback the video before the event

Please double-click on one of the smart search result to play the video.








4.3.5 Main Functions on Playback



1. Display mode

NVR supports multi-display modes for playback. When you click a display mode, the mode icons will turn into blue.

Icon	Description
	Full Screen
	1 screen
	4 screens
	9 screens
	16 screens

2. Mute control

Users can choose whether to play audio when playback videos. The button will change icon appearance while clicking:



: Mute



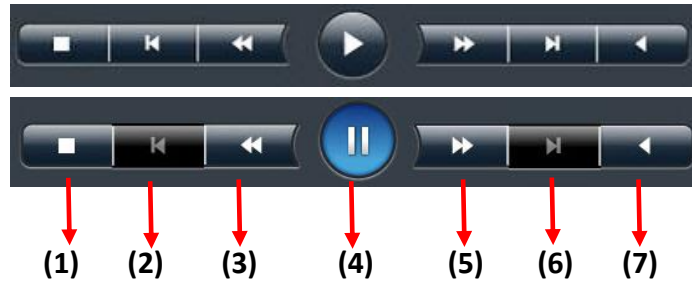
: Sound

3. Digital zoom out and digital zoom in



The image can also return to previous sizes by clicking the digital zoom out button. The image can be enlarged by clicking digital zoom-in button.

4. Video playback speed control



- (1) **Stop:** to clear playback videos
- (2) **Previous frame:** to show the earlier frame
- (3) **Slow motion:** to play in slower speed
- (4) **Play/ Pause:** to play video file or to temporarily stop the playback
- (5) **Fast forward:** to play in faster speed
- (6) **Next frame:** to show the next frame
- (7) **Rewind:** to let video automatically wind backward

The play speed status is beside display mode.



5. Snapshot



Users can save the image of playback by clicking “**Snapshot**”.

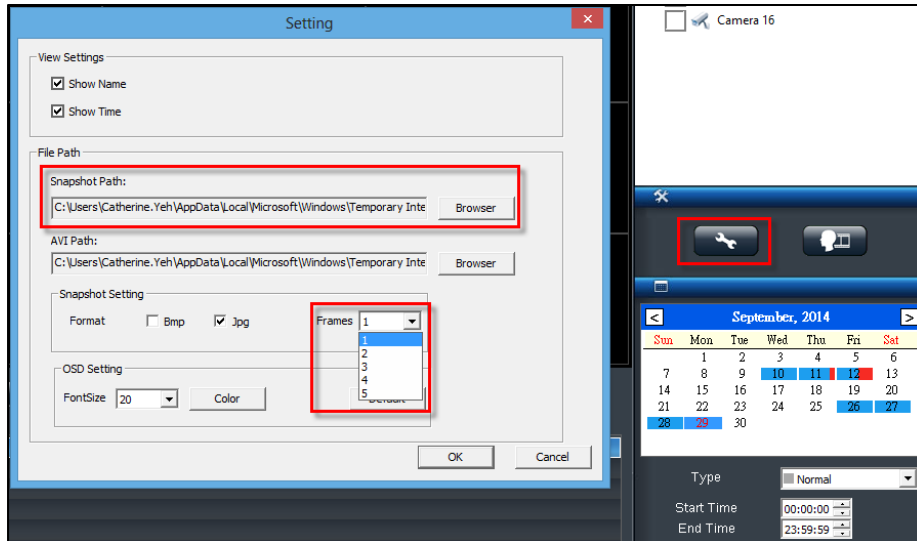
Before taking snapshot from NVR, users are recommended to set snapshot path from “**Setting**.”



”

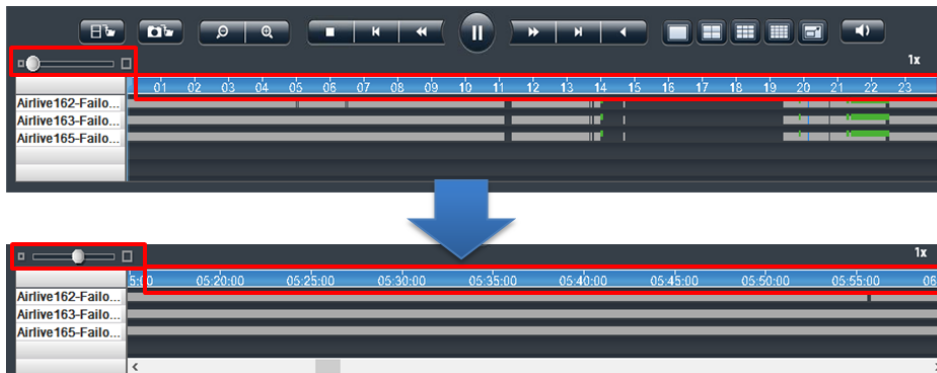
- **Sequential snapshot on remote playback**

Users can have the sequent images from recording video while in playback, which helps users to catch the key frame in the recording files. It can be setup up to 5 frames for sequential snapshots.



6. Scale bar

Users can move the bar to enlarge or narrow down time period to check video footage in time table.



7. Seek bar

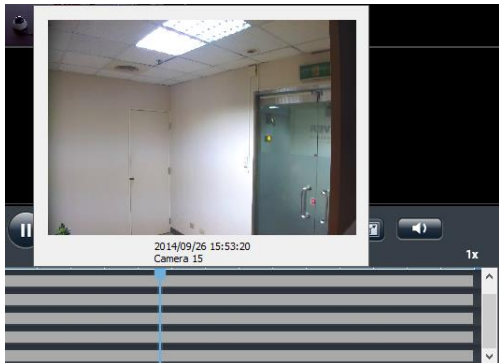
By moving seek bar, users can go to the specific recording time directly. Time is shown above seek bar to provide time reference.



8. Thumbnail on Playback

With thumbnail function on playback, users can move the pointer of the mouse over the footage and the snapshot of the specific time will be shown. It helps users easier to locate the period of time for play the recorded videos.

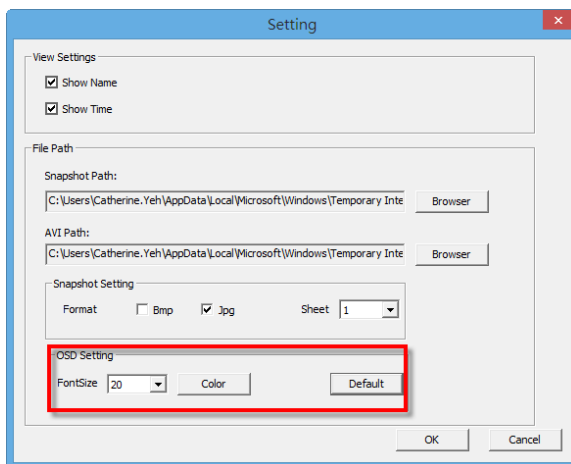
From the thumbnail, users can also read the related information such as date, time and camera name.



The thumbnail will be shown while pointer moves on the footage.

9. Change OSD color and font size

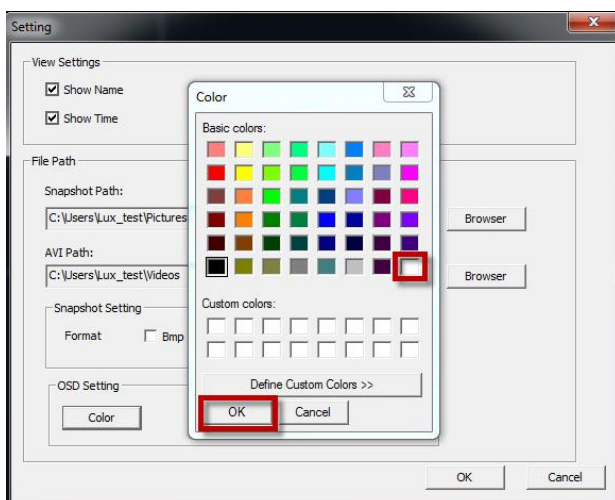
Users can select different OSD color while having the playback of recording files.



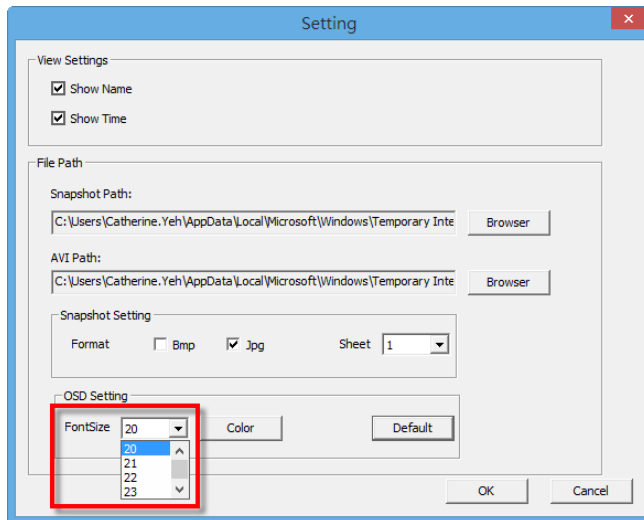
1) Click "Setting"



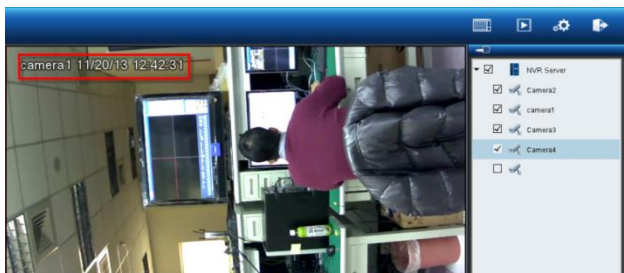
2) Click OSD "color" setting button the select the OSD color and click "OK"



3) Select font size and click “OK”

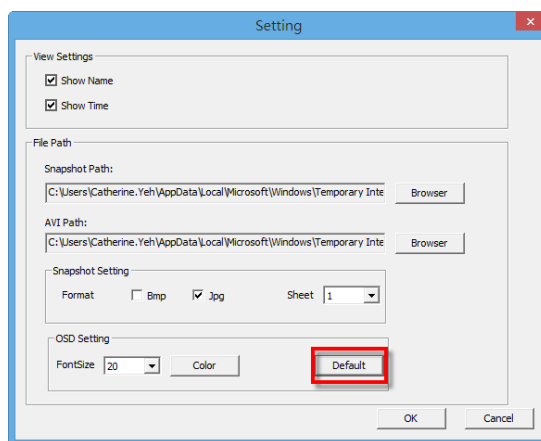


4) OSD color and font size will be changed as below.



- **Default button**

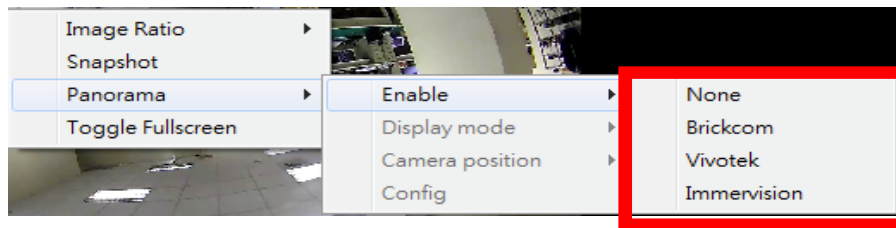
By clicking “Default” button, users can default OSD setting. Default font size is 20 in orange color.



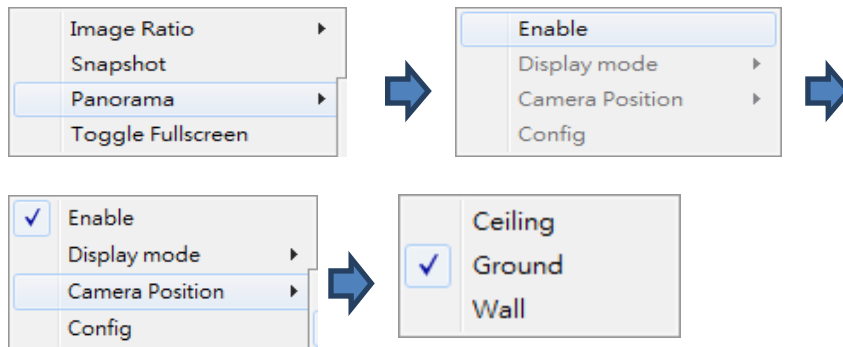
10. Dewarp for fisheye cameras

By right click on the video, users can choose the proper dewarp engine for fisheye camera.

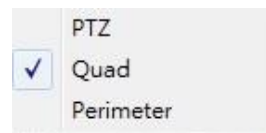
a. Choose the dewarp engine:



b. Choose the mounting type



c. Choose the display mode



4.3.6 Zooming with Mouse scroll

In addition to digital zoom in/out button, users can use mouse scroll to find out crucial proof in incident site in playback.


Zoom in/out: To click on the video window and use mouse scroll to enlarge the image.



View enlarged images:


To press and hold left mouse button, drag the image to the place that you would like to monitor.

4.3.7 Export

Export function  allows users to retrieve recorded files from NVR. NVR offers two methods to export recorded videos for different export requirements:

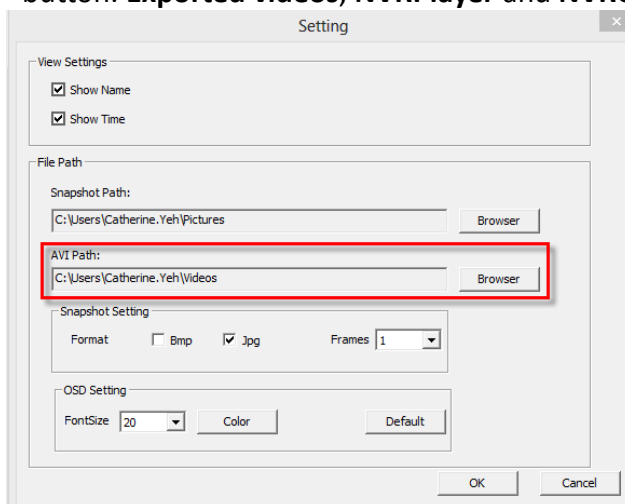
Method1. Export video by specifying export start time and end time


Method2. Instant export (export videos while playing recorded videos)

 **Note:** NVR offers 3 formats to export recorded videos depending on different security level. More information, please refer to 5.6.4 USB Backup -> 3. **Advance Settings**

- **Check Video AVI Path**

Before exporting videos, users are recommended to set AVI path via “**Setting**” button. **Exported videos, NVRPlayer** and **NVRCheck** to be saved in this path.




 **Note:** It is necessary to run IE browser as administrator to change playback setting.


Method1. Export video by specifying export start time and end time

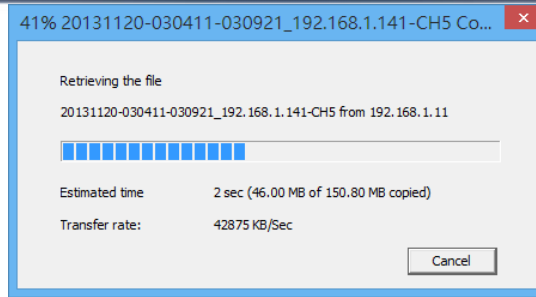
1) Select cameras, date, recording type and time period
Users can select which cameras and what time range is to export the recording file.

2) Start to export files from the NVR
By pressing the Export button, the process of export will start.

NVRPlayer and NVRCheck will also be downloaded with video files.

 NVRPlayer is a portable player to play videos exported from NVR.

 NVRCheck is the verification tool to verify if the recorded files are originated from NVR.

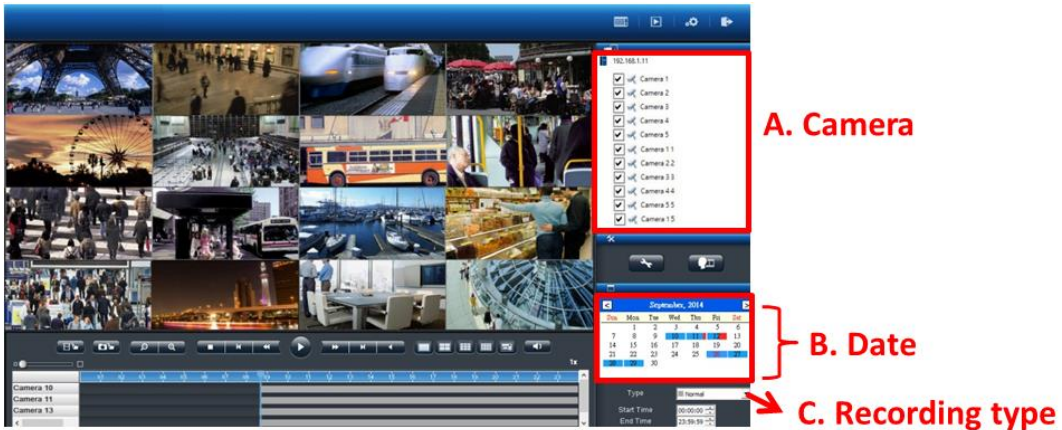


Users can cancel the files transferred while downloading files from NVR.

Method2. Instant Export

Instant export allows users to export maximum 16-channel videos while playing recorded videos on playback interface. A **playlist** will also be exported to PC in order to precisely record export start time and end time. Collocating with **NVRPlayer**, users can simultaneously play 1/4/16-channel exported videos via import playlist.

- 1) Select camera, date and recording type

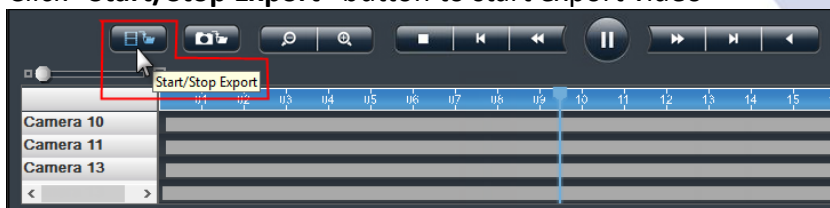


- 2) Click "Play" button 

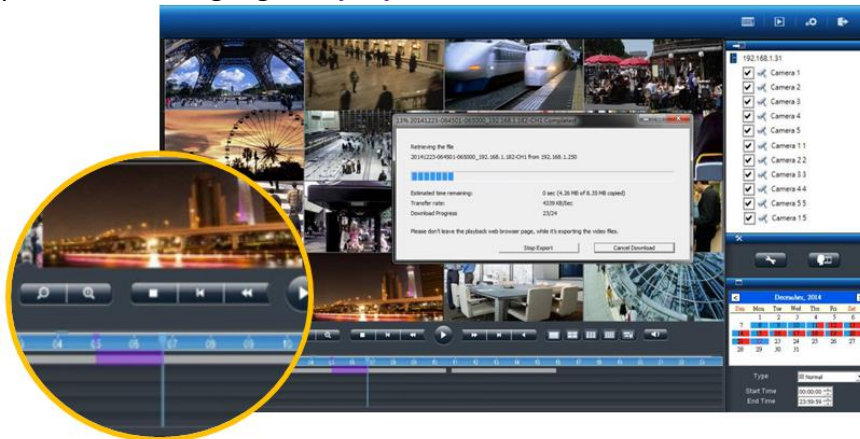
- 3) Move seek bar to desire export time



- 4) Click "Start/Stop Export" button to start export video

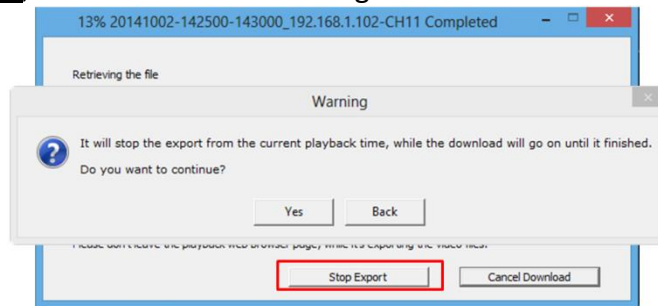


- 5) A window will pop out to display export status. On time table, exporting time period will be highlight in **purple** color.

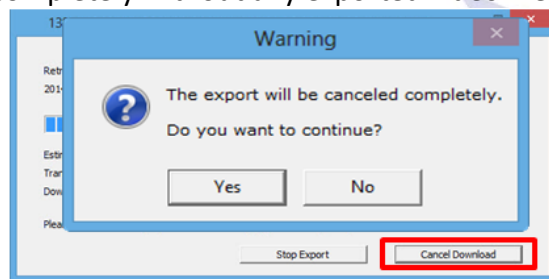


- ⚠ **Note:** Please don't close the playback browser page, while it's exporting the video files. Otherwise, the exporting video will not be saved on your PC.
- ⚠ **Note:** NVR will also download **NVRCheck** and **NVRPlayer** to your PC.

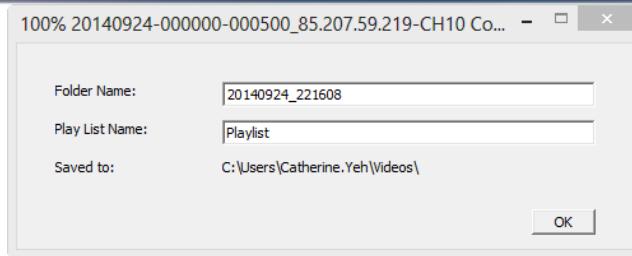
- 6) Click **“Stop Export”** button to stop instant export
Once users click **“Stop Export”**, it will stop export from the current playback time, while the download will go on until it finish.



- ⚠ **Note:** If user clicks **“Cancel Download”**, the export will be canceled completely without any exported video files.



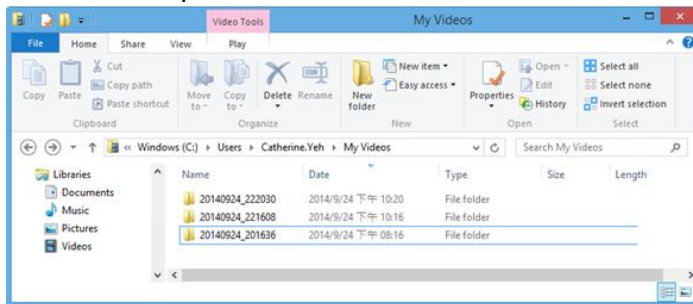
- 7) Once the export is finished, a playlist window will pop out to let user modify folder Name and Playlist Name.



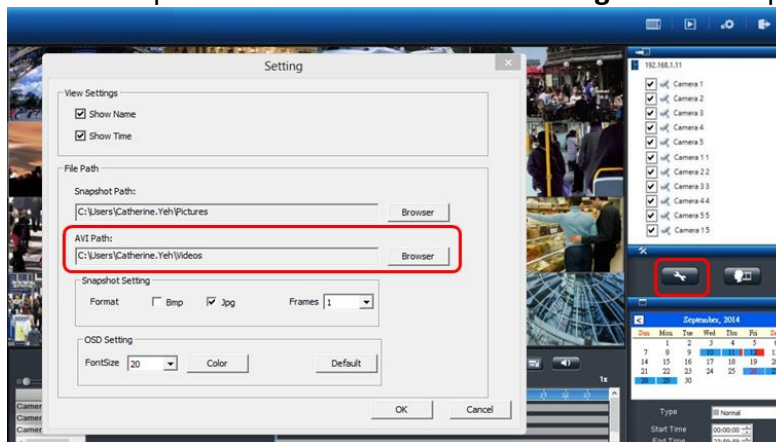
Note. The default folder is named by the time when users click the “Start Export” button. (yyyymmdd_hhmmss)

1. Play exported video by instant export

1) Access the exported file

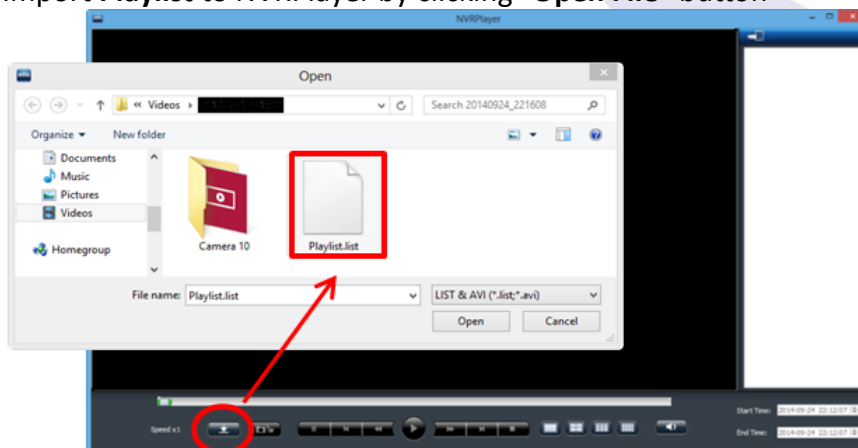


Note. Exported file can be found in “Setting” button on playback

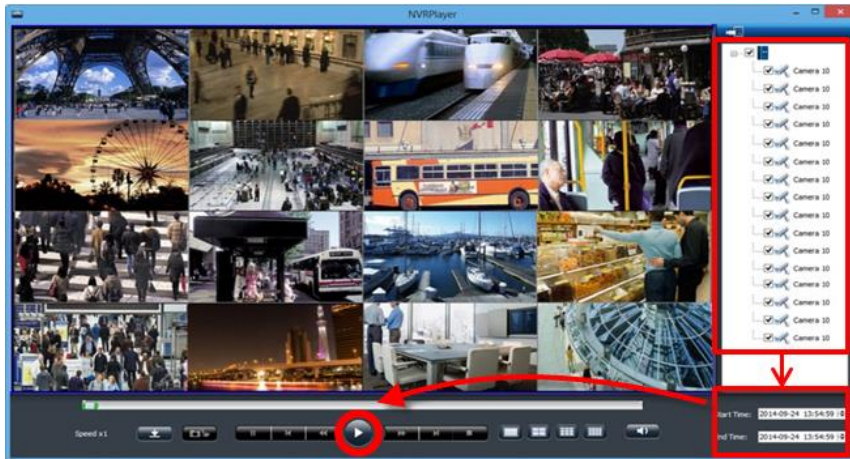


2) Unzip and run NVRPlayer

3) Import **Playlist** to NVRPlayer by clicking “Open File” button




- 4) Select cameras, start time and end time. Then, click “**Play**” button to play videos



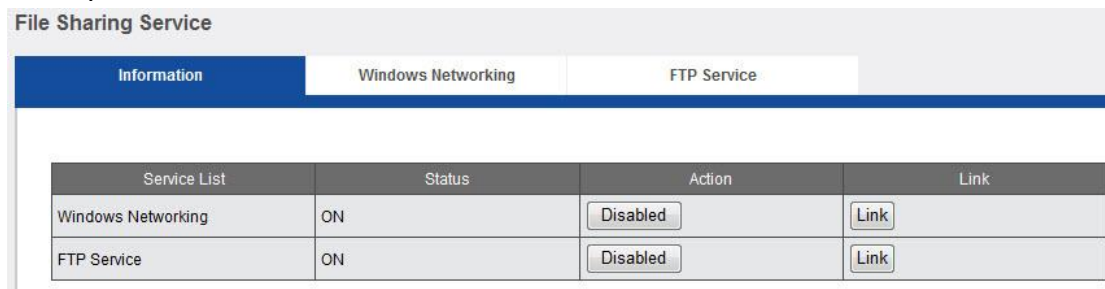
4.4 Play Video Files

Users can access the video files by Windows Networking and FTP Service.

 **Note:** To use Windows Networking and FTP Service, please enable both in “**File Sharing Service**” in configuration page.




By using the link button on file sharing service page, users can open the dialog directly after the service is enable.

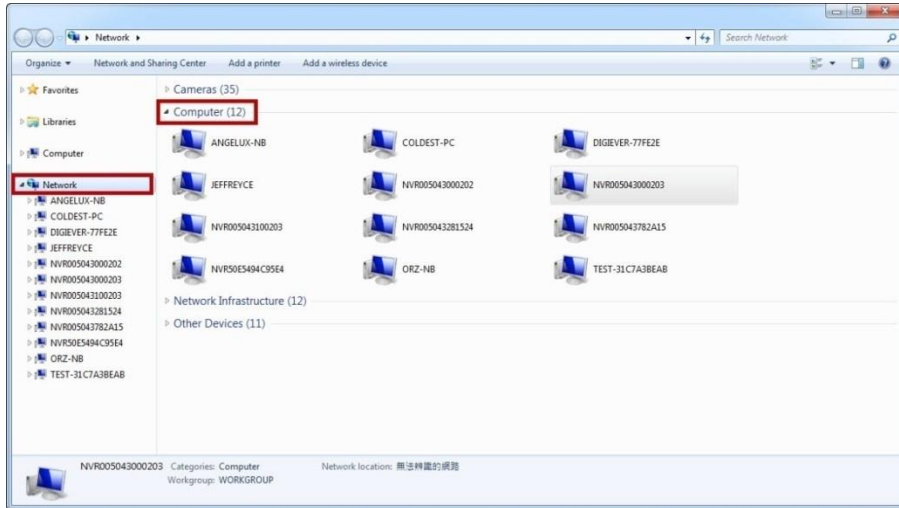


4.4.1 Windows Networking

Through Windows Networking, users can search video files in LAN via **choosing a computer of NVR** or **entering IP address from Windows Start menu**.

- **Choose a Computer of NVR**
Please go to “**Network**” folder and choose NVR. If more than one server exists in the same network, “**Network**” folder will display all servers.

 **Note:** The default **computer name** of each connected NVR is from “**Mac Address**” of each NVR, which can be found in configuration page.



To acquire Mac address, users can refer to **“System”** > **“Device Information”** > **“System Information”** in configuration page.

▼ **System**

- > **Device Information**
- > System Upgrade
- > Language
- > Date & Time
- > Buzzer
- > Reboot & Shutdown

Product Model	DS-4225 Pro Series
Firmware Version	2.0.0.42
MAC Address	20:10:7a:8f:b5:de, 20:10:7a:8f:b5:df
Operating System	Embedded Linux
OS Version	Linux version 3.2.29
CPU	Intel(R) family
Network Adapter	Gigabit Ethernet Card 10/100/1000 Mbps
Locate	<input type="button" value="Locate"/>

“Computer Name” is shown in **“Network”** > **“Network Setup”** > **“Information”** in configuration page.

▼ **Network**

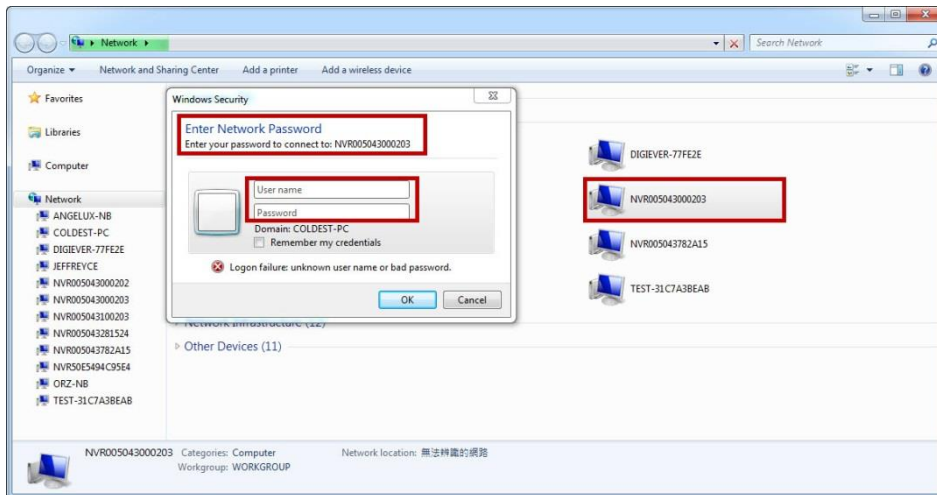
- > **Network Setup**
- > Network Service
- > DDNS

Network Setup	
Information	
Network Information	
Computer Name	NVR005043000203
Address	192.168.1.245
Subnet Mask	255.255.255.0
Default Gateway IP Address	192.168.1.1
Primary Domain Name Server	192.168.1.1
Secondary Domain Name Server	

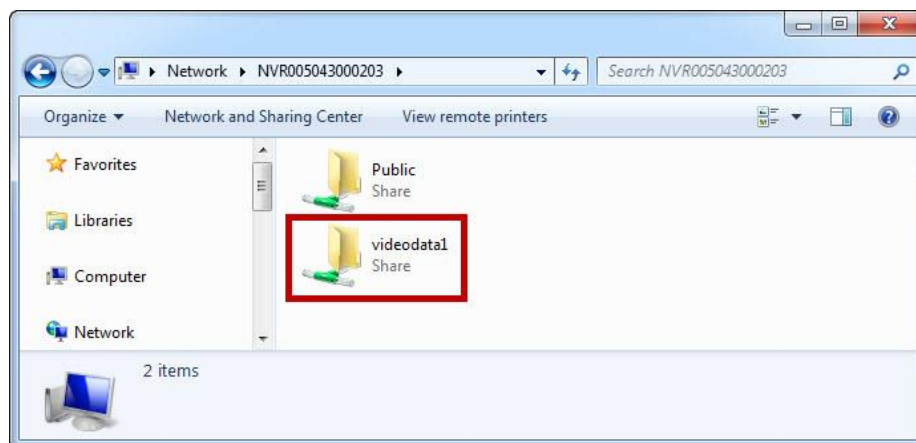
For example, the computer name is **NVR005043000203**.

Thus, users can select a NVR in Network folder by this computer name.

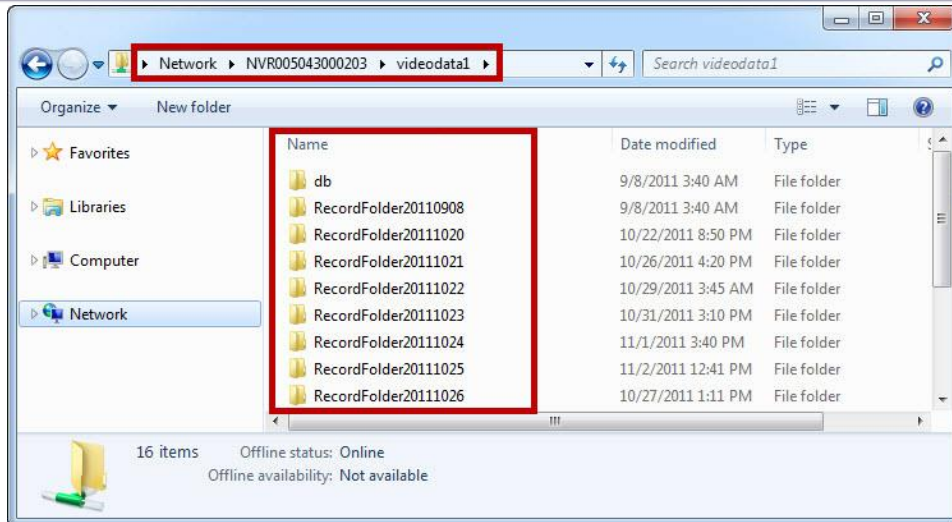
As you select the NVR, a window will pop up and ask to enter network password.



If users don't amend the user name and password, please enter the default ones: "admin/admin."



After users enter accurate user name and password, the NVR will display the folder "Public" and "videodata1." Please select "videodata1" to check video files.



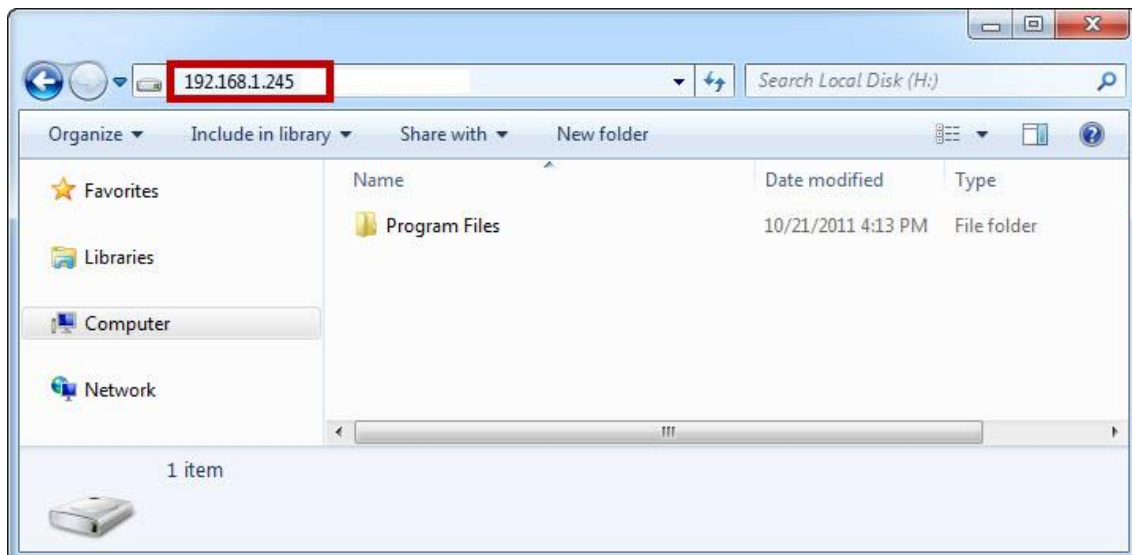
After entering “videodata1,” the folder displays RecordFolderchronologicallyby recording dates. Please select a folder to enter.

All video files lists chronologically by recorded time and video length of each chunk is five minutes.

Select a video file to play.

- **Enter IP Address to Search**

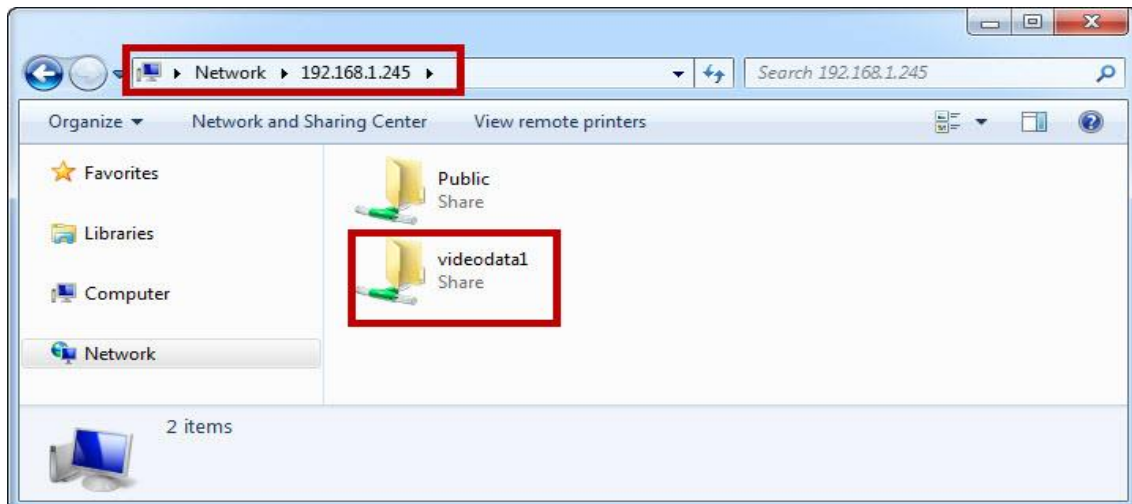
Please enter NVR IP address from the Windows Start menu.

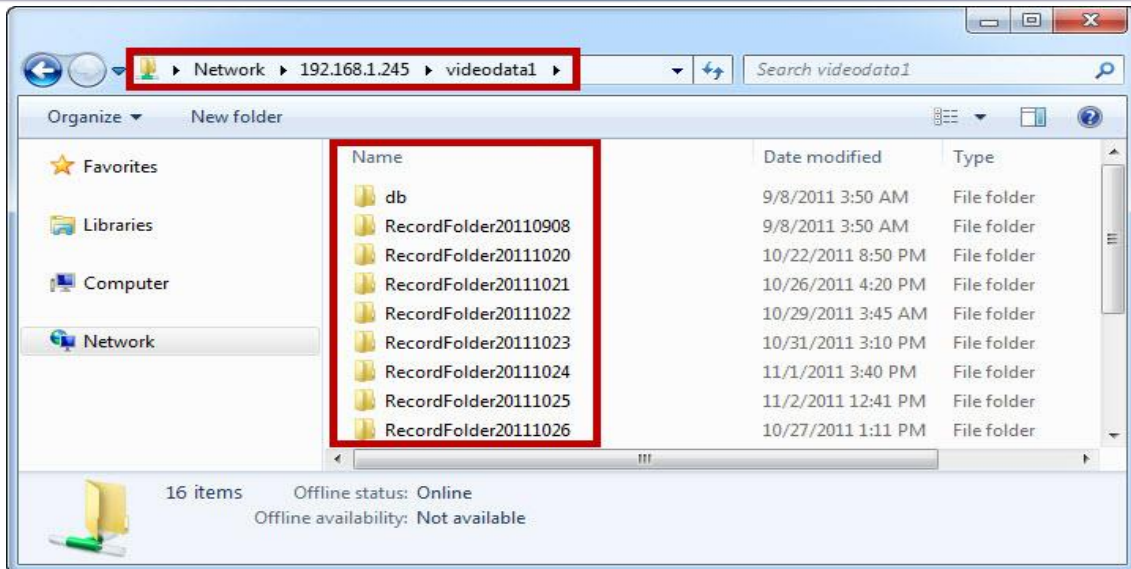




As you enter the IP address, a window will pop up and ask for network password. If you don't amend the user name and password, please enter the default ones: "admin/admin."

After users enter accurate user name and password, the folder of NVR displays the folder "videodata1." Continuously, select a RecordFolder and a video file to play.

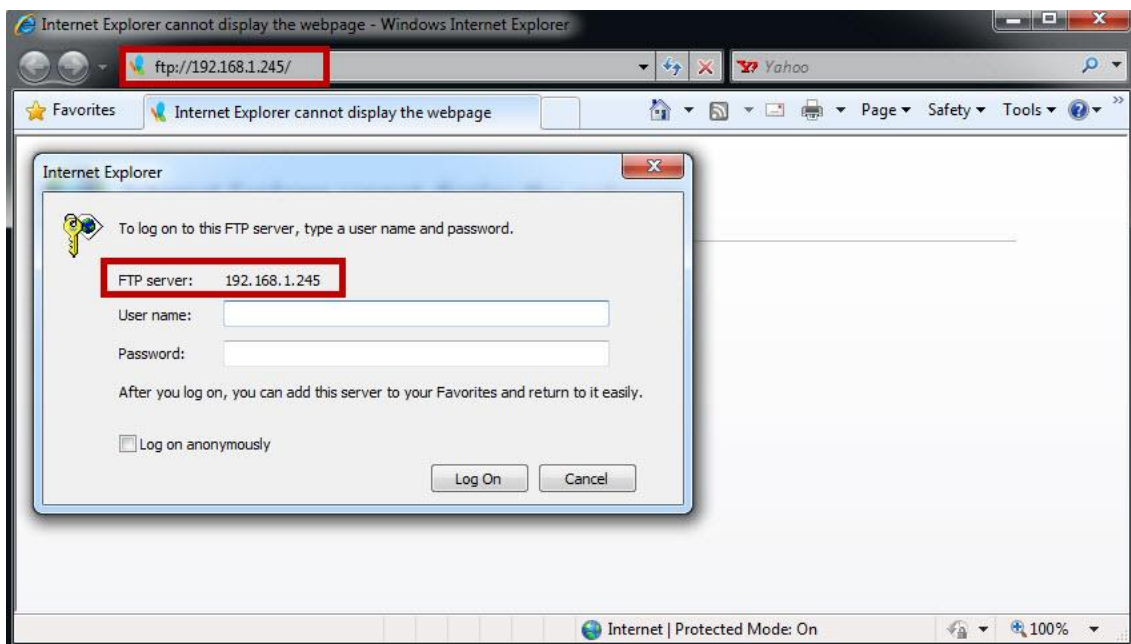




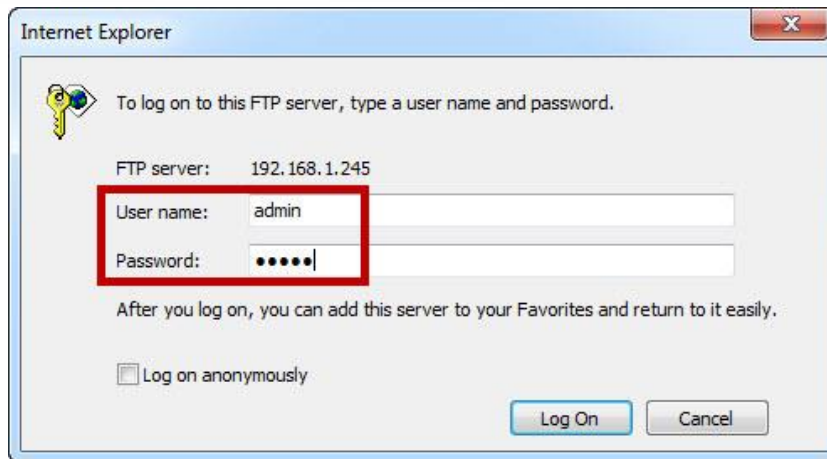
4.4.2 FTP Service

To access FTP service in a web-based interface, please open Windows Internet Explorer and enter NVR IP address which users configure.

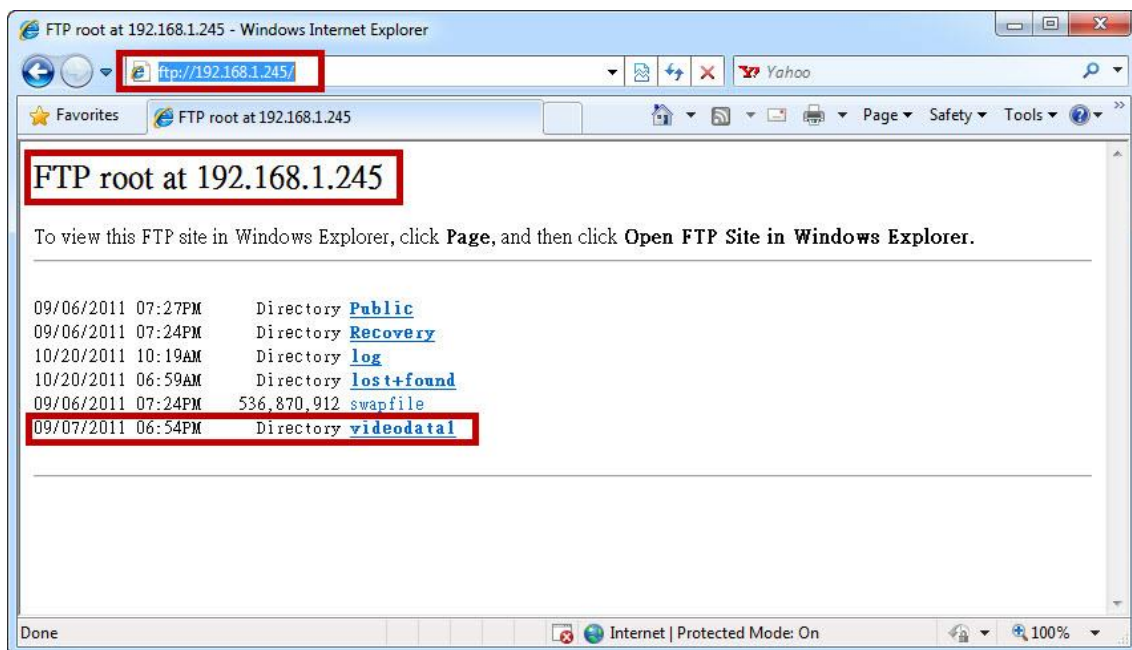
Note: To access FTP service in WAN, please enable router's Internet access and specify the same port as NVR. (The default is 21)



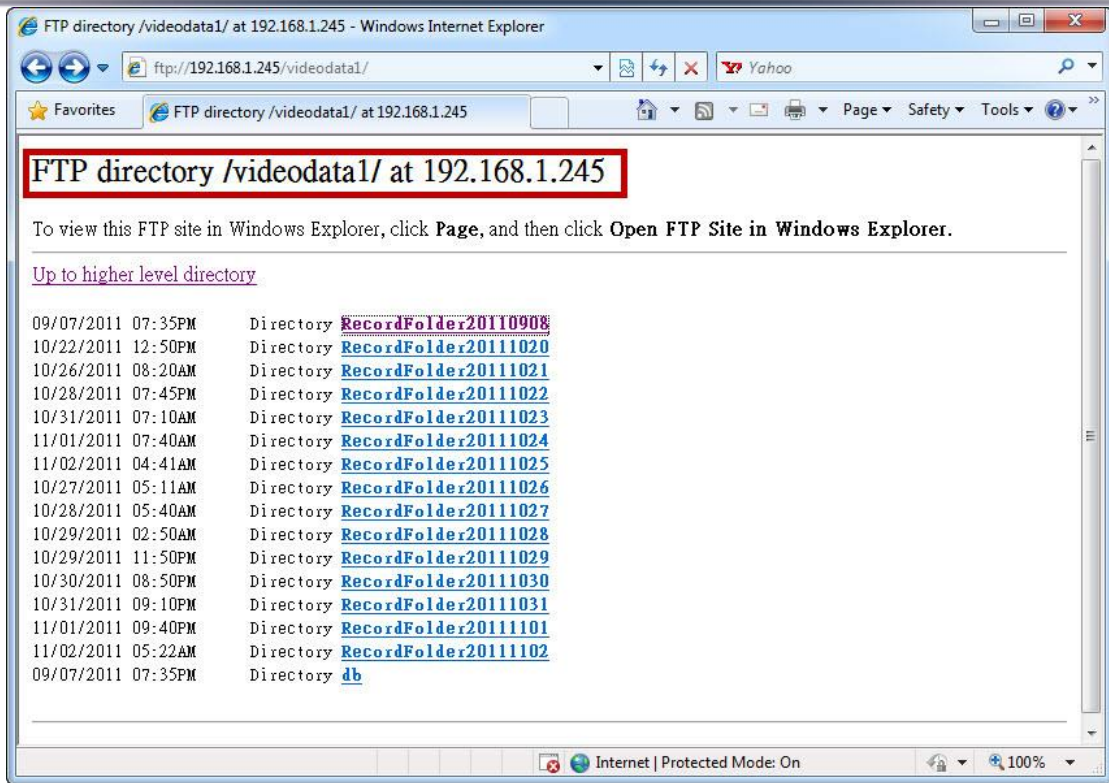
As you enter the IP address, a window will pop up and ask to type a user name and password to log in FTP server. If you don't amend the user name and password, please enter the default ones: "admin/admin."



Please click "Log On" to proceed.



IE browser shows the folders on FTP server. Please select folder "videodata1".



The folder displays RecordFolder chronologically by recording dates. Please select a folder to enter.

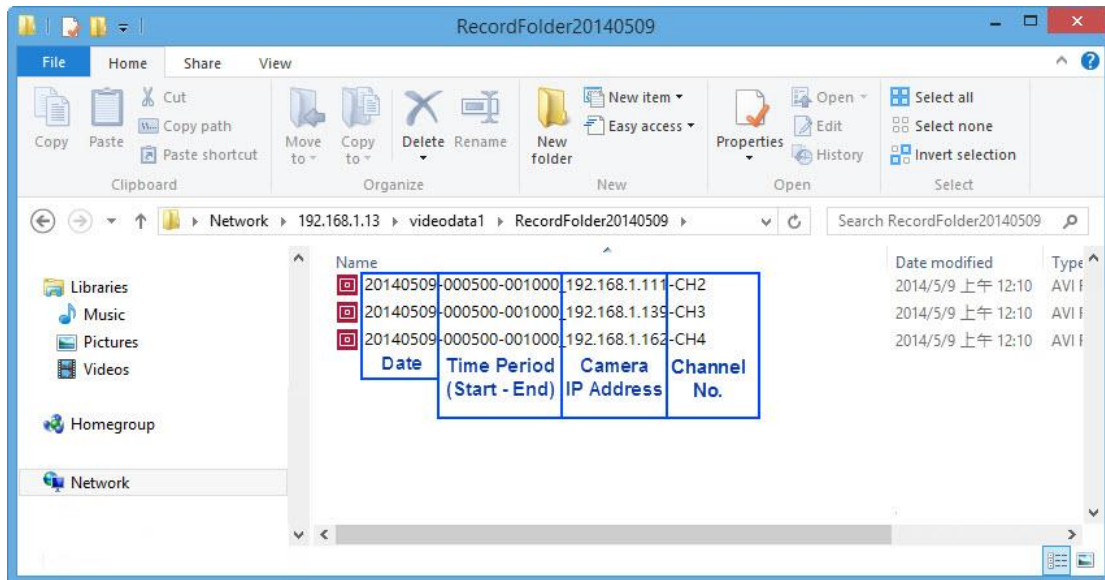
All video files lists chronologically by recorded time and video length of each chunk is five minutes.

Select a video file to play.

4.4.3 Naming Rule of Video files

NVR writes and memorizes videos to HDD in every 5 minutes. This way can ensure all videos are well saved when encountering power outage or other accidents. Besides, when exporting videos, each videos file is in around 5 minutes as well. In this way, it is clear for users to search for the videos they are aiming for.

The naming rule of video files is “(year)(month)(day)-(hour)(minute)(second)-(hour)(minute)(second)_(Camera IP Address)-(Channel No).”



Chapter 5. Configuration

In configuration page, users can configure **Quick Configuration**, **IP Camera**, **Recording & Event**, **Disk Management**, **NetworkManagement** and **System** from each drop-down menu.

⚠ Note: NVR will automatically log out from configuration page after idle for 10 minutes.

5.1 IP Camera



5.1.1 Camera Settings

Please refer to Chapter2 - 2.3.6 Camera Settings.

5.1.2 Camera Parameter

User can directly modify camera's configuration such as video format, frame rate and resolution video quality via NVR in this page. Besides, NVR supports multi-stream for monitoring and recording.

Please select "Camera Parameter" from the drop-down menu of IP Camera to begin.



Camera Parameter

Camera No.	3	Camera Name	Camera 3 - Vivitek
Stream 1	<input checked="" type="radio"/> Record		
Video Format	<input type="radio"/> MPEG4 <input checked="" type="radio"/> H264 <input type="radio"/> MJPEG		
Resolution	1280x720		
Frame Rate	25 fps		
Video Quality	<input type="radio"/> VBR 3 <input checked="" type="radio"/> CBR 2000 Kbps		
Enable Audio Recording	<input checked="" type="checkbox"/>		
Enable Mobile Snapshot	<input checked="" type="checkbox"/>		

Stream 2	<input type="radio"/> Record		
Enabled	<input checked="" type="checkbox"/>		
Video Format	<input type="radio"/> MPEG4 <input checked="" type="radio"/> H264 <input type="radio"/> MJPEG		
Resolution	640x360		
Frame Rate	30 fps		
Video Quality	<input type="radio"/> VBR 3 <input checked="" type="radio"/> CBR 4000 Kbps		
Enable Audio Recording	<input checked="" type="checkbox"/>		

Camera List

No.	Camera Name	IP Address	Vendor	Model	Original Web
1	Camera 1	183.233.190.40	Generic_RTSP	NA	Go to Web
2	Camera 2	192.168.1.111	Brickcom Corporation	Brickcom-30xN	Go to Web
3	Camera 3 - Vivitek	192.168.1.139	VIVOTEK	FD8164	Go to Web
4	Camera 4	192.168.1.24	VIVOTEK	IP8173H	Go to Web
5	Camera 5	192.168.1.19	Brickcom Corporation	Brickcom-30xN	Go to Web
6	Camera 6	192.168.1.179	AVTECH	AVN813	Go to Web
7	Camera 7	192.168.1.102	Brickcom Corporation	Brickcom-30xN	Go to Web

There are two parts in this section: **Camera Parameter** and **Camera List**.

Please select a camera in **Camera List** first.

Camera List					
No.	Camera Name	IP Address	Vendor	Model	Original Web
1	Camera 1	183.233.190.40	Generic_RTSP	NA	Go to Web
2	Camera 2	192.168.1.111	Brickcom Corporation	Brickcom-30xN	Go to Web
3	Camera 3 - Vivotek	192.168.1.139	VIVOTEK	FD8164	Go to Web
4	Camera 4	192.168.1.24	VIVOTEK	IP8173H	Go to Web
5	Camera 5	192.168.1.19	Brickcom Corporation	Brickcom-30xN	Go to Web
6	Camera 6	192.168.1.179	AVTECH	AVN813	Go to Web
7	Camera 7	192.168.1.102	Brickcom Corporation	Brickcom-30xN	Go to Web

As you click one column turning into blue, please wait and the window below will appear to allow user to configure camera parameter.

Camera Parameter

Camera No.	3	Camera Name	Camera 3 - Vivotek
Stream 1	<input checked="" type="radio"/> Record		
Video Format	<input type="radio"/> MPEG4 <input checked="" type="radio"/> H264 <input type="radio"/> MJPEG		
Resolution	1280x720		
Frame Rate	25 fps		
Video Quality	<input type="radio"/> VBR 3 <input checked="" type="radio"/> CBR 2000 Kbps		
Enable Audio Recording	<input checked="" type="checkbox"/>		Enable Mobile Snapshot <input checked="" type="checkbox"/>

Stream 2	<input type="radio"/> Record		
Enabled	<input checked="" type="checkbox"/>		
Video Format	<input type="radio"/> MPEG4 <input checked="" type="radio"/> H264 <input type="radio"/> MJPEG		
Resolution	640x360		
Frame Rate	30 fps		
Video Quality	<input type="radio"/> VBR 3 <input checked="" type="radio"/> CBR 4000 Kbps		
Enable Audio Recording	<input checked="" type="checkbox"/>		

After loading camera's information, users can modify below camera parameter:

(1) Camera No.

Load Select a desired camera no. to switch camera in NVR's camera list.

(2) Stream 1/ Stream 2 (Recording Stream)

Decide one stream as recording stream for video recording between stream 1 and stream 2, if cameras support dual streams.

⚠ Note: It is suggested stream 1 is set for higher resolution and stream 2 for lower resolution, which helps users to choose the proper streaming on live view with intuitive control.

⚠ Note: On liveview interface, NVR will display videos in stream 1 from 1-screen to 12-screen display mode. NVR will display videos in stream 2 when display mode is above 16-screen.

⚠ Note. The default resolution of stream2 is CIF (360x 240).

(3) Video Format

Choose a video compression format for live view and recording: MPEG4, H.264 and MJPEG.

⚠ Note: Types of video format varies depending on the camera brands and models.

(4) Frame Rate

Frame rate of IP camera will be influenced by the network surroundings.

(5) Resolution

Select resolution from drop-down list for your camera.

(6) Video Quality

Select either “VBR” (Variable bit rate) or “CBR” (Constant bit rate) to set the video quality.

(7) Enable Audio Recording

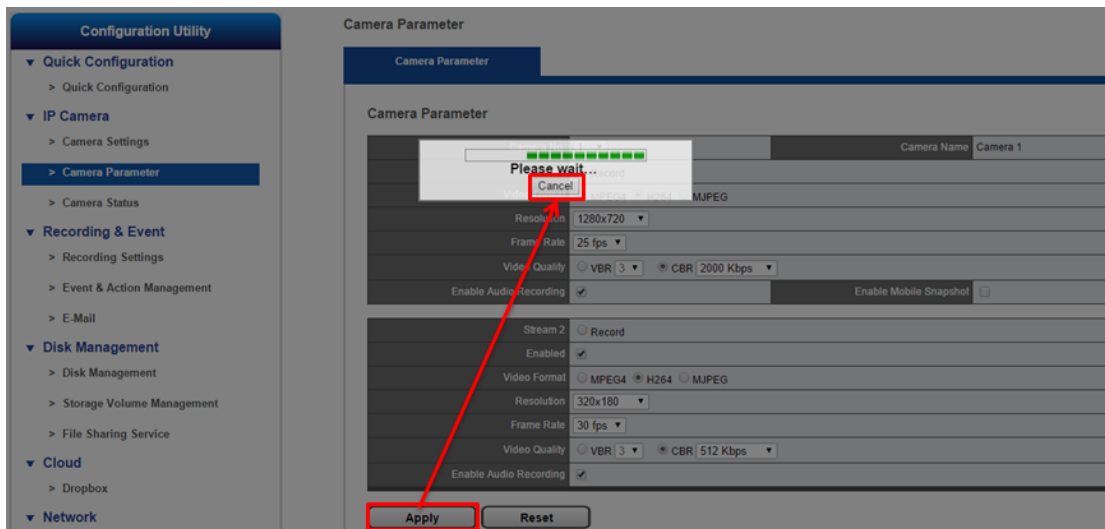
To make audio recording function enable or disable.

(8) Enable Mobile Snapshot

To make mobile snapshot function enable or disable.

Please click “**Apply**” button to save modified camera parameter.

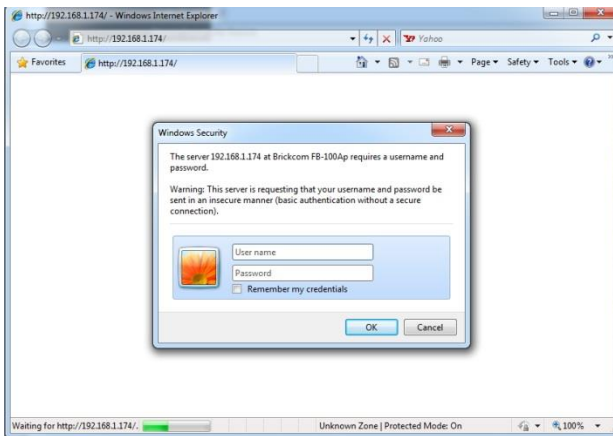
You may click “**Cancel**” button to stop the execution.



Furthermore, click “**Go to Web**” for advanced camera configuration in camera’s user interface.

Camera List					
No.	Camera Name	Address	Vendor	Model	Original Web
1	174	192.168.1.174	Brickcom Corporation	FB-100Ap	Go To Web
2	176	192.168.1.176	Brickcom Corporation	CB-100Ap	Go To Web
3					Go To Web

At the same time, a window will pop up to ask for user name and password for camera configuration.



5.1.3 Camera Status

Please select “Camera Status” from the drop-down menu of IP Camera to begin.



Camera List shows connection status of recording.

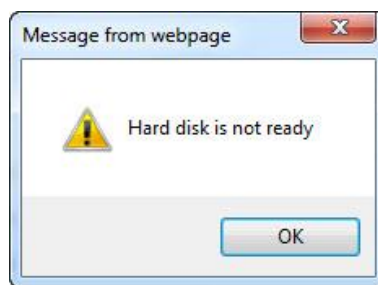
Camera Status						
Camera Status						
No.	Camera Name	IP Address	Conn. Status	Rec. Status	Framerate(fps)	Bitrate(Kbps)
1			-	-	0 fps	0 Kbps
2			-	-	0 fps	0 Kbps
3	124	192.168.1.124	Connected	Stopped	30 fps	4087.4 Kbps
4	CAM	192.168.1.11	Connected	Recording	20 fps	3381.6 Kbps
5	189	192.168.1.60	Disconnected	Stopped	0 fps	0 Kbps
6			-	-	0 fps	0 Kbps
7			-	-	0 fps	0 Kbps
8			-	-	0 fps	0 Kbps

5.2 Recording & Events

Recording & Events can provide different event modes and recording schedule for users to configure IP camera. Event & Action Management also allows users to combine various events and its triggered actions to achieve the security surveillance.



If the hard disk is not installed, the following window will pop up when you click "Recording & Event".



After the hard disk is ready, users can continue the following settings.

5.2.1 Recording Settings

Please select “Recording Settings” from the drop-down menu of **Recording & Event** to begin.



Recording Settings

Recording Mode Recording Schedule Recording Group

Recording Mode

	<input type="radio"/> No Recording			
	<input type="radio"/> Recording by Schedule or Event (please go to Recording Schedule to do settings)			
Recording Mode	<input checked="" type="radio"/> Always Recording <input checked="" type="checkbox"/> All			
	<input checked="" type="checkbox"/> 241	<input checked="" type="checkbox"/> AMTK155	<input checked="" type="checkbox"/> AMTK157	<input checked="" type="checkbox"/> Afidus159
	<input checked="" type="checkbox"/> Basler166	<input checked="" type="checkbox"/> Basler167	<input checked="" type="checkbox"/> ZAVIO170	<input checked="" type="checkbox"/> ZAVIO227
	<input checked="" type="checkbox"/> ZAVIO228	<input checked="" type="checkbox"/> ZAVIO229	<input checked="" type="checkbox"/> ZAVIO230	<input checked="" type="checkbox"/> ZAVIO231
	<input checked="" type="checkbox"/> 166	<input checked="" type="checkbox"/> 167	<input checked="" type="checkbox"/> 227	<input checked="" type="checkbox"/> 228
	<input checked="" type="checkbox"/> 229	<input checked="" type="checkbox"/> 230	<input checked="" type="checkbox"/> 231	<input checked="" type="checkbox"/> 172
	<input checked="" type="radio"/> NVR's unique AVI file <input type="radio"/> General AVI file			
	<small>Note: For security concern, the default recorded video format is "NVR's unique AVI file". It will allow the exported files to be played only via NVRPlayer. If you select "General AVI file", the files will be able to be played via also other video players like Windows Media Player, VLC etc.</small>			
	HDD Automatic Recycle	<input type="radio"/> Threshold <input type="text" value="90"/> % (Max.:90,Min.:20)		
	Video Keeping Period	<input checked="" type="radio"/> Keep Video for <input type="text" value="30"/> Days		

Note: When HDD storage capacity is over 94%, NVR will start to recycle the oldest 16GB recorded videos.

1. Recording Mode

Users can set the mode of “No Recording,” “Recording by Schedule or Event” and “Always Recording” for each connected cameras.

- (1) **No Recording:** This mode will make all cameras disable to record the video.
- (2) **Recording by Schedule or Event:** This mode allows you to set the scheduled time to record the video in two record modes, Always Record and Recording by Event. Please configure the schedule in “Recording Schedule” section.



- (3) **Always Recording:** Users can select the camera or click “All” camera to apply “Always Recording” function. The video will be recorded continuously.

2. Video Format

NVR provides two video formats of recording videos for different safety concerns. Please select a suitable video format to record videos in NVR.

- (1) **NVR's unique AVI file:** For security concern, the default recorded video format is "NVR's unique AVI file". It will allow the exported files to be played only via NVRPlayer.
- (2) **General AVI file:** If users select "General AVI file", the files will be able to be played via also other video players like Windows Media Player, VLC etc.


3. Storage Management

NVR provides two ways to delete the recorded videos.

- (1) **HDD Automatic Recycle:** Users can set storage capacity percentage for keeping videos to automatically overwrite the oldest video files. The maximum threshold is 90% while the minimum is 20%. NVR will check the HDD storage capacity in every 5 minutes. If HDD storage capacity is more than threshold, NVR will start to delete the oldest 16GB videos.

- (2) **Video Keeping Period:** Users can set time period for keeping videos. NVR will check the video keeping time in every 10 minutes.

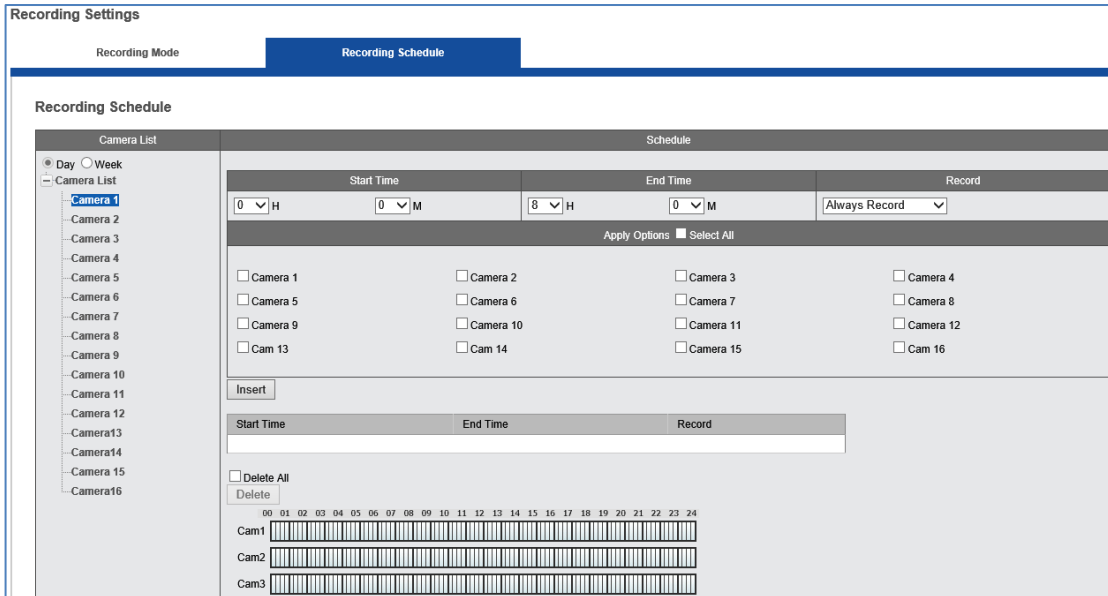
For example, if the video is set to keep in 7 days and the storage of HDD has kept over 7 days, NVR will automatically delete the recorded videos of the earliest time.

-  **Note.** When HDD storage capacity is **over 94%**, NVR will start to recycle the oldest 16GB recorded videos. User can go to configuration page (Management > Log System > NVR Log) to check the record for security control.

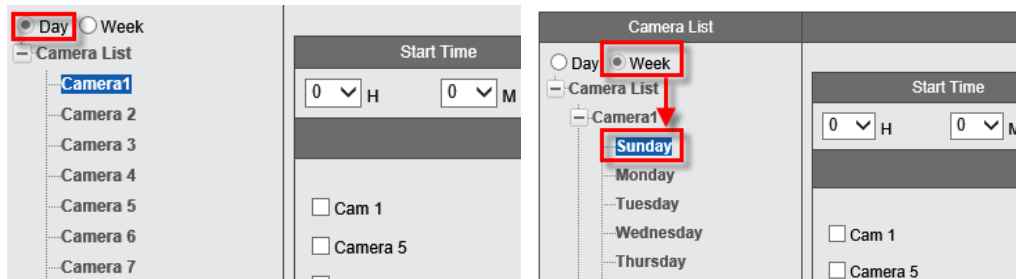
Click "**Apply**" to apply setting or click "**Reset**" to change the setting.

5.2.2 Recording Schedule

Users can configure Recording Schedule in desired time range and recording type (Always Record and Recording by Event) for all channels.

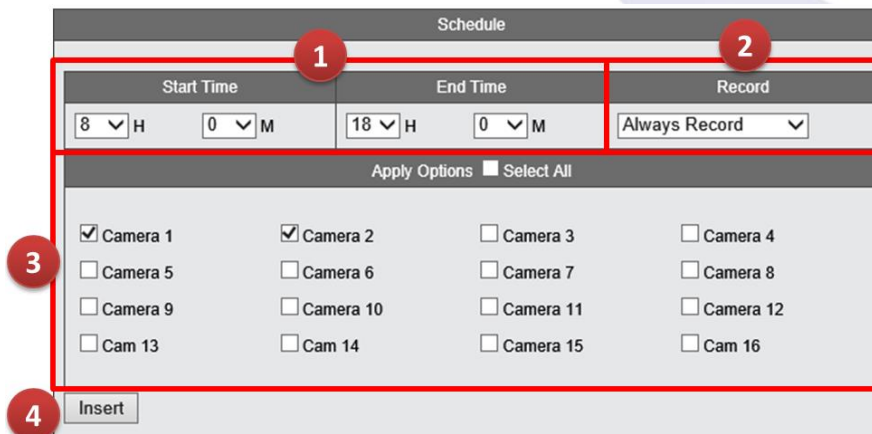


1. Select schedule **by day** or **by week**(such as Sunday only)



2. Insert schedule

Select time range (Start/End time), recording type and channel for recording schedule and click "Insert."

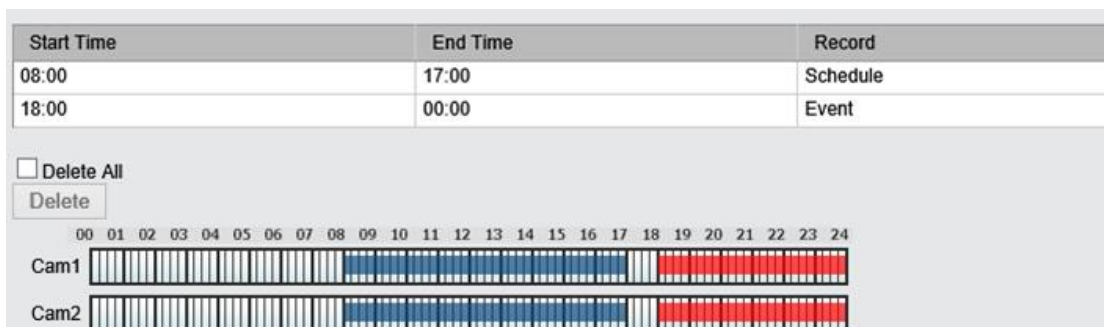


2. Recording type

Depending on recording requirements, users can two recording types:

- (1) **Always Record:** If “Always Record” is selected, the video will be recorded continuously.
- (2) **Record by Event:** Once “Recording by Event” is selected, all cameras will record the video when an event is triggered.

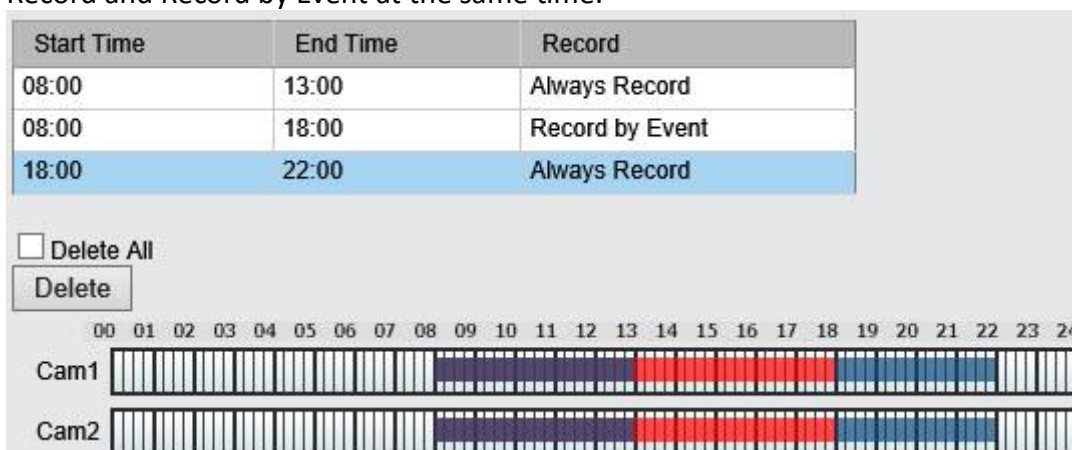
After inserting time range and channel, the time/camera bar displays the selected time.



Camera bar will display record schedule in each camera bar. **Always Record** is in blue, **Record by Event** is in red.

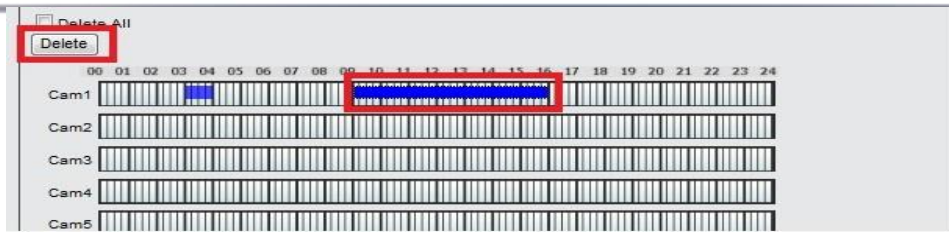
Click “Apply” to finish setting or “Reset” to rearrange time and camera channel.

⚠ Note: A camera can set **multi-recording schedule** and **two recording types** at same time. The camera bar will display in purple when users set up both Always Record and Record by Event at the same time.



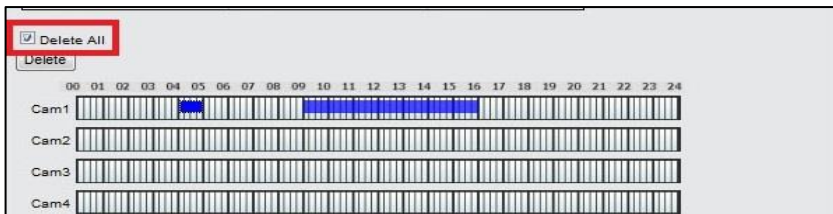
3. Delete schedule

Users can erase the specific time in recording schedule by selecting the time then click “Delete”.



- **Delete All**

With checking the **Delete All** and then select the camera, users can remove the whole recording schedule for the certain camera after click "**Delete**".

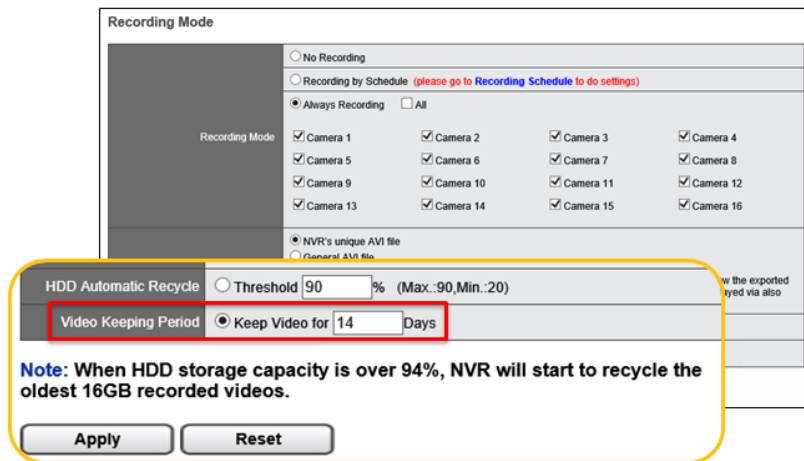


5.2.3 Recording Group

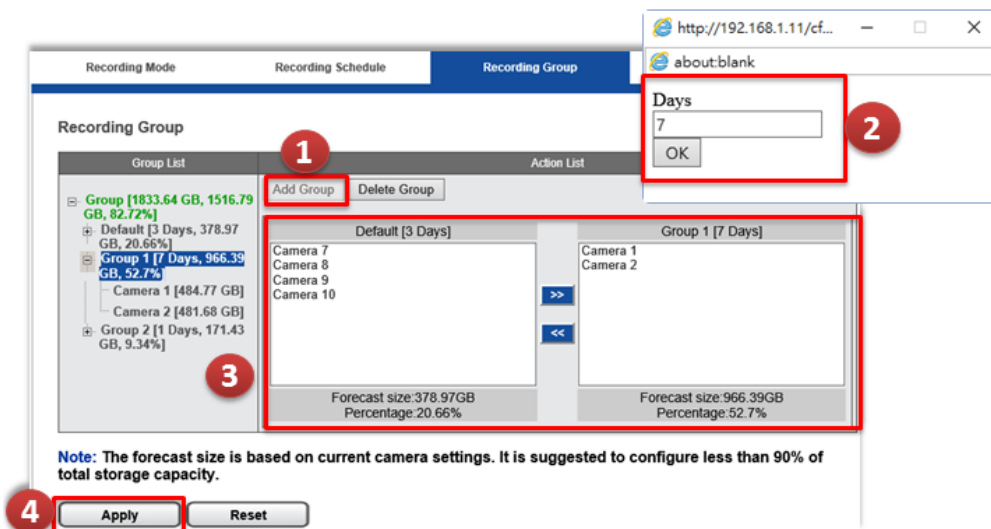
Based on the importance of cameras, users can store videos in desired days by categorizing cameras in group.

- ⚠ **Note:** The group numbers should be no more than 10.
- ⚠ **Note:** The forecast size is based on current camera settings. It is suggested to configure less than 90% of total storage capacity.

Please select **video keeping period** and enter the default days on recording mode page.



Click “Add Group” to enter the number of recording day.



Move cameras to new group. Based on current camera setting, NVR will **estimate storage space and percentage** that each camera group will take in NVR. Finally, click “Apply” button to save setting.

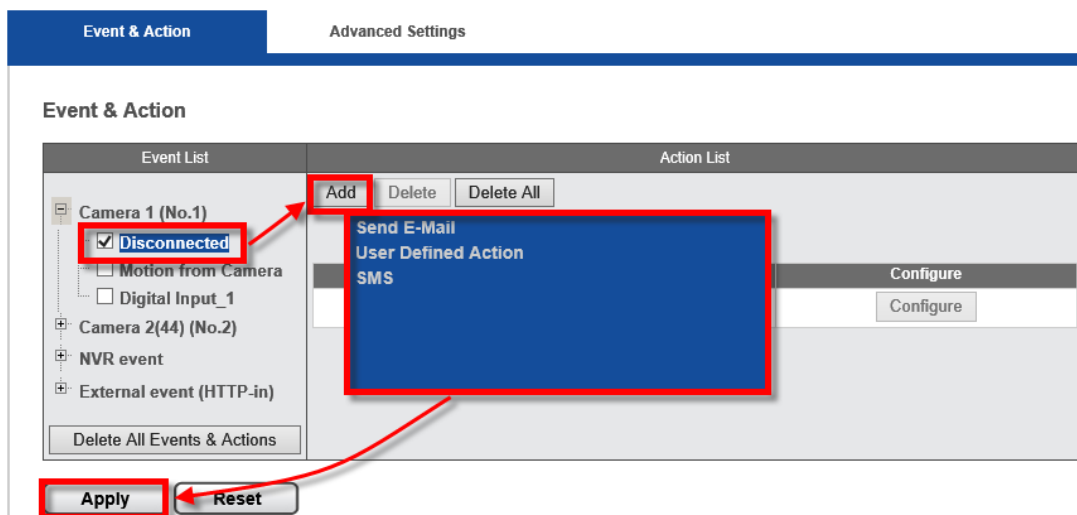
5.2.4 Event & Action Management

Please select “Event & Action Management” from the drop-down menu of **Recording & Event** to begin.



“Event & Action Management” allows users to define event setting that manage events and its corresponding action. Users can configure multiple types of event for camera, and NVR also provide various types of event for NVR system. It can strengthen security level during monitoring and recording to notify users when necessary. When an event occurs, NVR will perform certain actions.

Select an event type and click “Add” to select an action. Then, click “Apply” to save setting.



Note: The action will be only triggered when the action is added to the event.

1. Event types



(1) Camera event: Disconnected

(2) Camera event: Motion from Camera

(3) Camera event: Audio Detection

When the audio threshold level is higher than preset level, the alarm will be triggered.

⚠ Note: Please go to camera web page to configure audio level. This event is supported for AXIS IP camera for now.

(4) Camera event: Digital Input

⚠ Note: Double-clicking on it, users can redefine the name of Camera Digital Input.

(5) Camera event: Call button

When the call button is triggered, the alarm will be triggered.

⚠ Note: This event is supported for Aiphone IX series for now.


⚠ Note: NVR will record the audio captured from door station only.

(6) NVR event: Disconnected

(7) NVR event: Recording Error


(8) NVR event: UPS Warning

UPS Low Power Warning will warn users that UPS is nearly out of power before NVR automatically shutdown to sleep mode.

 **Note:** Please **enable** this feature and fill in a number to trigger event on configuration page: Management > UPS Management > UPS Information. For more information, please refer to **5.6.7-2 UPS Management Settings**.

(9) NVR event: Storage Threshold Warning

Storage Threshold Warning is a friendly HDD recycle pre-notice design to give users the time to backup important recorded videos or to save recorded videos longer by using DIGIARRAY. Once NVR nearly reaches HDD automatic recycle threshold, NVR will send email to inform users that NVR will start to recycle the oldest recorded video soon. The second email sent by NVR means that NVR starts recycle progress.

 **Note:** Depending on HDD recycling method, storage threshold warning will be triggered in below situations: (Please refer to **5.2.1-3 Recording Settings** to set up storage management.)

[1. HDD Automatic Recycle]: Event will be triggered when HDD storage space remains **5% prior to the threshold**.

[2. Video Keeping Period]: Event will be triggered **3 days before setting days**.

(10) NVR event: Abnormal Shutdown

When NVR resumes from a power outage, NVR will automatically recover and send notice that NVR has encountered abnormal shutdown. Besides, NVR will recover missing file caused from power outage.

(11) NVR event: Digital Input

(12) NVR event: Redundant Power

For NVR equipped with **rack-mount redundant power supply**, NVR offers **system buzzer** and other system notification such as **Email notification** and **Digital Output (DO)** to notify users of the failure of power supply.

(13) Hardware event: CPU Temperature Warning

(14) Hardware event: CPU Fan Warning

(15) Hardware event: System Fan Warning

(16) Hardware event: HDD Error Warning

HDD Error Warning is a pre-notice to inform users that HDD has encountered some errors. NVR can save videos in HDD.

(17) Hardware event: HDD Failed

In below two situations, HDD failed event will be triggered:

- ① NVR's HDD fails (NVR cannot save videos to that HDD)
- ② DIGIARRAY, the storage expansion box, is disconnected to NVR

(18) External event (HTTP-in)

Event could be triggered by **external HTTP-in CGI command**. It allows users to define **up to 5 different HTTP-in events**. With the “External Event”, users can set its actions just like other events.

- The format of external HTTP-in event

http://<NVR_IP>/login.cgi/cgi_main.cgi?cgiName=event_ipc.cgi&eventName=Defined <int>

- <NVR_IP>is the IP of NVR that command need to be delivered to.

- <int>is defined for what number(1~5) of external HTTP-in event need to be triggered.

For example :

http://192.168.1.245/login.cgi/cgi_main.cgi?cgiName=event_ipc.cgi&eventName=Defined_3

- The CGI is for sending message to the NVR with IP 192.168.1.245 and trigger the external event #3

2. Action types

(1) Send E-Mail

E-Mail Configuration window will pop up as you add “**Send E-Mail**” to action. But there will be no contactor listed in the configuration at first, please go to add a new contactor in the following section “**E-Mail**.”



After contact information is added, **Contact List** shows the information of Name and E-Mail.

Contact List

Selected	Contact Name	E-Mail
<input type="checkbox"/>	Natasha	natasha.wu@digiever.com
<input type="checkbox"/>	Test	info@digiever.com

Note: The contact can be set through (Recording & Event > Email)

Subject:
(Max. size: 64 characters)

Message:
(Max. size: 127 characters)

Snapshot Attached with the snapshot

Apply Options All

<input checked="" type="checkbox"/> Camera 1	<input type="checkbox"/> Camera 2(44)	<input type="checkbox"/> Camera 3(27)	<input type="checkbox"/> Camera 4(28)
<input type="checkbox"/> Camera 5	<input type="checkbox"/> Camera 6	<input type="checkbox"/> Camera 7	<input type="checkbox"/> Camera 8
<input type="checkbox"/> Camera 9	<input type="checkbox"/> Camera 10	<input type="checkbox"/> Camera 11	<input type="checkbox"/> Camera 12
<input type="checkbox"/> Camera 13	<input type="checkbox"/> Camera 14	<input type="checkbox"/> Camera 15	<input type="checkbox"/> Camera 16

Note: This option will be applied to other cameras.

- ① Select the contactor
- ② Edit the content on **Subject** and **Message** column
- ③ You can choose whether to **attach the snapshot** with Email (Optional)
- ④ Apply same setting with other cameras in “**Apply Options**” (Optional)
- ⑤ Click “**Ok**” button to finish E-MAIL Configuration.

E-Mail action will be triggered once per 20 seconds as the event is happening, which means if an event is lasting for one minute, NVR will send email 3 times per every 20 seconds.

(2) Digital Output and Camera Digital Output

Action Digital Output Configuration -- Webpage Dialog

http://192.168.1.245/cfg_event_buzzer.htm

Digital Output Configuration

Buzzer Enabled Enabled / Time: 60 sec

Digital Output1 Enabled Enabled / Time: 60 sec

Digital Output2 Enabled Enabled / Time: 60 sec


Apply Options All

<input checked="" type="checkbox"/> Camera 1	<input type="checkbox"/> Camera 2	<input type="checkbox"/> Camera 3	<input type="checkbox"/> Camera 4
<input type="checkbox"/> Camera 5	<input type="checkbox"/> Camera 6	<input type="checkbox"/> Camera 7	<input type="checkbox"/> Camera 8
<input type="checkbox"/> Camera 9	<input type="checkbox"/> Camera 10	<input type="checkbox"/> Camera 11	<input type="checkbox"/> Camera 12
<input type="checkbox"/> Camera 13	<input type="checkbox"/> Camera 14	<input type="checkbox"/> Camera 15	<input type="checkbox"/> Camera 16

Note: This option will be apply to other cameras

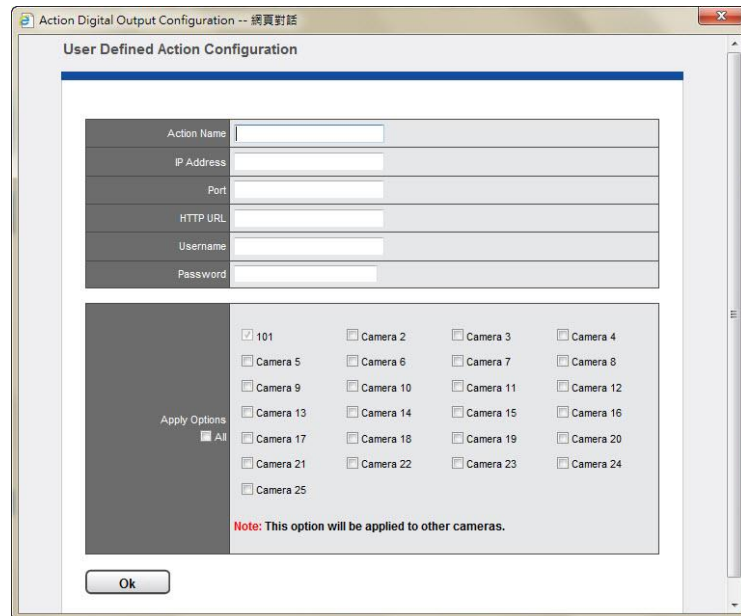
http://192.168.1.245/cfg_event_buzzer.htm Internet | Protected Mode: On

Buzzer can be enabled up to sound for 60 seconds. **Digital Output1** and **Digital Output2** can be enabled from 3 second to continuous warning.

 **Note:** User can press “**USB BACKUP**” button on the front panel of NVR for one second to stop the buzzer beeping.

(3) User Defined Action (HTTP-out)

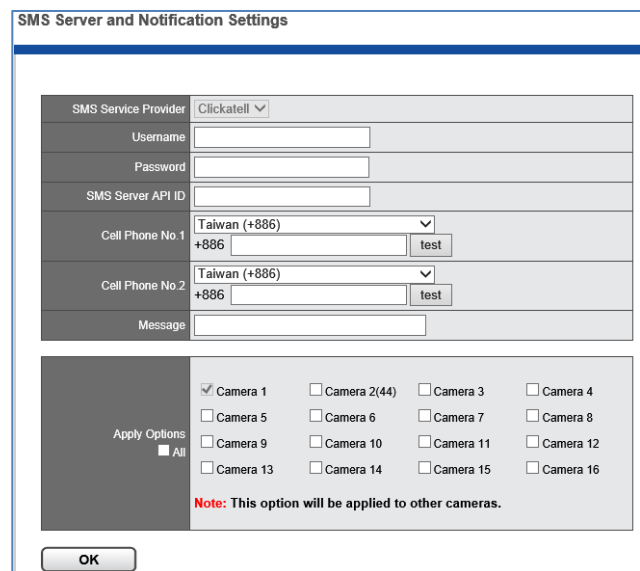
User Defined Action allows users to send the specific HTTP command out when an event is triggered in order to manage devices such as power controller, fire/smoke protection device, etc.



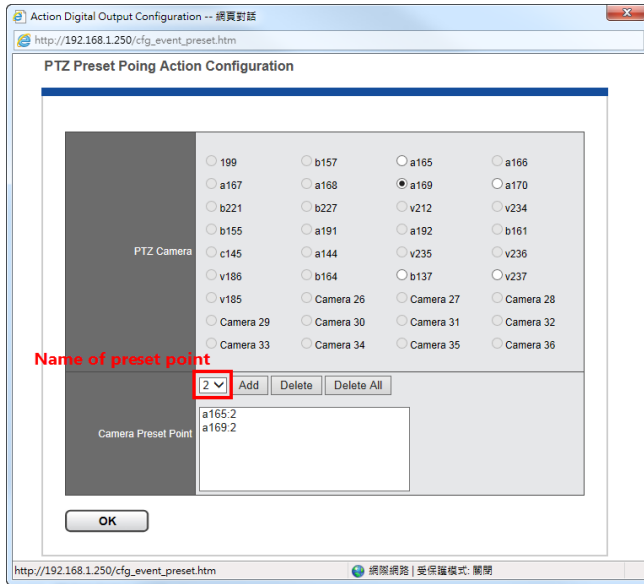
(4) SMS

SMS stands for Short Message Service. Users can be notified by short message service while the event is triggered. The service is supported by [Clickatell](#) and users need to register for the service.

Before clicking “**OK**” button to save the setting, please click “**test**” button to ensure the account information and cell phone is correct

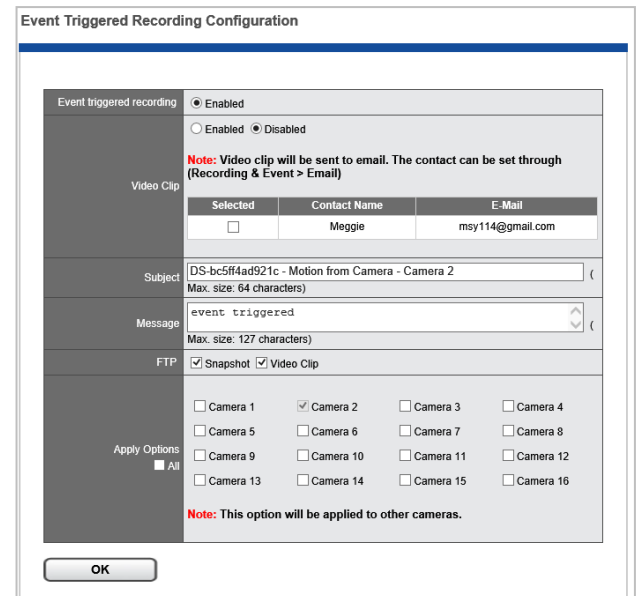


(5) Camera Preset Point



Once an event occurs, user can set up to 3 PTZ cameras to go to specific location individually.

(6) Event Triggered Record



NVR can enable **Event trigger record**, **Video Clip** and **External FTP** when an event is triggered.

- ① **Event triggered record:** NVR records video every five minutes as the event continues happening. Recording type on playback page displays as **Event in red footage**.
- ② **Video Clip:** Video clip will be sent by E-mail. Please **enable** video clip and select **E-mail contact** to send video clip. You can also edit E-mail **subject** and **content**. Recording type on playback page displays as **Video Clip in yellow footage**.

You can change the Pre-time and Post-time of video clip through **“Advanced Settings.”**



- ③ **External FTP:** Enable “**Snapshot**” and “**Video Clip**” to store them to external FTP server when an event is triggered.

⚠ **Note:** You can apply **Event trigger record**, **Video Clip** and **External FTP** to other cameras on “Apply Options.”

(7) SNMP Trap

To make users easily manage and monitor devices on network, NVR supports **SNMP (Simple Network Management Protocol)** to intelligently notify users of event triggered via SNMP trap.

Users can configure **up to 8 event types** to inform security guard of event occurred via SNMP server, including **camera disconnected**, **recording error**, **UPS low power warning**, **CPU temperature warning**, **CPU fan warning**, **system fan warning**, **HDD error warning** and **HDD fail warning**.

⚠ **Note:** Please go to configuration page (Management > SNMP) to connect a SNMP server in advance.

(8) Stack Light

Please connect stack light to NVR first. (Please refer to **5.6.12 Stack Light**.)

Once an event occurs, user can set up stack light’s action: **Red**, **Yellow**, **Green** and **Buzzer**.

Stack Light Configuration				
Stack Light Actions	<input type="checkbox"/> Red	<input type="checkbox"/> Yellow	<input type="checkbox"/> Green	<input type="checkbox"/> Buzzer
Stack Light	<input type="checkbox"/> Device 1	<input type="checkbox"/> Device 2	<input type="checkbox"/> Device 3	<input type="checkbox"/> Device 4
Note: Please go to the setting page				
<input type="button" value="OK"/>				

⚠ **Note:** It is necessary to press stop button on stack light to ensure the event has been checked.

(9) Network Horn Speaker

Please refer to **2.3.6 Camera Settings** to add network horn speaker first. Users can assign pre-recorded audios when an event is triggered. (One event can be configured up to 3 speakers.) By clicking network horn speaker on liveview page, users can centrally and remotely address people and deter unwanted activity.

Network Horn Speaker Action Configuration

Speaker	<input type="radio"/> GRUNDIG224 <input type="radio"/> GRUNDIG225 <input type="radio"/> GRUNDIG226 <input type="radio"/> IDIS232 <input type="radio"/> IDIS233 <input type="radio"/> IDIS234 <input type="radio"/> IDIS237 <input type="radio"/> LINKSYS239 <input type="radio"/> LINKSYS241 <input type="radio"/> Infinova220 <input type="radio"/> Infinova221 <input type="radio"/> Dynacolor142 <input type="radio"/> Dynacolor141 <input type="radio"/> Kanasky145 <input type="radio"/> Kanasky146 <input type="radio"/> Kanasky147 <input type="radio"/> Cantonk161 <input type="radio"/> 3S162 <input type="radio"/> Hikvision150 <input type="radio"/> Hikvision154 <input type="radio"/> Hikvision152 <input type="radio"/> Messoa182 <input type="radio"/> Messoa184 <input type="radio"/> Messoa186 <input type="radio"/> 166 <input type="radio"/> 167 <input type="radio"/> 227 <input type="radio"/> 228 <input type="radio"/> 229 <input type="radio"/> 230 <input type="radio"/> 231 <input checked="" type="radio"/> Camera 64
Audio File List	<div style="border: 1px solid gray; padding: 2px; margin-bottom: 5px;"> 17_Merry Christmas Wishing Add Delete Delete All </div> <div style="border: 1px solid gray; padding: 2px;"> Camera 64:17_Merry Christmas Wishing </div>

- ⚠ **Note:** NVR supports Axis C3003-E for now.
- ⚠ **Note:** Please go to camera setting on configuration page and click “**Apply**” button for network horn speaker again, when you add new pre-recorded audios to network horn speaker.

5.2.5 Advanced Setting

Event & Action Management

Event & Action **Advanced Settings**

Advanced Settings

Action Triggered Interval	10 sec	
Video Clip	Seconds before event being triggered: 3 sec. Start Recording Video	
	Seconds after Event 3 sec. Stop Video	
Recording Settings	Seconds before event being triggered: 300 sec. Start Recording Video	
	Seconds after Event 300 sec. Stop Video	
Event Triggered with Audio	<input type="checkbox"/>	
User-defined event trigger time	<input type="checkbox"/> 1 minutes of camera disconnected	
Digital Input Default	DI_1 Low DI_2 High DI_3 Low DI_4 Low	
Digital Input Name	DI_1 Digital11111	DI_2 DigitalInput_22
	DI_3 DigitalInput_33	DI_4 DigitalInput_44
Digital Output Name	DO_1 Digital-Output1	DO_2 Digital-Output2
FTP Settings	IP Address: 192.168.3.91	Port: 21
	<input type="checkbox"/> Anonymous Access Username: FTPTest	Password: ****

Tip: When 'Event Triggered with Audio' is enabled, the audio of all cameras will be disabled to do recording until the event is triggered. And when the event stops, the audio will be disabled again accordingly. All above will not influence the audio function in liveview.

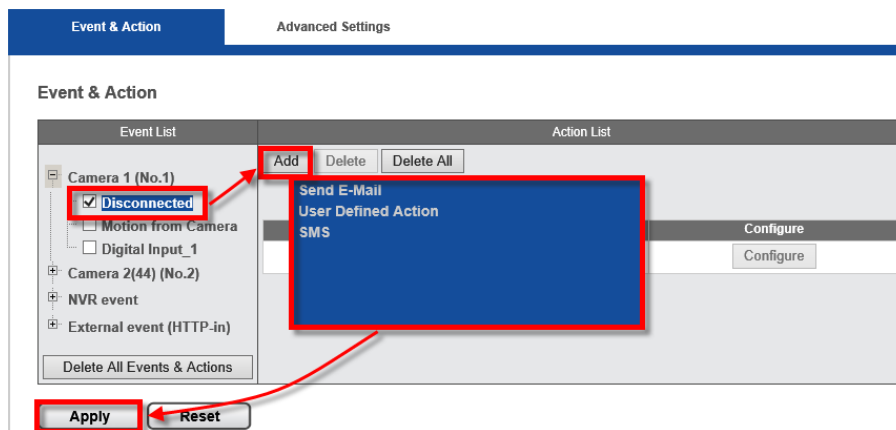
- 1. Action Triggered Interval**
Users can set proper time interval when events are triggered in sequence.
- 2. Video Clip and Recording Settings**
Users can set Pre-time of record and Post-time of record for video clip and event recording.
Pre-time of record can up to 300 seconds before the event is triggered and Post-time of record can up to 300 seconds after the event ends.
- 3. Event Triggered with Audio**
Users can set up whether audio is recorded only when an event is triggered.

When “**Event Triggered with Audio**” is enabled, camera audio will be recorded when an event is triggered. When the event stops, the audio will be disabled again automatically.

4. User-defined Event Tigger Time

For unstable network surveillance environment, NVR allows user to define event trigger time for camera disconnection (named **Camera connection lost delay**) to decrease the possibility of error alarm.

Please go to configuration page (Recording & Event > Event & Action Management > Event & Action) to configure **camera disconnected** as event and set up corresponding action.



5. Digital Input Default

User can set up default High/Low setting of digital inputs for different digital input device. (Default is Low) Once one of digital inputs becomes High, NVR will treat it as an event.

6. Digital Input/ Output Name

User can give the specific name to all digital inputs (DI) and all digital outputs (DO) to save time to set up event and actions with no need to remember the function of each DI/DO one by one.

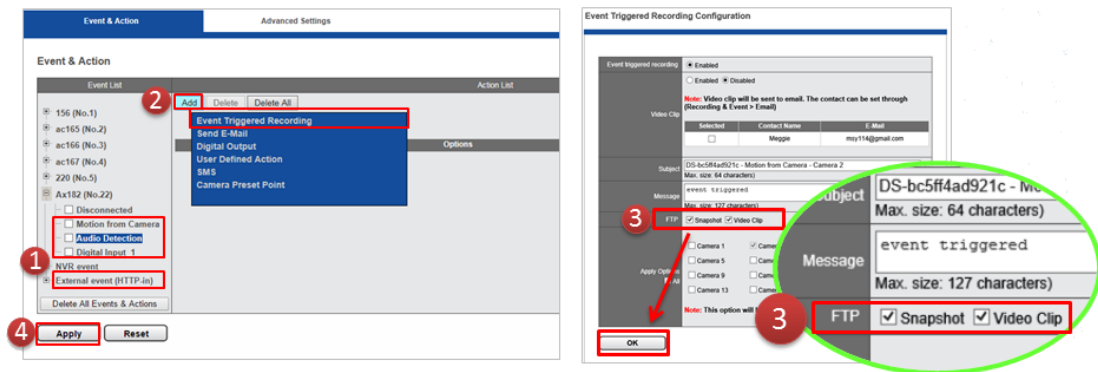
7. FTP Settings(Event Backup to External FTP)

NVR can back up video clips and snapshots to external FTP server when an event is triggered. User can enable “**Anonymous Access**” if external FTP server supports it.

After filling FTP server information, please click “**FTP Test**” to check connectivity and click “**Apply**” to save setting.

Please go to configuration page (Recording & Event > Event & Action

Management > Event & Action) for further setting.



5.2.6 E-Mail

Please select “E-Mail” from the drop-down menu of **Recording & Event** to begin.



1. SMTP Server

- **Server Address:** Enter the Server Address of the SMTP server.
 - **Sender:** Specify sender’s E-Mail in the “**Sender**” field.
 - **Subject:** Enter the Subject.
 - **Body:** Enter the content.
 - **Authentication:** NVR provides four types of authentication for SMTP Server, including “**PLAIN**”, “**LOGIN**”, “**LOGIN with TLS**” or “**Disable**”. “**Disable**” means users can use anonymous SMTP server to quickly send email notification with no need to configure sender account (username/password).
- This feature can greatly save MIS/administrator’s time to set up Email setting when setting plenty of Email accounts, especially for large-scale institutions or companies.
- **User name:** Specify username.

- **Password:** Specify user password.

Click “**Apply**” to finish or “**Send Test Mail**” to check the availability.

2. Contact

Add contactor by entering name and E-Mail and click “**Add Contact.**”

The screenshot displays the 'E-Mail' configuration page with the 'Contact' tab selected. The 'Contact' section contains a form with two input fields: 'Name' (filled with 'Hannah') and 'E-Mail' (filled with 'inlan@yahoo.com.tw'). Below the form is an 'Add Contact' button. The 'Contact List' section shows a table with one entry:

Name	E-Mail	Delete
Hannah	inlan@yahoo.com.tw	Del

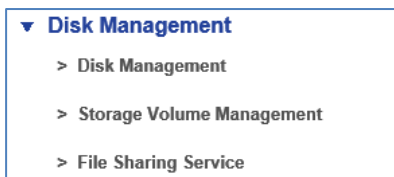
At the bottom of the interface are 'Apply' and 'Reset' buttons.

Contact List will show the information you entered. Please click “**Apply**” to finish settings.

Users can delete the contactor by clicking “**Delete**” button.

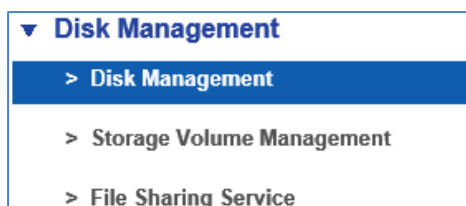
5.3 Disk Management

NVR can create new RAID disk or delete/format the RAID disk. Also, users can manage NVR's storage device for data transmission and file sharing service.



5.3.1 Disk Management

Please select "Disk Management" from the drop-down menu of Disk Management to begin.

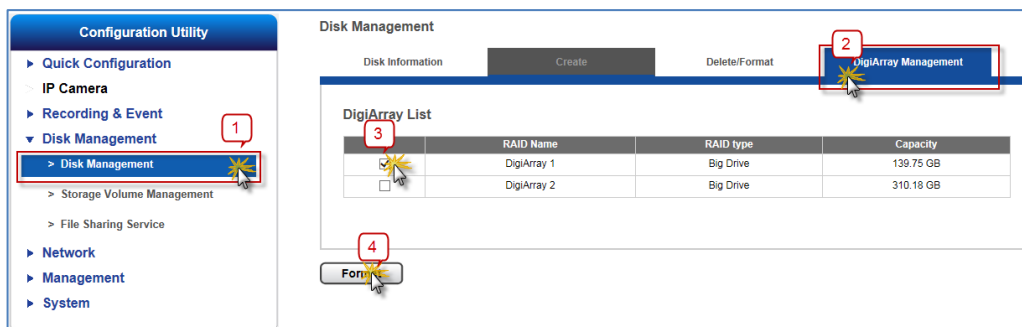


1. Disk Information

The steps for creating and deleting NVR's hard disk, please refer to **2.3.5 Disk Management**.

2. Add DIGIARRAY to NVR

Format DIGIARRAY to add its volume into NVR's volume pool.



Note: Please make sure NVR and DIGIARRAY are power on with a complete RAID type, before you start to connect DIGIARRAY to NVR.

5.3.2 Storage Volume Management

Please select “**Storage Volume Management**” from the drop-down menu of **Disk Management** to begin.

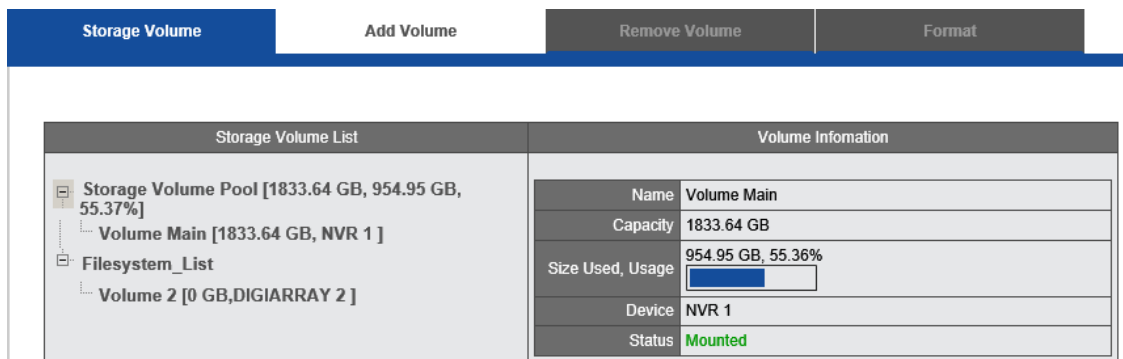


Storage volume management provides an efficient method to organize data expected to be retained after a program is terminated by providing procedures to store, retrieve and update data, as well as manage the available space on the device.

When there is no hard disk installed in the NVR, the page will show “**No File system.**”



Once the hard disk is installed, the file system will show the volume of RAID as below.



1. Add Volume

Select one volume (DIGIARRAY) to add volume in NVR.

Storage Volume Management

Storage Volume **Add Volume** Remove Volume Format

Add volume to Storage Volume Pool

	Volume Name	Capacity	Device	Status
<input checked="" type="radio"/>	Volume 2	0 GB	DIGIARRAY 2	Not mounted

Add

2. Remove Volume

You can follow below steps to remove Volume (DIGIARRAY) from NVR to prevent data loss.

Configuration Utility

- Quick Configuration
- IP Camera
- Recording & Event
- Disk Management
 - Disk Management
 - Storage Volume Management**
 - File Sharing Service
- Network
- Management
- System

Storage Volume Management

Storage Volume Add Volume **Remove Volume** Format

Remove volume from Storage Volume Pool

	Volume Name	Capacity	Usage	Device	Status
<input type="radio"/>	Volume S	121.2 GB	0.11 %	NVR 1	Mounted
<input checked="" type="radio"/>	Volume 2	300.86 GB	0.11 %	DigiArray 2	Mounted
<input type="radio"/>	Volume 1	136.1 GB	0.11 %	DigiArray 1	Mounted

Remove Reset

3. Format

By clicking “Format” button, you can format all volumes in storage volume pool.

Storage Volume Management

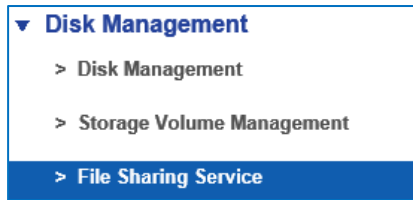
Storage Volume Add Volume Remove Volume **Format**

Format all volumes in Storage Volume Pool

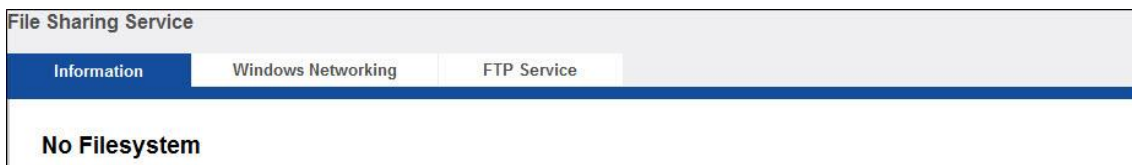
Format

5.3.3 File Sharing Service

Please select “**File Sharing Service**” from the drop-down menu of **Disk Management** to begin.

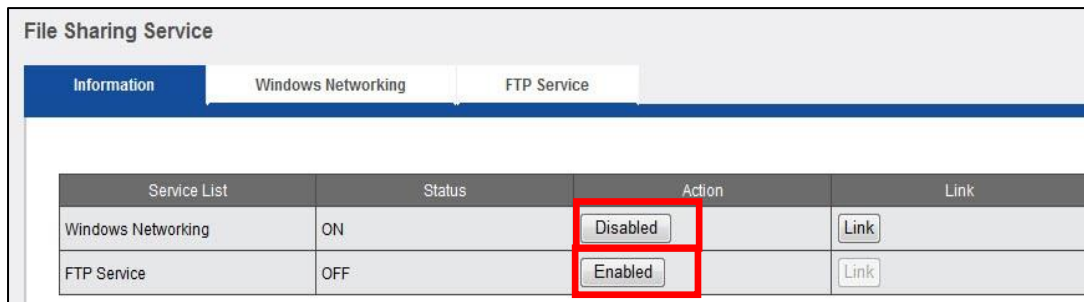


Arrange data transmission service including **Windows Networking** and **FTP service**. When there is no hard disk installed in the NVR, the screen will show “**No Filesystem.**”



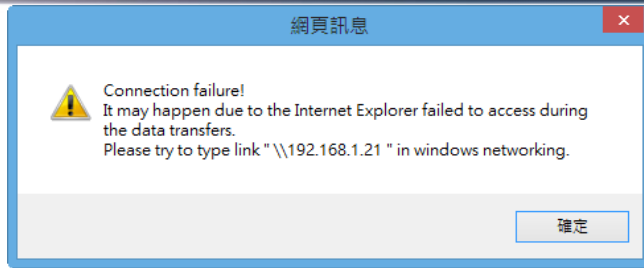
1. Information

Once the hard disk is installed, the filesystem will show status as below. Turn On or turn off sharing service to enable or disable **Windows Networking** and **FTP service**.



After the service is enabled, by using link button on the File Sharing Service page, users can open the dialog of windows to share service and FTP service directly.





2. Windows Networking

In Windows Networking field, users can enable or disable the services and **Computer Name** is already shown. **Computer Description** and **Domain or Workgroup Name** can be changed.

File Sharing Service		
Information	Windows Networking	FTP Service
Windows Settings		
Services	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled	
Computer Name	DIGISTOR-4225 Pro	
Computer Description	NVR	
Domain or Workgroup Name		
<input type="button" value="Apply"/> <input type="button" value="Reset"/>		

3. FTP Service

File Sharing Service		
Information	Windows Networking	FTP Service
FTP Settings		
Services	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled	
Command Port	21	
Passive Ports	1024 ~ 65535	
Client Coding Type	English	
<input type="button" value="Apply"/> <input type="button" value="Reset"/>		

In FTP Settings, users can enable or disable FTP Services. User can arrange **Command Port** and **Passive Port**.

Please click “**Apply**” to finish FTP settings.

5.4 Cloud

NVR provides cloud backup to upload recorded files to Dropbox. With cloud backup, users can share recorded files with a link.

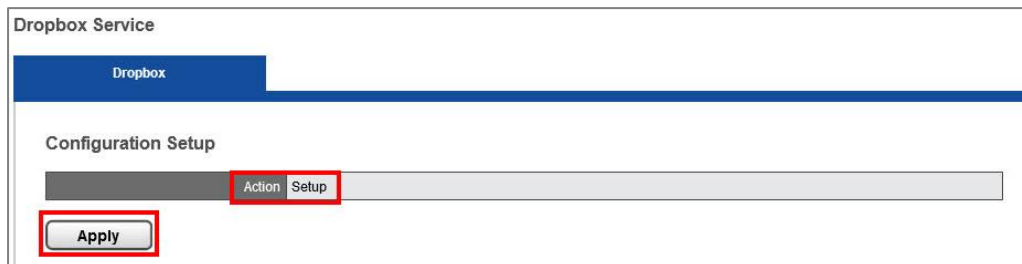
Please select “Dropbox” from the drop-down menu of **Cloud** to begin.



5.4.1 Setup Dropbox Service

Please click “Apply” to start Dropbox webpage connection and to establish a folder in NVR.

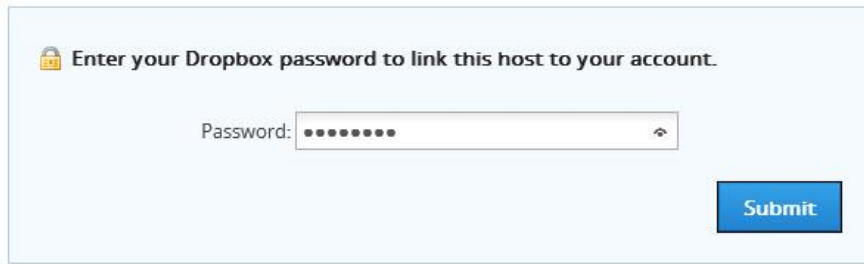
⚠ Note: It is suggested to create a new Dropbox account for NVR video sharing. The documents saved in your Dropbox account will start sync to Dropbox folder created in NVR after NVR successfully connects to a Dropbox account.



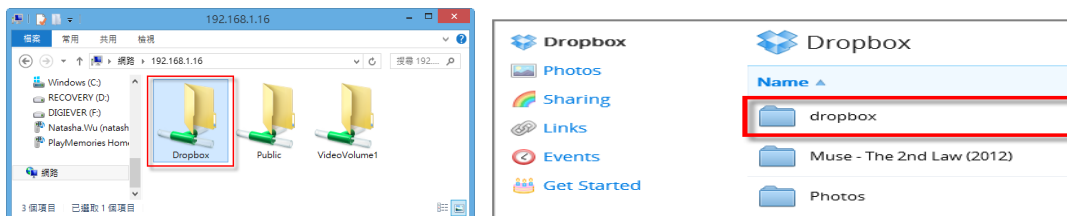
At the same time, a window will pop up to ask users to sign in account.



Another window will pop up to enter Dropbox password again to connect NVR.

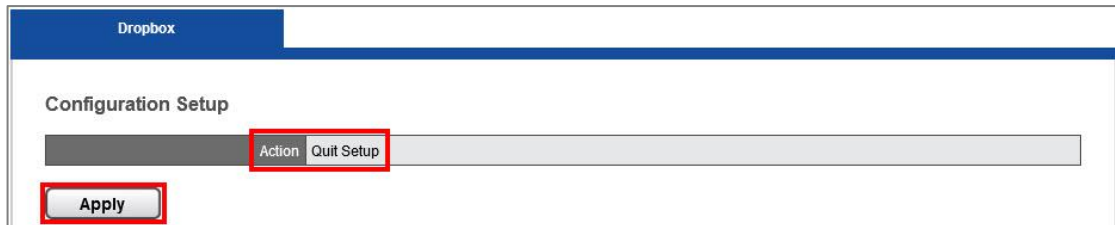


When Dropbox successfully connects to NVR, NVR will automatically create a file named “**Dropbox.**” All documents saved in your Dropbox account will start sync to Dropbox folder created in NVR.



- **Quit Setup**

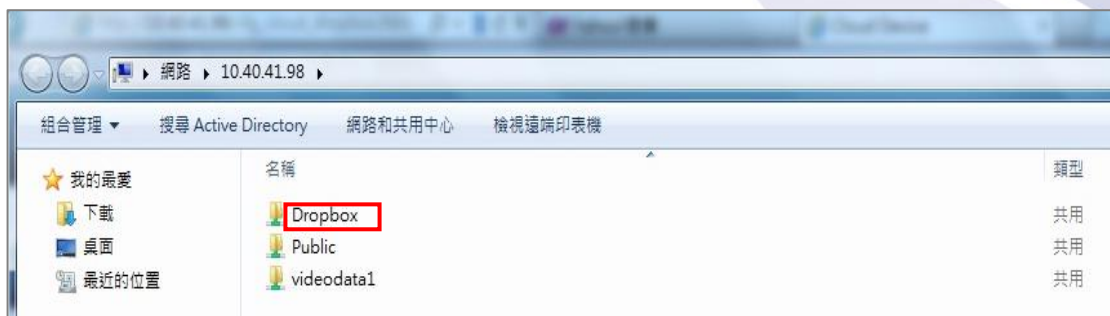
When NVR is accessing to Dropbox, the NVR will display as below:



If users want to cancel the Dropbox setting, please click “**Apply**” to remove setup.

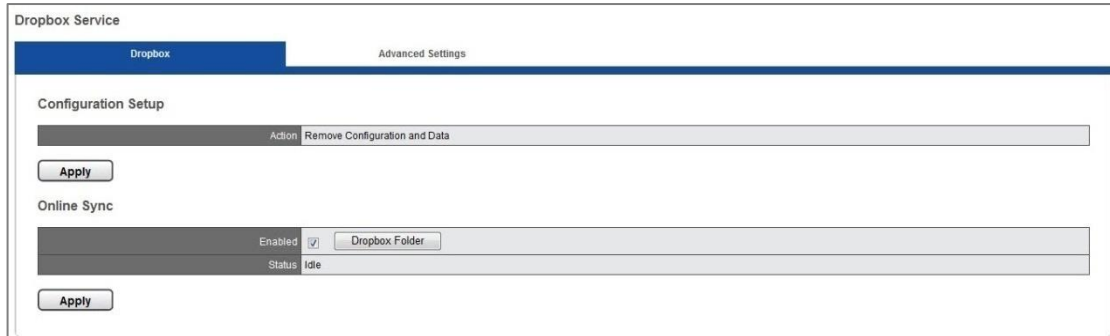
5.4.2 Share Files to Dropbox Server

Users can move the files from **Public** (snapshot, config, etc.) or **Videodata1** (continuous recording, event recording, video clip, etc.) to Dropbox folder in order to share files to the clouds.



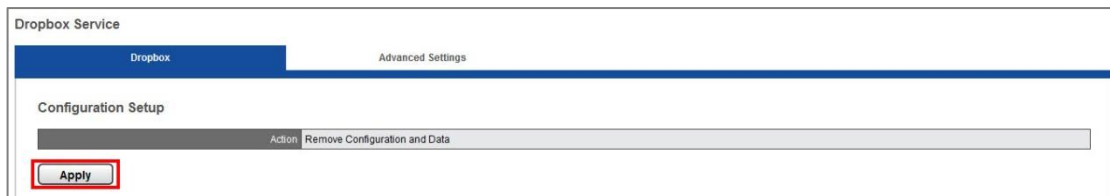
5.4.3 Remove Configuration and Online Sync

Please press “F5 button” on the keyboard to refresh the webpage. You can see the webpage as below:



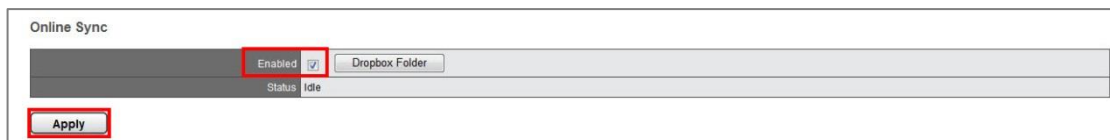
1. Remove Configuration and Data

Please Click “Apply” to remove Dropbox service from NVR. All configuration and data of Dropbox in NVR will be deleted.



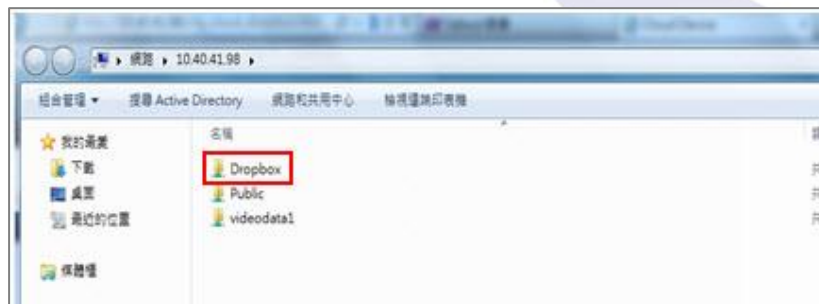
2. Online Sync

Users can choose whether NVR automatically synchronizes with Dropbox Server. If users want to enable synchronization, please check “Enable” and click “Apply.”

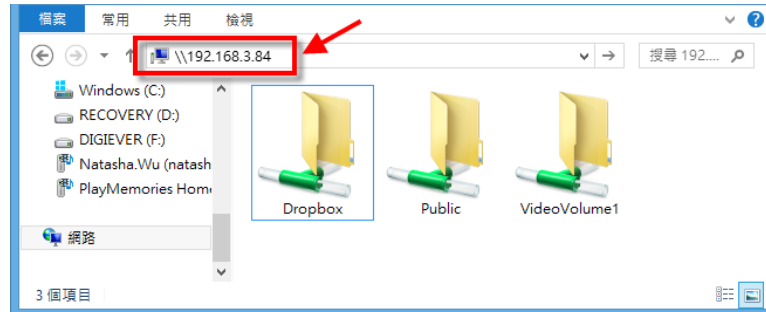
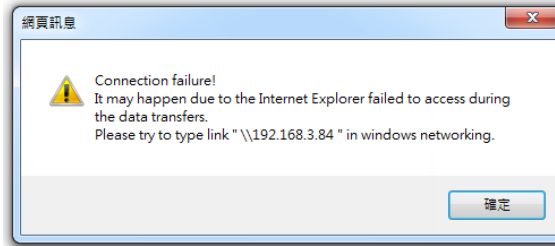


Dropbox Folder

Users can click “Dropbox Folder” to open the folder directly.



Please enter NVR’s IP address in LAN if a warning window pops up as below.

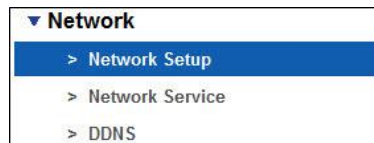


5.5 Network Setup



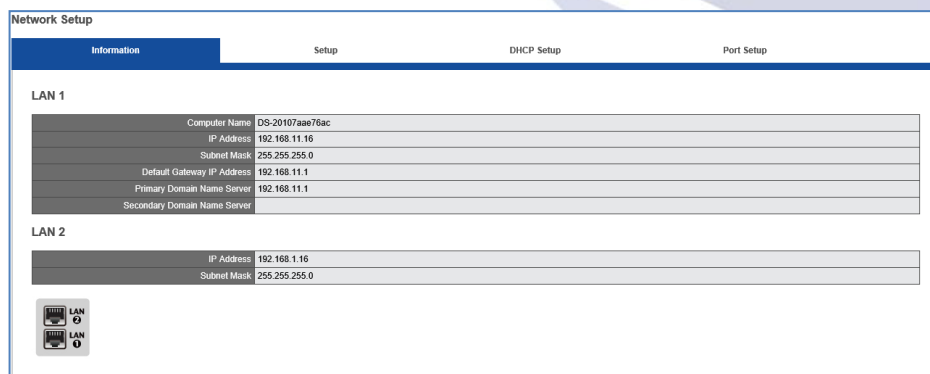
5.5.1 Network Setup

Please select “**Network Setup**” from the drop-down menu of **Network** to begin.



This section explains how to configure network connection with NVR.

1. Information



Network information displays present network configuration including: **Computer Name**, **IP address**, **Subnet mask**, **Default Gateway**, **Primary and Secondary DNS**.

2. Setup

Users can rename **Computer Name**, assign IP address in **DHCP** or **Static IP** and set up **IPv6**.

(1) Network Interfaces: Select **Shared IP** or **Separated IP**.

The screenshot shows the 'Network Setup' page with the 'Setup' tab selected. Under 'Network Settings', the 'Network Interfaces' section has 'Shared IP' selected. The 'Computer Name' is 'DS-20107ad6a2d8'. Under 'Internet Protocol', 'Specify an IP address' is selected. The 'IPv6' section has 'IPv4' checked. Below this, the 'LAN IPv4 / IPv6' section is highlighted with a blue box, showing fields for IP Address (192.168.1.11), Subnet Mask (255.255.255.0), Default Gateway IP Address (192.168.1.60), Primary Domain Name Server (192.168.1.66), and Secondary Domain Name Server (192.168.1.135). At the bottom, there are 'Apply' and 'Reset' buttons.

For NVR with two LAN port, users can set up **dual IP application (Separated IP)** to connect different network segments to maximize network efficiency.

The screenshot shows the 'Network Setup' page with the 'Setup' tab selected. Under 'Network Settings', the 'Network Interfaces' section has 'Separated IP' selected. The 'Computer Name' is 'DS-20107ad6a2d8'. Under 'Internet Protocol', 'Specify an IP address' is selected. The 'IPv6' section has 'IPv4' checked. Below this, the 'LAN 1 IPv4 / IPv6' section is highlighted with a blue box, showing fields for IP Address (192.168.1.11), Subnet Mask (255.255.255.0), Default Gateway IP Address (192.168.1.60), Primary Domain Name Server (192.168.1.66), and Secondary Domain Name Server (192.168.1.135). Below that, the 'LAN 2 IPv4 / IPv6' section is also highlighted with a blue box, showing fields for IP Address (192.168.1.11) and Subnet Mask (255.255.255.0). At the bottom, there are 'Apply' and 'Reset' buttons.


⚠ Note: Please assign **LAN1** as WAN port and set up gateway to communicate with router.

(2) Computer Name: Rename NVR's name


Information	Setup	DHCP Setup	HTTP Service
Network Settings			
Network Interfaces	<input checked="" type="radio"/> Shared IP <input type="radio"/> Seperated IP		
Computer Name	DS-20107ad6a2d8		
Internet Protocol	<input checked="" type="radio"/> Obtain an IP address automatically <input type="radio"/> Specify an IP address		
IPv6	<input checked="" type="checkbox"/> IPv4 <input type="checkbox"/> IPv6		

(3) Internet Protocol: Define NVR's IP address in DHCP or Static IP.



- ① **DHCP**: Obtain an available dynamic IP address assigned by a DHCP server. If this option is selected, NVR will automatically obtain an available dynamic IP address from the DHCP server when connecting to the LAN.

Information	Setup	DHCP Setup	HTTP Service
Network Settings			
Network Interfaces	<input checked="" type="radio"/> Shared IP <input type="radio"/> Seperated IP		
Computer Name	DS-20107ad6a2d8		
Internet Protocol	<input checked="" type="radio"/> Obtain an IP address automatically <input type="radio"/> Specify an IP address		
IPv6	<input checked="" type="checkbox"/> IPv4 <input type="checkbox"/> IPv6		
LAN IPv4 / IPv6			
IP Address	192.168.1.11	/	
Subnet Mask	255.255.255.0	/ 64	(prefix)
Default Gateway IP Address	192.168.1.60	/	
Primary Domain Name Server	192.168.1.66	/	
Secondary Domain Name Server	192.168.1.135	/	
			
<input type="button" value="Apply"/> <input type="button" value="Reset"/>			

- ② **Static IP**: If no DHCP server exists in the networking environment, the IP address will be given as **192.168.1.245**. However, it's recommended to set different IP address of NVR if there is more than one NVR in the network.

Information	Setup	DHCP Setup	HTTP Service
Network Settings			
Network Interfaces	<input checked="" type="radio"/> Shared IP <input type="radio"/> Seperated IP		
Computer Name	DS-20107ad6a2d8		
Internet Protocol	<input type="radio"/> Obtain an IP address automatically <input checked="" type="radio"/> Specify an IP address		
IPv6	<input checked="" type="checkbox"/> IPv4 <input type="checkbox"/> IPv6		
LAN IPv4 / IPv6			
IP Address	192.168.1.11	/	
Subnet Mask	255.255.255.0	/ 64	(prefix)
Default Gateway IP Address	192.168.1.60	/	
Primary Domain Name Server	192.168.1.66	/	
Secondary Domain Name Server	192.168.1.135	/	
			
<input type="button" value="Apply"/> <input type="button" value="Reset"/>			

(4) IPv6: Configure NVR in IPv6 (Internet Protocol version 6).

Information	Setup	DHCP Setup	HTTP Service
Network Settings			
Network Interfaces	<input checked="" type="radio"/> Shared IP <input type="radio"/> Seperated IP		
Computer Name	DS-20107ad6a2d8		
Internet Protocol	<input type="radio"/> Obtain an IP address automatically <input checked="" type="radio"/> Specify an IP address		
IPv6	<input checked="" type="checkbox"/> IPv4 <input checked="" type="checkbox"/> IPv6		
LAN IPv4 / IPv6			
IP Address	192.168.1.11 / <input type="text"/>		
Subnet Mask	255.255.255.0 / 64 (prefix)		
Default Gateway IP Address	192.168.1.60 / <input type="text"/>		
Primary Domain Name Server	192.168.1.66 / <input type="text"/>		
Secondary Domain Name Server	192.168.1.135 / <input type="text"/>		
 LAN 2  LAN 0			
<input type="button" value="Apply"/>		<input type="button" value="Reset"/>	

Finally, please click “**Apply**” to execute the settings.


3. DHCP Setup

Built-in DHCP server allows users to easily install IP surveillance systems without connecting another router providing network parameters. With built-in DHCP server, NVR can assign local IP addresses to multiple IP cameras in a local area network (LAN).

Information	Setup	DHCP Setup	Port Setup
DHCP Setup			
DHCP Server	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled		
IP Address	192.168.1.16		
Start IP	192.168.1.1 (1-254)		
End IP	192.168.1.254 (1-254)		

⚠ Note: In DS-2100 Pro+, DS-1100 Pro+, DS-2100 Pro and DS-1100 Pro, built-in DHCP server is available when LAN is specified an IP address (static IP).

⚠ Note: In DS-8400-RM Pro+, DS-8300-RM Pro+, DS-4300-RM Pro+, DS-4300 Pro+, DS-8200-RM Pro+, DS-4200-RM Pro+, DS-4200 Pro+, DS-8200-RM Pro+, DS-4200-RM Pro, DS-4200 Pro, DS-4000 and DS-2000 series, DHCP service will assign valid IP address via **LAN2 port**.

 **Note:** Please do not connect to another device containing DHCP server function such as router when utilizing built-in DHCP server.

To enable DHCP in IPv6 protocol, please **enable IPv6 auto configuration**.


IPv6 auto configuration	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
Mode	Stateless Auto-configuration
Router advertisement daemon	<input checked="" type="checkbox"/> Enabled Prefix : a11::102 Prefix length : 64
IP Address	a11::102
Start IP	a11:: (1~ffff)
End IP	a11:: (1~ffff)
<input type="button" value="Apply"/> <input type="button" value="Reset"/>	

Select a mode from **Stateful**, **Stateless Auto-configuration**, **Stateless DHCPv6**. Then, configure router advertisement daemon and click “**Apply**” button to save setting.

4. HTTP Service

Please set up transmission port to access NVR. Default port for HTTP connection is **80** while default port for HTTPS connection is **443**.

Users can concurrently enable HTTP and HTTPS feature to connect NVR. For users with higher security concern, HTTPS can efficiently enhance security of network communication.

 **Note.** HTTP is the default setting.

Network Setup	
Information	Setup
	DHCP Setup
	HTTP Service
HTTP	
Enabled	<input checked="" type="checkbox"/>
Management Port	80
HTTPS	
Enabled	<input checked="" type="checkbox"/>
Management Port	443
Note: Ports: 1234~1362 and some others ports are reserved by system	
<input type="button" value="Apply"/> <input type="button" value="Reset"/>	

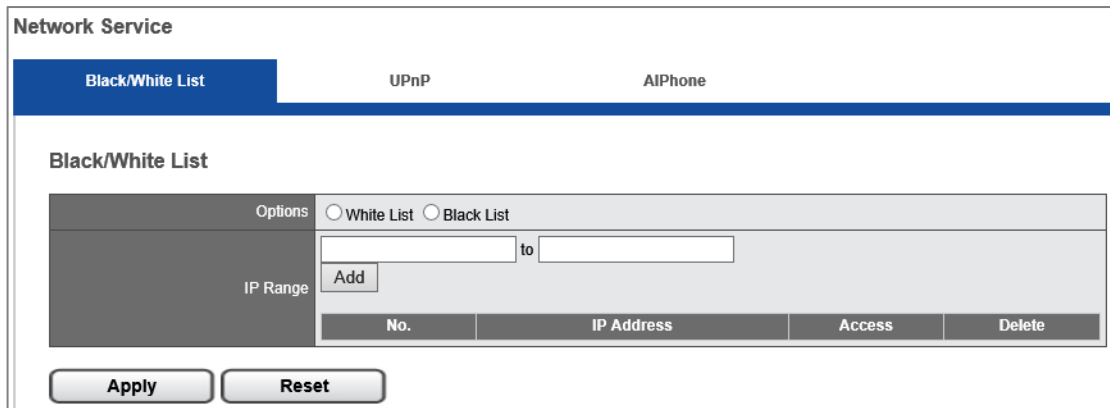
5.5.2 Network Service

Please select “**Network Service**” from the drop-down menu of **Network** to begin.

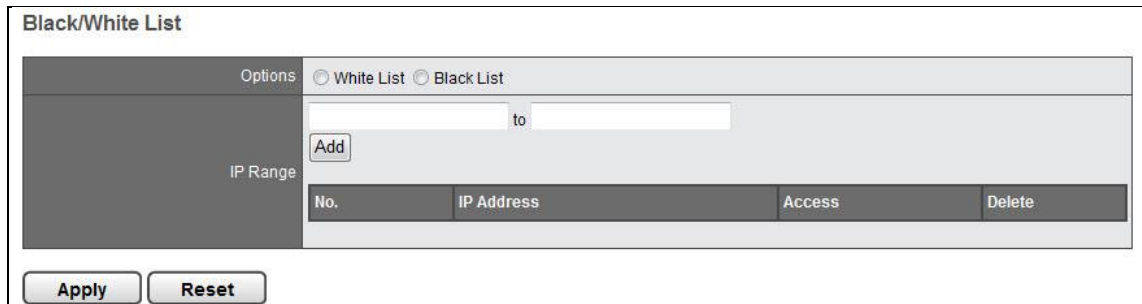


1. Black/ White List

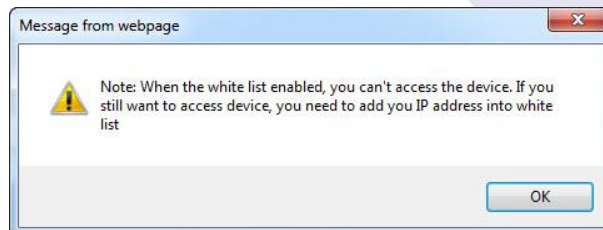
For security concern, users can also define available/prohibited IP range (Black/ White List).



Edit **White** or **Black List** to **allow** or **block** different IP address.



As White List is enabled, a window will pop up to make sure the execution.



As Black List is enabled, a window will pop up to make sure the execution.




Please enter the IP address range to add to White List or Black List.

White List
 Black List

192.168.1.10 ← to 192.168.1.20 ←

Add

 **Note:** The above IP address is only an example for reference. User is recommended to add White List or Black List carefully according to different demand. Also, user can set either White List or Black List in the same time.

After the White List or Black List is added, the following information will display the accept access or deny access. You can also delete the list.

White List
 Black List

Add

No.	IP Address	Access	Delete
1	192.168.1.10-192.168.1.20	Accept	Del

White List
 Black List

Add

No.	IP Address	Access	Delete
1	192.158.1.10-192.158.1.20	Deny	Del

2. UPnP

Network Service

UPnP

Enabled

UPnP Name DIGISTOR-4225 Pro (max size: 32 characters)

Enable or disable **UPnP** search.

Rename **UPnP**.

⚠️ Note: The maximum character limitation for UPnP Name is **32** characters.
Please click **“Apply”** to execute the settings.

3. Aiphone SIF

NVR supports IP video door intercom system. Users can record the video captured from door station (always recording), even when it is triggered by its call button (event recording). **Please configure Aiphone setting first.**

⚠️ Note: NVR supports Aiphone IX series for now.

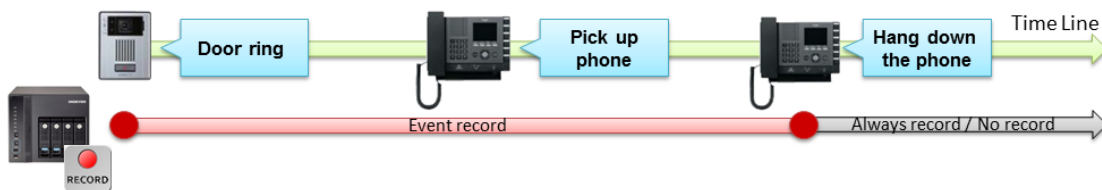
To connect Aiphone and NVR, please enable **Aiphone SIF** and enter **management port** (the same as Aiphone). Then, click **“Apply”** button.

The screenshot shows the 'Network Service' configuration page with three tabs: 'Black/White List', 'UPnP', and 'AIPhone'. The 'AIPhone' tab is selected. Under the 'AIPhone SIF' section, there is an 'Enabled' checkbox which is currently unchecked, and a 'Management Port' text input field. Below these fields is a blue note: 'Note: Ports: 1234~1362 and some others ports are reserved by system'. At the bottom of the section are two buttons: 'Apply' and 'Reset'.

Please go to [IP Camera > Camera Settings](#) to add Aiphone to NVR. You may configure event & action setting for Aiphone when someone presses call button. Please refer to **5.2.4 Event & Action Management**.

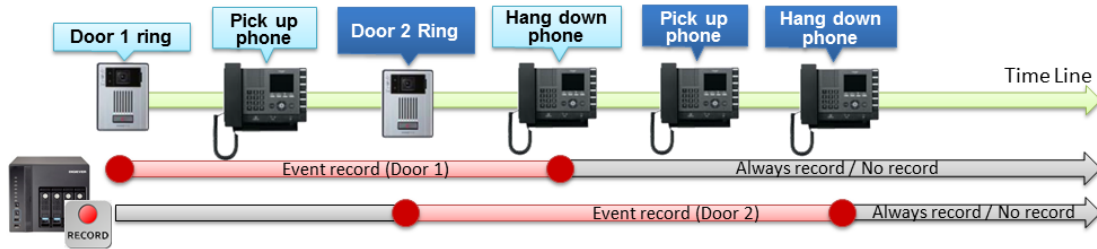
NVR can record video in below scenarios:

[Scenerio1] Master station x 1pc + Door station x 1pc

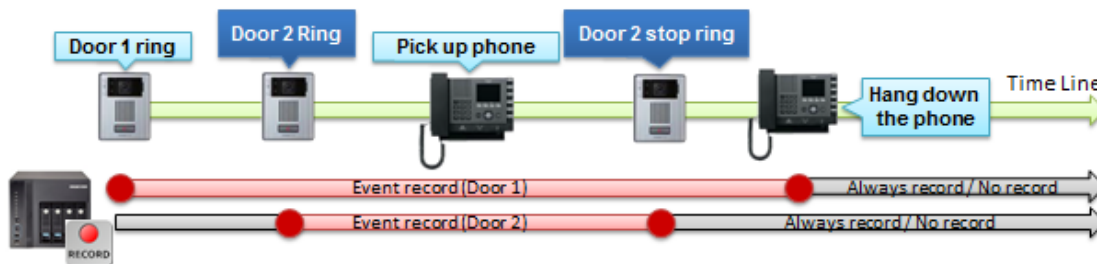


[Scenerio2] Master station x 1pc + Door station x 2pcs:

Answer both door1 and door2



[Scenerio3] Master station x 1pc + Door station x 2pcs: Answer door1 only



5.5.3 DDNS

Please select “DDNS” from the drop-down menu of **Network** to begin.

Dynamic Domain Name Service

Provider List ipcam.jp nwcam.jp DynDNS no-ip ChangeIP

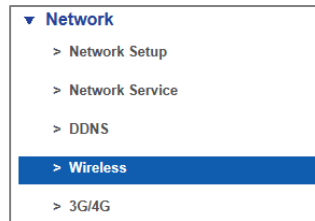
Registered Info.	Enabled	<input type="checkbox"/>
	Update Server	<input type="text" value="nic.changeip.com"/> (Max. size:64 characters)
	Username	<input type="text"/> (Max. size:128 characters)
	Password	<input type="text"/> (Max. size:64 characters)
	Host Name	<input type="text"/> (Max. size:128 characters)

DDNS links a domain name to an IP address, allowing users to easily access their camera even with a changing IP address. NVR is compatible with four DDNS service providers (1) ipcam.jp (2) mwcam.jp (3) DynDNS (4) No-IP (5) ChangeIP

⚠️ Note: Before utilizing this function, please apply for a dynamic domain account from a DDNS provider.

5.5.4 Wireless

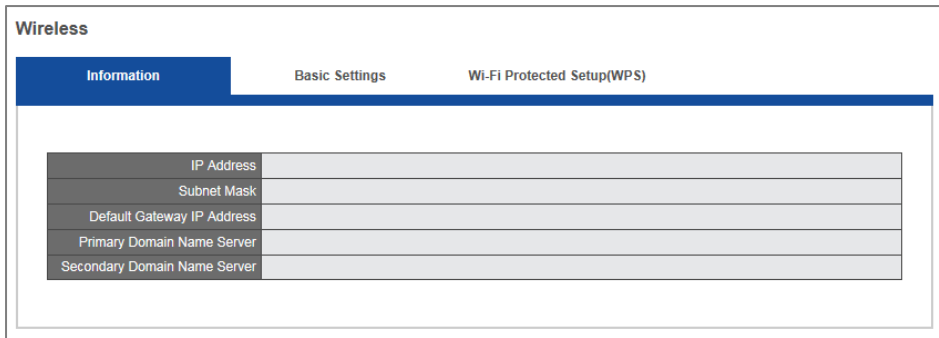
Please select “Wireless” from the drop-down menu of **Network** to begin.



Note: This function is supported for MN-1100 Pro+ series and MN-2100 Pro+ series.

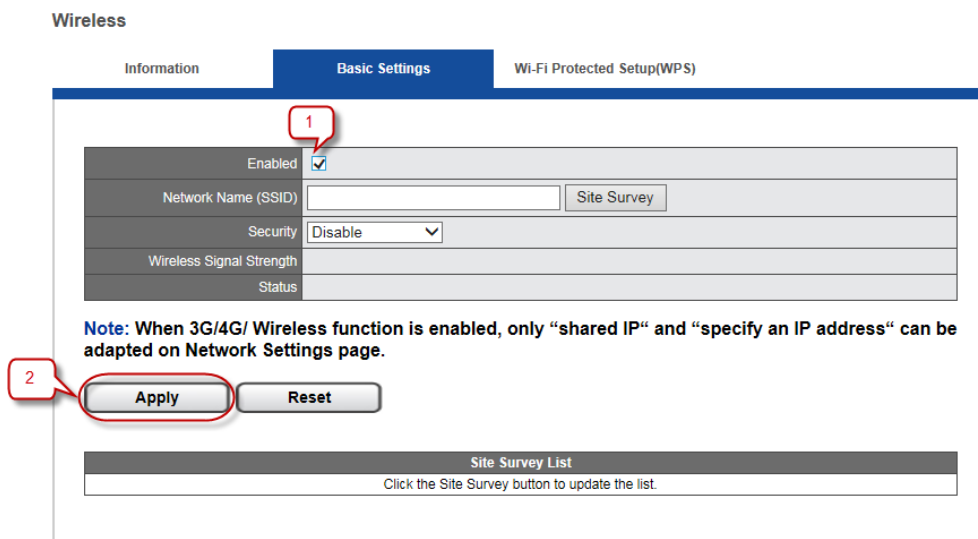
1. Information

Users can check NVR’s wireless information in this page.

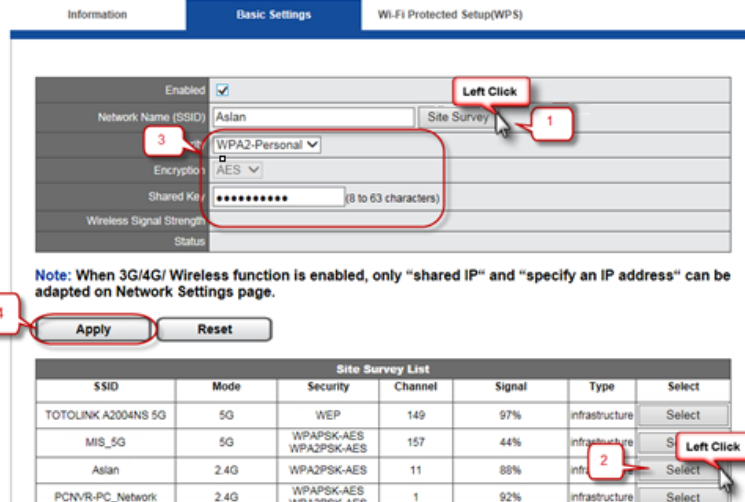


2. Basic Settings

This page allows users to enable wireless function and execute wireless configuration.



Enable wireless function and click “Apply” button.



Click “Site Survey” button, select one wireless from site survey list and type password if necessary. Then, click “Apply” button.

3. Wi-Fi Protected setup (WPS)

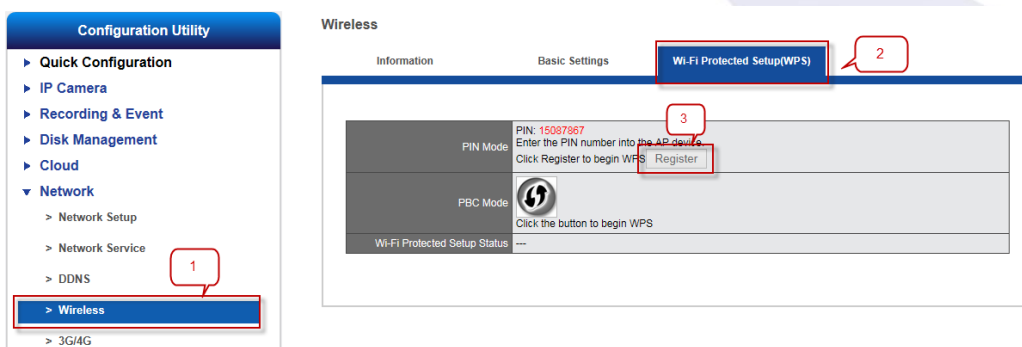
User can connect to router via **PIN mode** and **PCB mode**.

1) PIN mode

Go to router’s WPS web page and type NVR’s PIN code. Then, click “Connect” button.

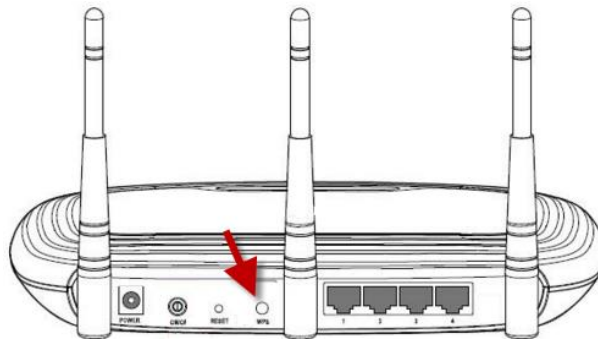


Go to NVR’s configuration page (Wireless → Wi-Fi Protected setup) and click “Register” button to connect the router.

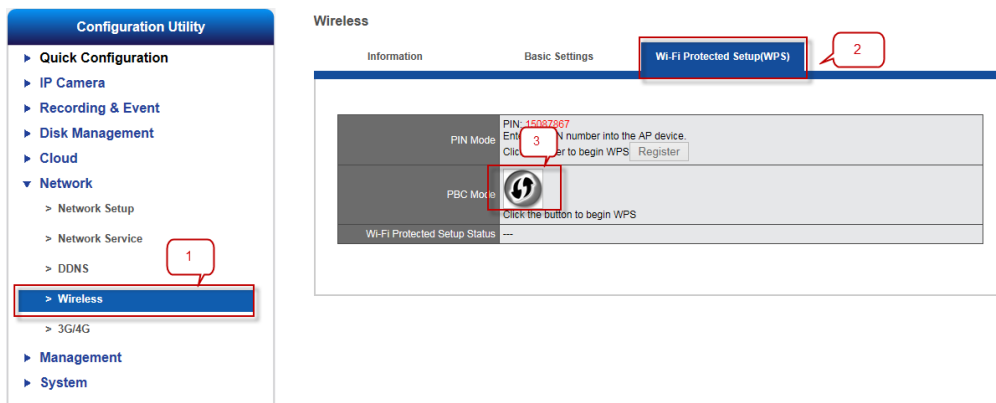


2) PBC mode

Please click WPS button on router.



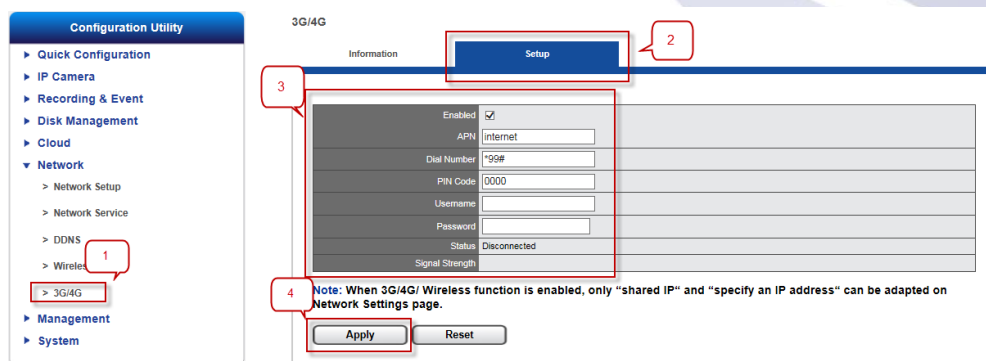
Please go to NVR's configuration page (Wireless → Wi-Fi Protected setup) and click **PBC button** to connect the router.



5.5.5 3G/4G

Please select "3G/4G" from the drop-down menu of **Network** to begin.

⚠ Note: This function is supported for MN-1100 Pro+ series and MN-2100 Pro+ series.



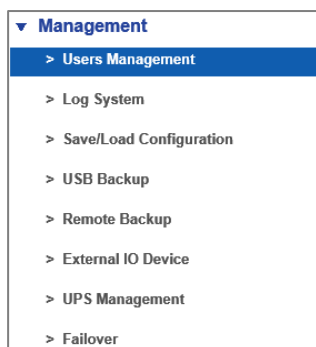
Enable 3G/4G and fill in SIM card information. Then, click "**Apply**" button.

5.6 Management

In Management, users can easily create, modify and change users' live view access and playback access. Also, users can read various log information through log system and quickly save or load configuration of NVR. Emergent backup of the latest video files as well as the external input and output control can also be set here.

5.6.1 User Management

Select “**User Management**” from the drop-down menu of **Management** to begin.



NVR can be accessed by multiple users simultaneously. Except the built-in Administrator account (user name "**admin**" and password "**admin**"). Administrator can create other Power User and User accounts. Administrator possesses the highest privilege, compare to Power User and User. And Power User and User can be given different privilege of live view and playback of different channels.

1. Create Users

User List will display all user information when creating new users. To create users, please go to **Create Users** to create user in advance.

Users Management

Create Users Modify Users Change Password Advanced Settings

User List

No.	Name	Group	E-Mail	Expiry day	LiveView	PTZ	IO	Multi-Server	Playback	Snapshot	Export Video
1	user	user			1,2,3,5,6	O	O	O	1,2,5	O	O
2	angela	user			1,2	X	X	X	2	X	X
3	123	power user			1,2,3,4,5,6,7,8,9,10, 11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25	O	O	O	1,2,3,4,5,6,7,8,9,10, 11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25	O	O

Create Users

Username:

Password:

Group: Power User

Expiration Date:

Random Password:

E-Mail:

Live View Access

- All
- Camera 1
- Camera 2
- Camera 3
- Camera 4
- Camera 5
- Camera 6
- Camera 7
- Camera 8
- Channel 9
- Channel 10
- Channel 11
- Channel 12
- Channel 13
- Channel 14
- Channel 15
- Channel 16
- Channel 17
- Channel 18
- Channel 19
- Channel 20
- Channel 21
- Channel 22
- Channel 23
- Channel 24
- Channel 25

Playback Access

- PTZ Control
- IO Control
- Multi-Server
- All
- Camera 1
- Camera 2
- Camera 3
- Camera 4
- Camera 5
- Camera 6
- Camera 7
- Camera 8
- Channel 9
- Channel 10
- Channel 11
- Channel 12
- Channel 13
- Channel 14
- Channel 15
- Channel 16
- Channel 17
- Channel 18
- Channel 19
- Channel 20
- Channel 21
- Channel 22
- Channel 23
- Channel 24
- Channel 25
- Snapshot
- Export Video

Apply Reset

- (1) Username and Password:** Fill in a username and password (or click **random password**). Please fill in Email address to send the password when clicking random password.
- (2) Account expiration (Optional):** Assign a specific date to control the valid time of user accounts in order to avoid the possibility of forgetting to close the account. Based on NVR time zone, once the expiration date is coming, original password becomes invalid to be accessed. User account information will remain in NVR system for tracking.

Your NVR username and password information Inbox x

e16122@gmail.com <e16122@gmail.com> 16:59 (0 minutes ago) ☆ ↶ ↷

to me

English > Chinese (Traditional) Translate message Turn off for: English x

User name : test
Password : I8LxmRDN1
Account expiration date : 05/31/2015

- ⚠ Note:** The expiration date is the last day that user account can log in to the NVR. For example, if account expiration date is 05/31/2015, user can log in NVR until 05/31/2015 23:59:59.
- (3) Group:** select a group from **power user/ user**.
 - (4) Liveview and playback access:** select liveview /playback channel and other functions (ex. PTZ control, multi-server) to be accessed
- Finally, click **“Apply”** to add new user account.

2. Modify Users

Please go to Modify User page.

Users Management

Create Users **Modify Users** Change Password Advanced Settings

Select an account to modify the Power User or User.

User List										
No.	Name	Group	LiveView	PTZ	IO	Multi-Server	Playback	Snapshot	Export Video	Delete
1	123	user	1	0	0	0	1,2,3,4,5,6,7,8,9,10, 11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30, 31,32,33,34,35,36	0	0	Delete
2	Catherine	power user	1,2,3,4,5,6,7,8,9,10, 11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30, 31,32,33,34,35,36	0	0	0	1,2,3,4,5,6,7,8,9,10, 11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30, 31,32,33,34,35,36	0	0	Delete
3	May	user	5,9	0	0	X	1,5	X	X	Delete

The selected account will turn to blue and the page for modifying user will appear as below. You can change Live View Access and Playback Access. Please click **“Apply”** to proceed.

Modify Users

Username: May

Group: User

All

Live View Access

Camera 1

Camera 5

Channel 9

Channel 13

Channel 17

Channel 21

Channel 25

Channel 29

Channel 33

Camera 2

Camera 6

Channel 10

Channel 14

Channel 18

Channel 22

Channel 26

Channel 30

Channel 34

Camera 3

Channel 7

Channel 11

Channel 15

Channel 19

Channel 23

Channel 27

Channel 31

Channel 35

Camera 4

Channel 8

Channel 12

Channel 16

Channel 20

Channel 24

Channel 28

Channel 32

Channel 36

PTZ Control IO Control Multi-Server

After User is modified, user list will display the renewed information.

User List										
No.	Name	Group	LiveView	PTZ	IO	Multi-Server	Playback	Snapshot	Export Video	Delete
1	123	user	1	0	0	0	1,2,3,4,5,6,7,8,9,10, 11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30, 31,32,33,34,35,36	0	0	Delete
2	Catherine	power user	1,2,3,4,5,6,7,8,9,10, 11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30, 31,32,33,34,35,36	0	0	0	1,2,3,4,5,6,7,8,9,10, 11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30, 31,32,33,34,35,36	0	0	Delete
3	May	user	2,5,6,9	0	0	X	1,5	X	X	Delete

To delete the user account, please click **“Delete”** from User List in Modify Users page.

User List										
No.	Name	Group	LiveView	PTZ	IO	Multi-Server	Playback	Snapshot	Export Video	Delete
1	123	user	1	0	0	0	1,2,3,4,5,6,7,8,9,10, 11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30, 31,32,33,34,35,36	0	0	Delete
2	Catherine	power user	1,2,3,4,5,6,7,8,9,10, 11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30, 31,32,33,34,35,36	0	0	0	1,2,3,4,5,6,7,8,9,10, 11,12,13,14,15,16,17,18,19,20, 21,22,23,24,25,26,27,28,29,30, 31,32,33,34,35,36	0	0	Delete
3	May	user	2,5,6,9	0	0	X	1,5	X	X	Delete

3. Change Password

The screenshot shows the 'Change Password' tab selected in the 'Users Management' section. The 'Username' dropdown is set to 'Amy'. The 'New Password' field is empty with a note '(Max. size: 15 characters)'. The 'Retype Password' field is also empty. The 'User defined password' checkbox is checked, while the 'Random Password' checkbox is unchecked. The 'E-Mail' field is empty. There are 'Apply' and 'Reset' buttons at the bottom of the form.

Each NVR comes with a built-in “**admin**” account with password “**admin**” for administrators. It’s highly recommended to change the password upon the initial login.

To change password, please select an account from “**Username**” drop-down list to change password. Enter a new password in the “**New Password**” and enter it again in “**Retype Password.**” Finally, click “**Apply,**” the password will be changed.

Option setting:

- (1) **User-defined Password:** administrator can define whether power users and users can redefine their password for higher security concerns.
- (2) **Random Password:** allows you to send a new password via email address.

4. Advanced Settings

The screenshot shows the 'Advanced Settings' tab selected in the 'Users Management' section. Under 'Local Display Settings', the 'Enable Anonymous Access' checkbox is unchecked. The 'Max Users for Login' field contains the value '128' with a note '(Max. size: 128)'. The 'Configuration Page Timeout Period' field contains the value '600' with a note 'sec. (Max. size: 3600)'. There is an 'Apply' button at the bottom of the form.

(1) Anonymous access on local display

Anonymous user can only view live monitoring and playback page on local monitor with no access of NVR configuration. Users can enable or disable this function in this page. For more information of anonymous login, please refer to **3.1.1 Anonymous login.**

(2) Maximum users for remote login (on remote configuration page)

Users can set up the maximum number of users to log in NVR on remote site at the same time.

⚠ Note: The access from other remote browsers and CMS system will be counted as a user.

(3) Configuration page timeout period (on remote configuration page)

NVR allows users to freely set up the idle time to automatically log out NVR. Default is 600 seconds.

(4) Auto logout and login (on local display configuration page)

Auto logout and login feature is an advanced firewall to prevent outsiders getting confidential videos and manipulating NVR settings.

Auto logout is especially designed for **administrator** and **power user** who may carelessly forget to logout NVR.

Auto login will automatically log in by a non-admin nor power user.

⚠ Note: Please create an user account first.

The screenshot shows the 'Advanced Settings' page with the following configuration:

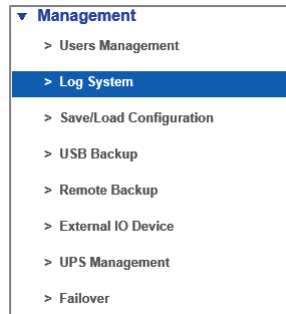
Local Display Settings	Configuration
Auto Logout (Group: Admin/Power user)	<input checked="" type="checkbox"/> Enable Anonymous Access <input checked="" type="checkbox"/> Enabled 30 sec. (Min.:30, Max.:3600) <input checked="" type="checkbox"/> Live View <input type="checkbox"/> Playback <input checked="" type="checkbox"/> Configuration Note: Administrator or Power User will be automatically logged out on above selecting pages when reaching the idle time.
Auto Login (Group: User)	<input checked="" type="checkbox"/> Enabled 5 sec. (Min.:1, Max.:3600) anton

Apply

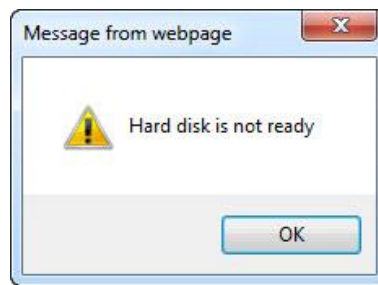
Please **enable** auto logout feature, set on **which page(s)** and **idle time period** to active auto logout. **Enable** auto login feature, set **time period** to active auto login after NVR log out to login page. Then, please click “**Apply**” button.

5.6.2 Log System

Please select “Log System” from the drop-down menu of **Management** to begin.



If the hard disk is not installed, the following window will pop up when you click “Log System.”

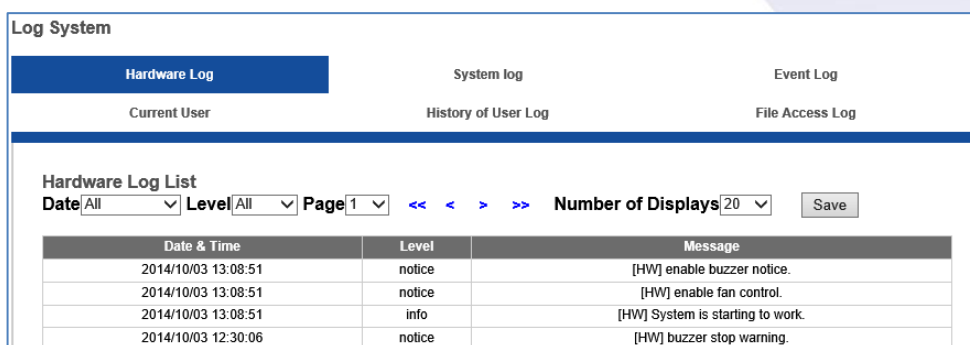


After the hard disk is ready, Log system starts to record the events of the NVR and to provide basic information for troubleshooting. Six types of log record are offered to check: **Hardware Log, System Log, Event Log, Current User, Historical User Log, and File Access Log.**

⚠ Note: The maximum record of each log is **10,000 records**. In other words, NVR offers six types of log record and the sum of all logs is 60,000 records. If a log reaches to 10,000 records, the oldest log will be overwritten by the latest log.

1. Hardware Log

The log information in Hardware Log includes **RAID creation, RAID deletion, RAID modification, CPU, buzzer, fan, system, sensor and USB.**



A screenshot of the 'Log System' web interface. At the top, there are tabs for 'Hardware Log' (selected), 'System log', 'Event Log', 'Current User', 'History of User Log', and 'File Access Log'. Below the tabs is the 'Hardware Log List' section. It includes filters for 'Date' (All), 'Level' (All), 'Page' (1), and 'Number of Displays' (20). A 'Save' button is also present. Below the filters is a table with the following data:

Date & Time	Level	Message
2014/10/03 13:08:51	notice	[HW] enable buzzer notice.
2014/10/03 13:08:51	notice	[HW] enable fan control.
2014/10/03 13:08:51	info	[HW] System is starting to work.
2014/10/03 12:30:06	notice	[HW] buzzer stop warning.

2. System Log

The log information in NVR Log includes **time zone, daylight, system, firmware upgrading, configuration IP, recording files export and storage.**

Log System

Hardware Log System log Event Log

Current User History of User Log File Access Log

NVR Log

Date: All Level: All Page: 1 << < > >> Number of Displays: 20 Save

Date & Time	Level	Account	IP Address	Message
2014/10/03 13:08:51	info	SYSTEM	LocalHost	[NVR] System is ready for starting up.
2014/10/03 13:02:53	notice	SYSTEM	192.168.1.8	[NVR] Firmware upgrading.
2014/10/03 12:56:40	notice	admin	192.168.1.8	[NVR] Remote Playback Export 20141003-105500-110000_192.168.1.139-CH12.avi to 20141003-110500-111000_192.168.1.139-CH12.avi file.
2014/10/03 12:56:40	notice	admin	192.168.1.8	[NVR] Remote Playback Export during 2014-10-03 11:00 to 2014-10-03 11:05.
2014/10/03 12:56:40	notice	admin	192.168.1.8	[NVR] Remote Playback Export 20141003-105500-110000_192.168.1.102-CH11.avi to 20141003-110500-111000_192.168.1.102-CH11.avi file.
2014/10/03 12:56:40	notice	admin	192.168.1.8	[NVR] Remote Playback Export during 2014-10-03 11:00 to 2014-10-03 11:05.
2014/10/03 11:45:01	warning	SYSTEM	LocalHost	[NVR] Data is full of storage. Please stop recording. Wait for data recycling and review data recycling setting.
2014/10/03 08:35:01	warning	SYSTEM	LocalHost	[NVR] Data is full of storage. Please stop recording. Wait for data recycling and review data recycling setting.
2014/10/03 05:50:01	warning	SYSTEM	LocalHost	[NVR] Data is full of storage. Please stop recording. Wait for data recycling and review data recycling setting.
2014/10/03 03:10:01	warning	SYSTEM	LocalHost	[NVR] Data is full of storage. Please stop recording. Wait for data recycling and review data recycling setting.
2014/10/03 00:05:01	warning	SYSTEM	LocalHost	[NVR] Data is full of storage. Please stop recording. Wait for data recycling and review data recycling setting.
2014/10/02 20:55:01	warning	SYSTEM	LocalHost	[NVR] Data is full of storage. Please stop recording. Wait for data recycling and review data recycling setting.
2014/10/02 18:28:38	notice	admin	192.168.1.10	[NVR] Remote Playback Export 20141001-114000-114500_192.168.1.179-CH16.avi to 20141001-235500-000001_192.168.1.179-CH16.avi file.
2014/10/02 18:28:38	notice	admin	192.168.1.10	[NVR] Remote Playback Export during 2014-10-01 11:43 to 2014-10-01 23:59.
2014/10/02 18:28:38	notice	admin	192.168.1.10	[NVR] Remote Playback Export 20141001-114000-114500_192.168.1.102-CH11.avi to 20141001-235500-000000_192.168.1.102-CH11.avi file.
2014/10/02 18:28:38	notice	admin	192.168.1.10	[NVR] Remote Playback Export during 2014-10-01 11:43 to 2014-10-01 23:59.
2014/10/02 18:27:34	notice	admin	192.168.1.10	[NVR] Remote Playback Export 20141001-114000-114500_192.168.1.173-CH15.avi to 20141001-235500-000000_192.168.1.173-CH15.avi file.
2014/10/02 18:27:34	notice	admin	192.168.1.10	[NVR] Remote Playback Export during 2014-10-01 11:43 to 2014-10-01 23:59.
2014/10/02 18:27:34	notice	admin	192.168.1.10	[NVR] Remote Playback Export 20141001-114000-114500_85.207.59.219-CH10.avi to 20141001-235500-000000_85.207.59.219-CH10.avi file.
2014/10/02 18:27:34	notice	admin	192.168.1.10	[NVR] Remote Playback Export during 2014-10-01 11:43 to 2014-10-01 23:59.

<< < > >>

3. Event Log

The log information in Event Log includes **“Camera is connected,” “The camera is disconnected,” “Digital Input,” “Motion detected” and “Storage usage is out of limit,”** etc.

Log System

Hardware Log System log Event Log

Current User History of User Log File Access Log

Event Log

Date: All Level: All IP Cam: All Page: 1 << < > >> Number of Displays: 20 Save

Date & Time	Level	Number	Message
2014/10/03 12:30:03	notice	NVR-DI1	[Event] NVR Digital Input 1 is triggered.
2014/10/01 19:03:09	notice	10	[Event] Camera is connected.
2014/10/01 19:02:22	notice	10	[Event] Camera is disconnected.
2014/10/01 06:54:27	notice	10	[Event] Camera is connected.
2014/10/01 06:52:14	notice	10	[Event] Camera is disconnected.
2014/09/30 23:26:14	notice	10	[Event] Camera is connected.
2014/09/30 23:26:11	notice	10	[Event] Camera is disconnected.
2014/09/30 10:39:25	notice	9	[Event] Camera is disconnected.
2014/09/30 10:39:25	notice	5	[Event] Camera is disconnected.
2014/09/30 10:39:25	notice	6	[Event] Camera is disconnected.

4. Current User

The log information in Current User shows the current users logged in the NVR with IP address.

Log System

Hardware Log System log Event Log

Current User History of User Log File Access Log

Current User

Date & Time	Account	IP Address	Message
2014/10/03 13:37:39	admin	192.168.1.8	[CurUSER] Access /cfg_management_log_currentuser.htm

5. Historical User Log

The log information in Historical User Log records any user who has logged in the NVR. For example, “Execute detect,” “Motion detected,” “FTP service is configured,” “Account is created,” “Execute system shutdown,” etc.

Hardware Log		System log			Event Log																																																		
Current User		History of User Log			File Access Log																																																		
History of User Log																																																							
Date	All	Level	All	Page	1	Save																																																	
<table border="1"> <thead> <tr> <th>Date & Time</th> <th>Level</th> <th>Account</th> <th>IP Address</th> <th>Method</th> <th colspan="2">Message</th> </tr> </thead> <tbody> <tr> <td>2014/10/03 13:37:39</td> <td>info</td> <td>admin</td> <td>192.168.1.8</td> <td>HTTP</td> <td colspan="2">[USER] Login</td> </tr> <tr> <td>2014/10/03 13:18:33</td> <td>info</td> <td>admin</td> <td>192.168.1.17</td> <td>HTTP</td> <td colspan="2">[USER] Login</td> </tr> <tr> <td>2014/10/03 13:02:53</td> <td>info</td> <td>admin</td> <td>192.168.1.8</td> <td>HTTP</td> <td colspan="2">[USER] System upgrade is configured.</td> </tr> <tr> <td>2014/10/03 12:55:20</td> <td>info</td> <td>admin</td> <td>192.168.1.8</td> <td>HTTP</td> <td colspan="2">[USER] Login</td> </tr> <tr> <td>2014/10/03 12:54:22</td> <td>info</td> <td>admin</td> <td>192.168.1.17</td> <td>HTTP</td> <td colspan="2">[USER] Login</td> </tr> <tr> <td>2014/10/02 18:28:02</td> <td>info</td> <td>admin</td> <td>192.168.1.10</td> <td>HTTP</td> <td colspan="2">[USER] Login</td> </tr> </tbody> </table>							Date & Time	Level	Account	IP Address	Method	Message		2014/10/03 13:37:39	info	admin	192.168.1.8	HTTP	[USER] Login		2014/10/03 13:18:33	info	admin	192.168.1.17	HTTP	[USER] Login		2014/10/03 13:02:53	info	admin	192.168.1.8	HTTP	[USER] System upgrade is configured.		2014/10/03 12:55:20	info	admin	192.168.1.8	HTTP	[USER] Login		2014/10/03 12:54:22	info	admin	192.168.1.17	HTTP	[USER] Login		2014/10/02 18:28:02	info	admin	192.168.1.10	HTTP	[USER] Login	
Date & Time	Level	Account	IP Address	Method	Message																																																		
2014/10/03 13:37:39	info	admin	192.168.1.8	HTTP	[USER] Login																																																		
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2014/10/03 13:02:53	info	admin	192.168.1.8	HTTP	[USER] System upgrade is configured.																																																		
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2014/10/03 12:54:22	info	admin	192.168.1.17	HTTP	[USER] Login																																																		
2014/10/02 18:28:02	info	admin	192.168.1.10	HTTP	[USER] Login																																																		

6. File Access Log

The message occurred is related to other method to get in NVR such as SAMBA or FTP.

Hardware Log		System log			Event Log																																																																							
Current User		History of User Log			File Access Log																																																																							
System Connection Log																																																																												
Date	All	Level	All	Page	1	Save																																																																						
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2014/09/29 15:54:56	info	admin	192.168.1.17	SAMBA	[SYSCON] desktop8.jpg	Access																																																																						

Export the log files

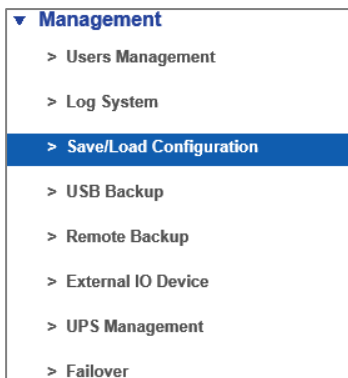
Users can export all log files from Log System page by clicking “Save” button. The log content will be saved in a zip file.

Hardware Log		System log			Event Log	
Current User		History of User Log			File Access Log	
System Connection Log						
Date	All	Level	All	Page	1	Save

5.6.3 Save/Load Configuration

Configuration Backup enables you to accelerate NVR deployment as well as to respond quickly to hardware failures and disasters. User can save NVR configuration file to **NVR HDD, external USB device (via local site) and computer (via remote PC access)**.

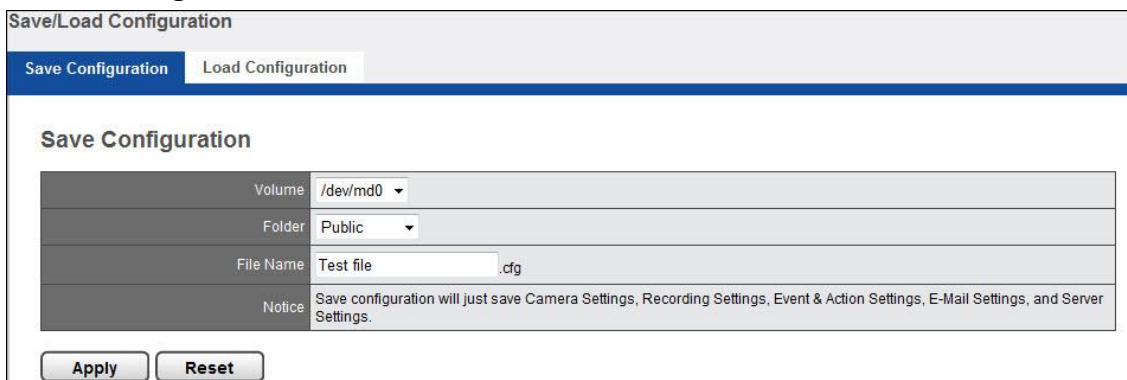
Please select “**Save/Load Configuration**” from the drop-down menu of **Management** to begin.



If the raid disk is not built, the following window will pop up.



1. Save Configuration



Select **Volume (NVR folder, Local USB device or PC folder)** and **Folder** to save configuration in a format of **cfg** file and specify the **File Name**.

⚠ Note: Save configuration will just **save Camera Setting, Recording Settings, Event & Action Setting, E-Mail settings, and Server Settings**.

⚠ Note: If the configuration file is saved in NVR, you can access it from Windows Networking or FTP service.

2. Load Configuration

Save/Load Configuration

Save Configuration **Load Configuration**

Load Configuration

Load Types	<input type="radio"/> Load Default Settings <input checked="" type="radio"/> Load Configuration
Volume	/dev/md0
Folder	Public
File Name	Test file .cfg
Notice	Load configuration will just load Camera Settings, Recording Settings, Event & Action Settings, E-Mail Settings, and Server Settings.

Load configuration can help users duplicate the same settings from one NVR to another without configuring system manually. Users can select Load Type as “**Load Default Settings**” or “**Load Configuration.**”

Once you select “**Load Default Settings**” and click “**Apply,**” configuration of **Camera Setting, Recording Settings, Event & Action Setting, E-Mail settings, and Server Settings** will reset to default.

When you select “**Load Configuration,**” please select Volume (**NVR folder, Local USB device or PC folder**) and browse the folder to find the saved configuration. Once file name displayed, click “**Apply**” to load configuration.

NVR Hardware reset to default method

In case that users forgetting their username and password, users can **reset NVR to default** by pressing the power button for 3 seconds on NVR login page.

⚠ Note: This feature supports for **DS-2100 Pro(+)** and **DS-1100 Pro(+)** series.

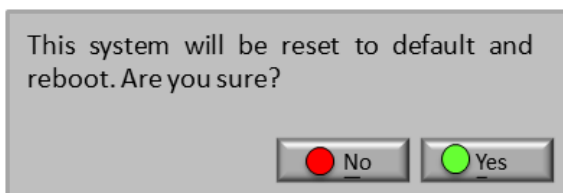
NVR will beep after pressing the power button for 3 seconds on login page.

Please click “**Cancel**” button to stop shutting down NVR.






An icon  will display at the **bottom left corner** of local screen.




Click the icon and a window will pop up to confirm your operation. Click **“Yes”** to execute reset to default.

5.6.4 USB Backup

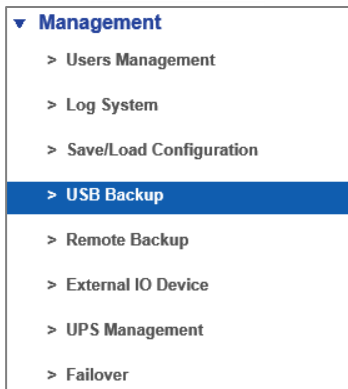
NVR can back up the latest video files by inserting **USB device** or **USB type DVD burner** into the USB port in the NVR (front panel backup area) by pressing **“USB BACKUP”** for 3 seconds. In addition to set up backup setting in NVR local site, users can remotely preset the latest duration and channels of USB Backup button for local security guard to execute quick USB backup. During the backup process, USB LED indicator will blink in **blue light**. When the NVR finished duplicating the data to the USB device, the blue light will fade away.

 **Note:** If any error occurs, including USB Backup function not enabled, USB LED indicator will show red to warn.

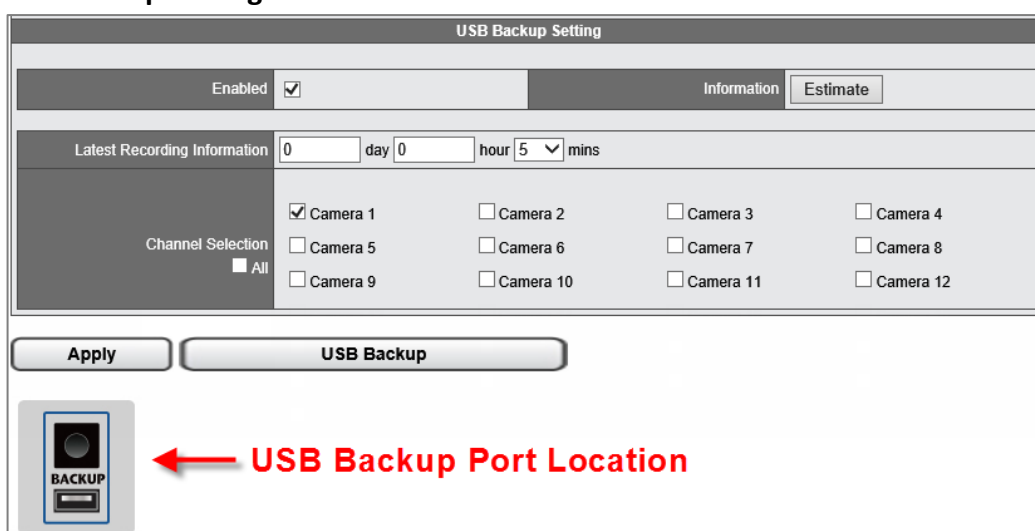
 **Note:** USB device format should be FAT32 file system.

1. USB Backup

To enable the USB Backup button function and to setup the USB Backup button's channels and the latest time duration for future duplication, please select **“USB Backup”** from the drop-down menu of **Management**.



USB Backup Setting

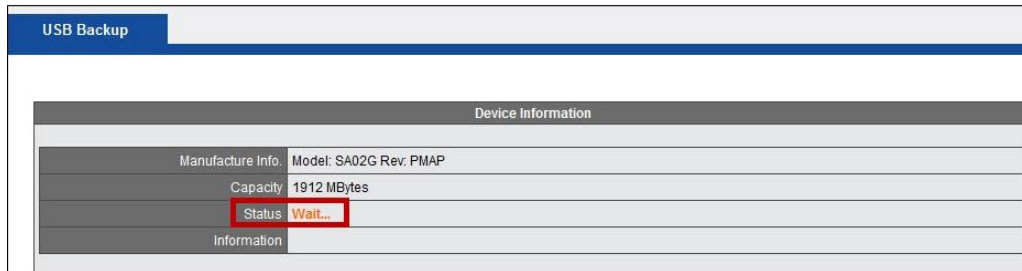


- (1) Enabled:** USB Backup function can be enabled or disabled, for security concern.
- (2) Latest recordings Information:** Set up days, hours and minutes to back up the latest video files.
- (3) Channel Selection:** Select certain camera channels or click “All” channels for future backup.
- (4) Apply:** Click “Apply” to save configuration.
In this step, users can insert a USB device to the local NVR to back up the latest video files.
- (5) Information:** Click “Estimate” to calculate the video size and to compare the size between USB device and backup videos. (Please make sure you have click “Apply” button to save setting)
- (6) USB Backup:** Start to export videos to USB device (Software USB Backup Virtual Button) (Please make sure you have click “Apply” button to save setting)

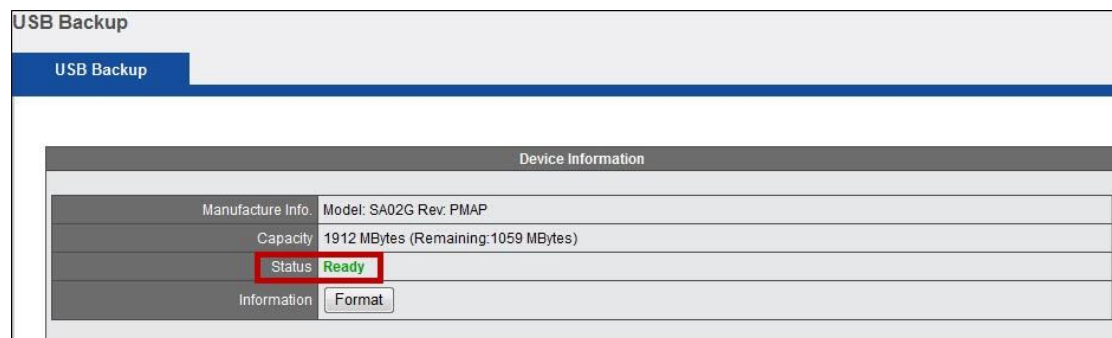
⚠ Note: Notification Picture is designed to notify users of the location of USB Backup port.

Device Information Status

When a USB device is inserted to the NVR, the USB Backup Device Information will show the status "Wait... ."

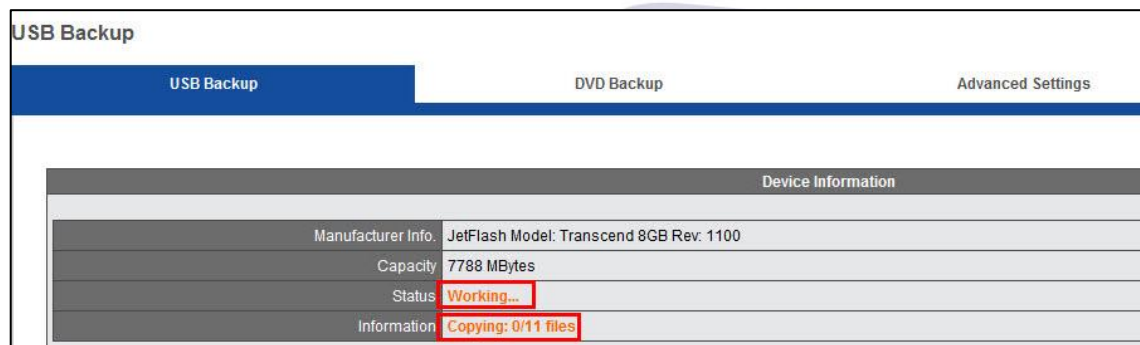


When the USB is ready to begin, the Device Information will show the status "Ready," and the USB LED indicator will show blue.

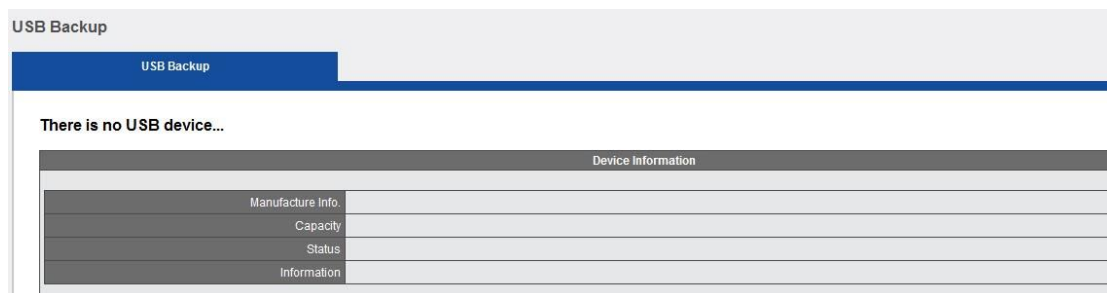


If you want to delete the current data in USB, please click "Format" to delete the current data of USB.

When NVR is in backup progress, the Device Information will show the status "Working," and the information "Copying: ...files."

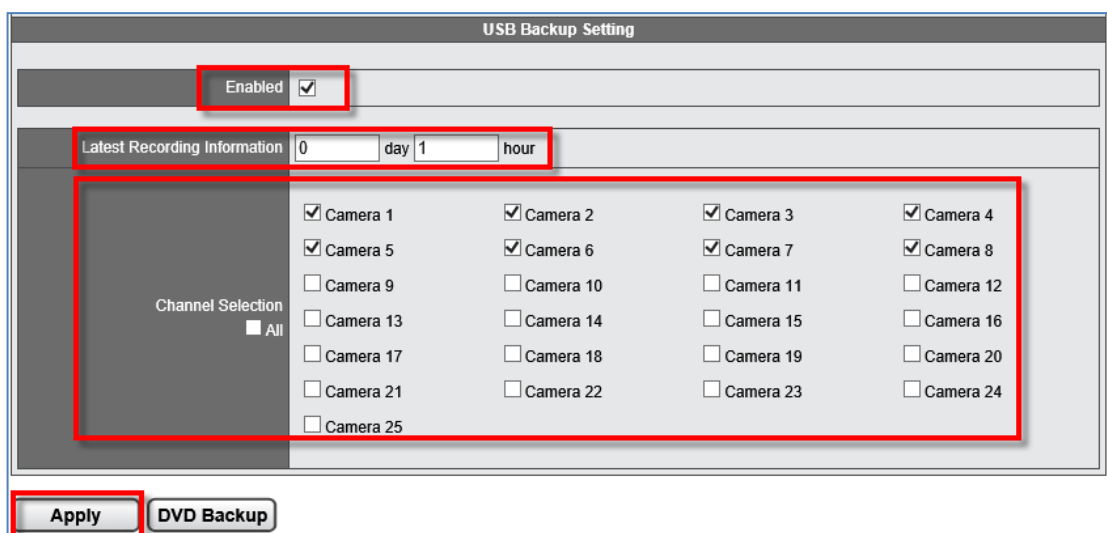


If there is no USB inserted into NVR, the screen will show “**There is no USB device...**” as below picture:



⚠ Note: NVRPlayer and NVRCheck will be downloaded with video files.

2. DVD Backup



(1)Enable: DVD Backup function can be enabled or disabled, for security concern.

(2)The latest duration of recordings: Set the days and hours to back up the latest video files

(3)Channel Selection: Select certain camera channels or click “**All**” channels for future backup

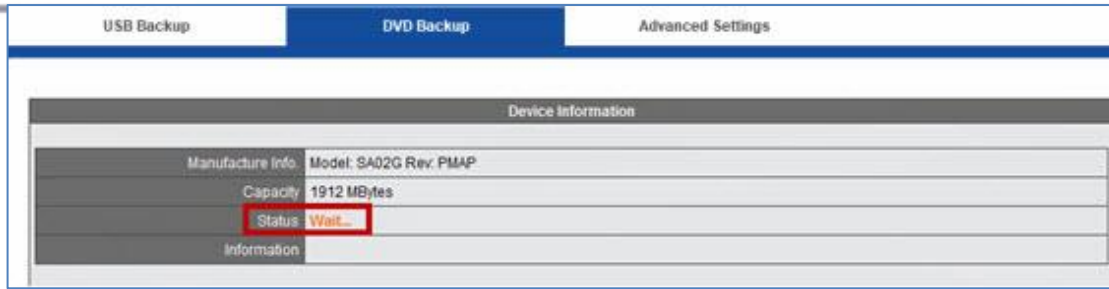
(4)Apply: Click “**Apply**” to save configuration

In this step, users can insert a USB type DVD device to the local NVR to back up the latest video files.

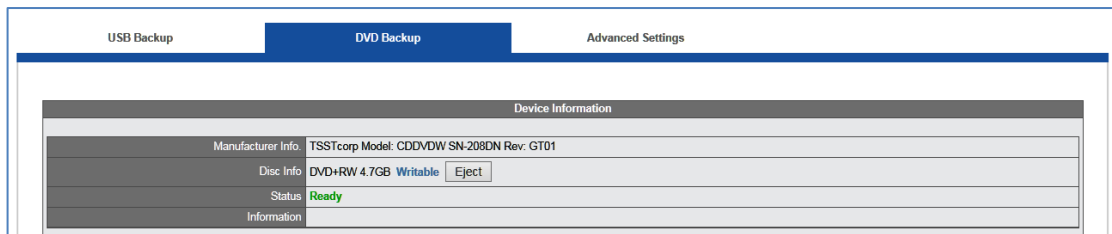
(5)DVD Backup: Start to export videos to USB type DVD device

Device Information Status

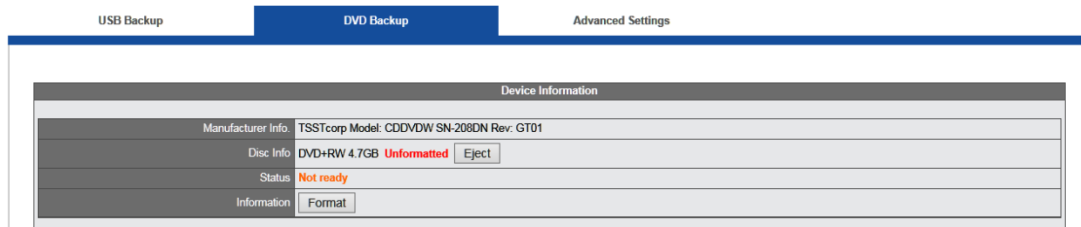
When a USB type DVD burner is inserted to NVR, Device Information of DVD Backup in Remote Browser will show the status “**Wait... .**”



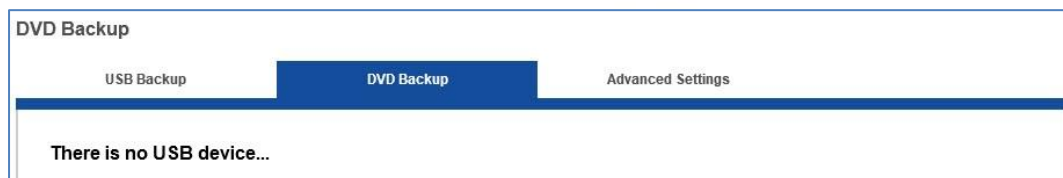
When the USB type DVD burner is ready to begin, the Device Information will show the status “Ready,” and the USB LED indicator will show blue.



If you need to delete the current data in USB type DVD burner, please click “Format” to delete current data.



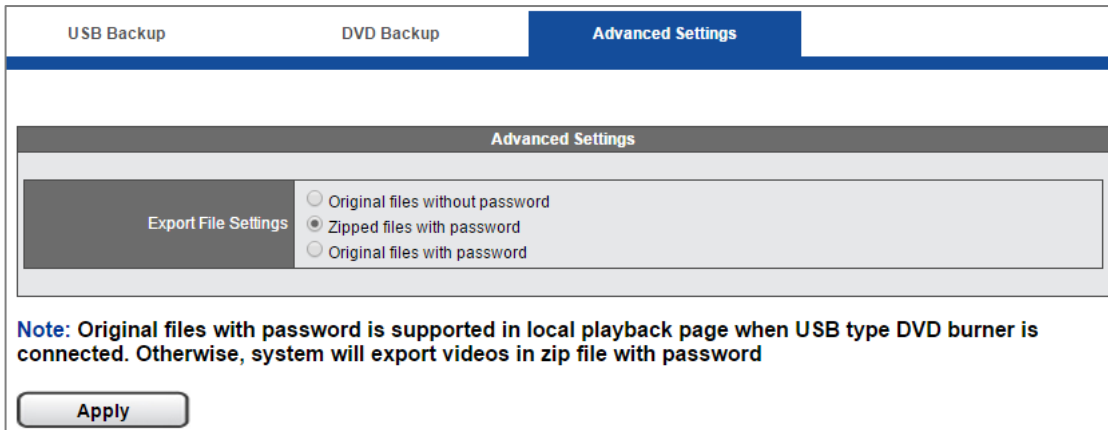
If there is no USB type DVD burner inserted into NVR, the screen will show “There is no USB device...”



 **Note:** NVRPlayer and NVRCheck will be downloaded with video files.

 **Note:** DVD burner is supported in Pro+ series and Pro series.

3. Advance Settings



(1) Video Export Setting

Based on video security level, NVR offers 3 formats to export recorded videos on **playback** page:

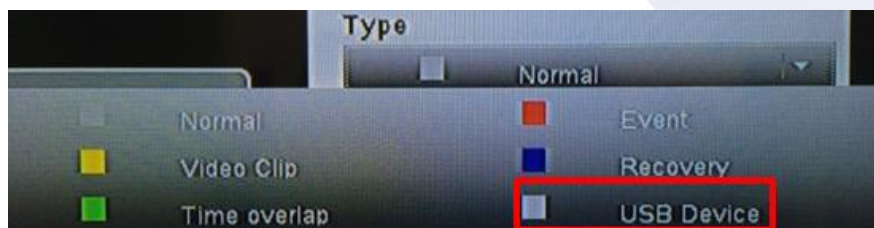
- ① **Original video files without password** (default)
NVR will directly export video files to USB type device.
- ② **Zipped files with password**
NVR will encrypt exported files to external USB type device in **ZIP format**.
User needs to decide password when exporting files on playback page.
- ③ **Original files with password** (For local export to USB type device)
This format allows user to safely export videos (password) and directly playback exported videos on local interface (with no need to install unzip software).

⚠ Note: “Original files with password” setting is supported on **local playback** for video export. Otherwise, NVR will export videos in zipped files with password.

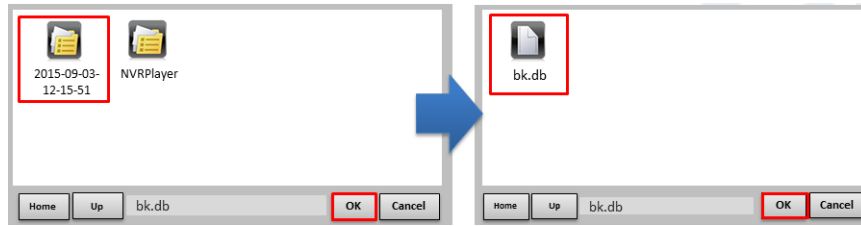
⚠ Note: Users can playback videos exported in “original files with password” on NVR (playback page) and PC (NVRPlayer):

[Method1] On NVR playback page:

Step1. Select **USB Device** as recording type.



Step2. Select a **video folder**. There is a “**bk.db**” file to playback videos.



⚠ **Note:** The name of video folder is the time when users press export button.

Step3. Enter password



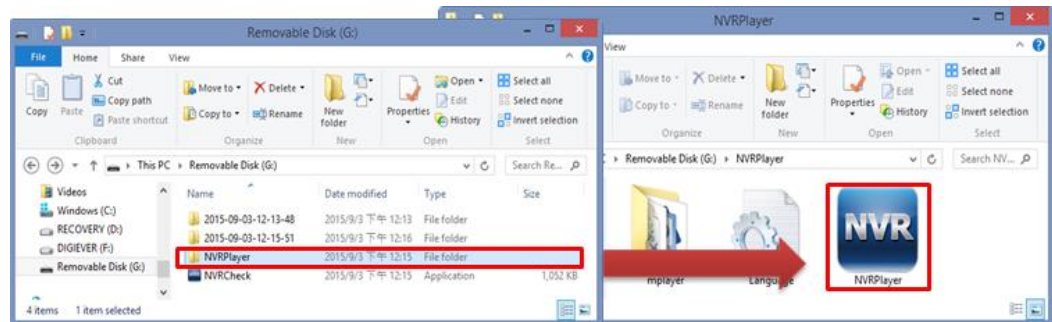
Step4. Select **date, time and camera**

⚠ **Note:** The calendar will display the last date of video file in the USB device.

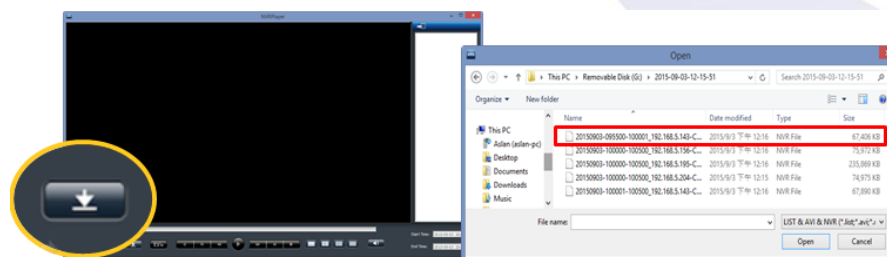
Step5. Click “**play**” button

[Method2] On remote PC via NVRPlayer

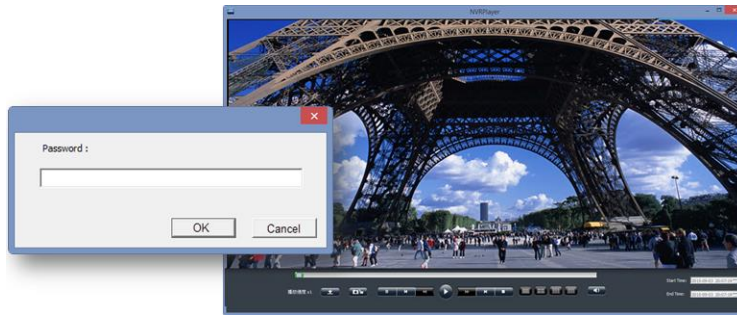
Step1. Execute NVRPlayer



Step2. Open a video file

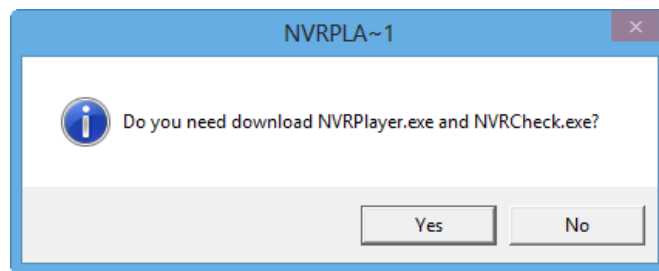


Step3. Enter password and NVRPlayer will start to playback video.

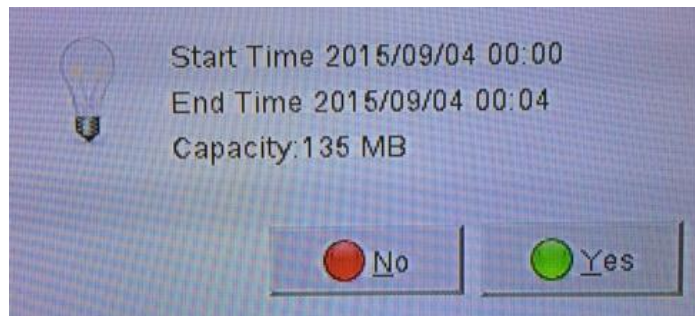


Export Video on Playback Page

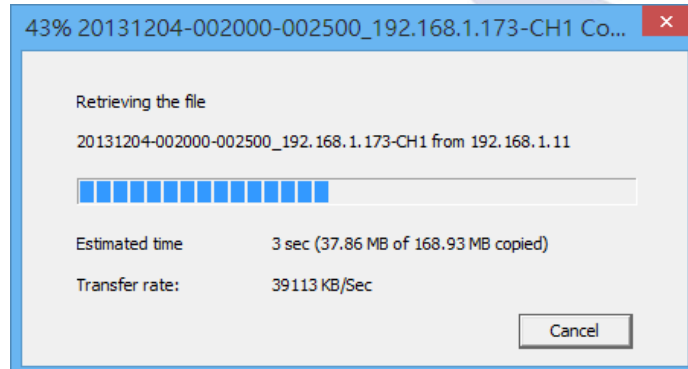
A window will pop up after users click export button on playback page.



NVR will display the capacity of video file on local NVR.

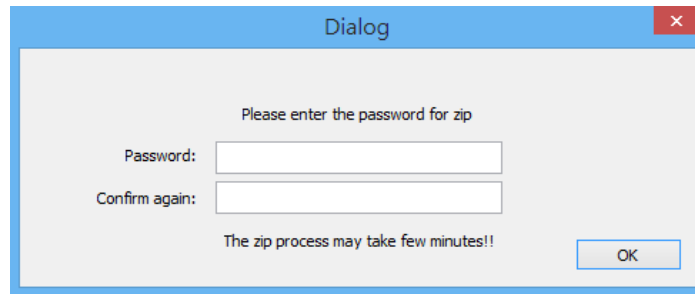


On remote browser, a window will pop up to display download status.



On remote web browser, a window will pop up to ask users to enter password for encryption **after** successfully exporting files.

On local NVR, a window will pop up to ask users to enter password for encryption **before** exporting files.



The image shows a screenshot of a Windows-style dialog box titled "Dialog". The dialog has a blue title bar with a close button (X) in the top right corner. The main content area is light gray and contains the following text and controls:

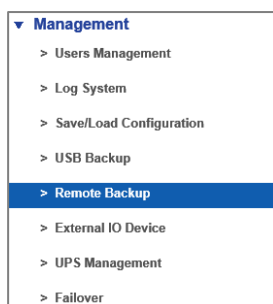
- Text: "Please enter the password for zip"
- Text: "Password:" followed by a text input field.
- Text: "Confirm again:" followed by a text input field.
- Text: "The zip process may take few minutes!!"
- Text: "OK" next to a button.

5.6.5 Remote Backup

To ensure the security of confidential videos, NVR provides **remote backup** to back up important recorded videos to NAS so as to storage confidential videos for a longer time.

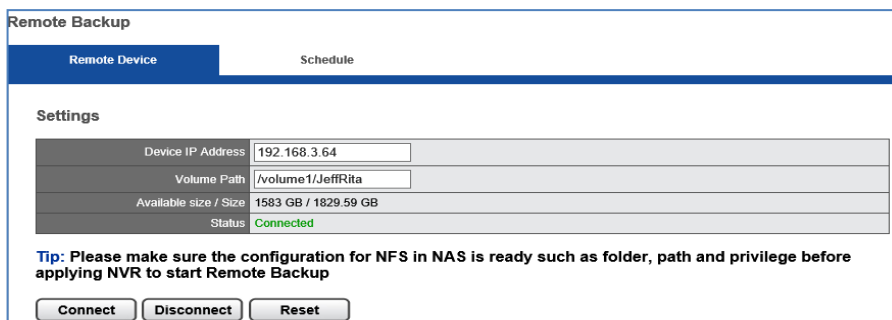
⚠ Note: ASUSTOR NAS is supported for now in LAN.

Please select “**Remote Backup**” from the drop-down menu of **Management** to begin.



⚠ Note: Please make sure the external NAS’s Network File System configuration is ready including folder, path and privilege, before connecting the NVR server to the external NAS for remote backup.

1. Connect to Device



Enter **IP Address** and **Volume Path** of the device that you set up in advance to execute remote backup, then click “**Connect**” button.

Once NVR successfully connects to the device, the status will show “**Connected**” and display the total size of the device as well as and the available size for remote backup.

As above picture, the total size of the device is 1829.59GB and it has 1583GB available size for remote backup.

2. Set up Remote Schedule Backup

(1) Video

Please set up the video that you would like to back up by setting **Days, Video Period, Channel Selection** and **Recording type**.

(2) Task

You can select “**Auto Backup**” to upload recorded videos to NAS **3 minutes later** when the video of selected time and channels are all saved in NVR. Or, you can fill in start time and end time to upload recorded video at that time period.

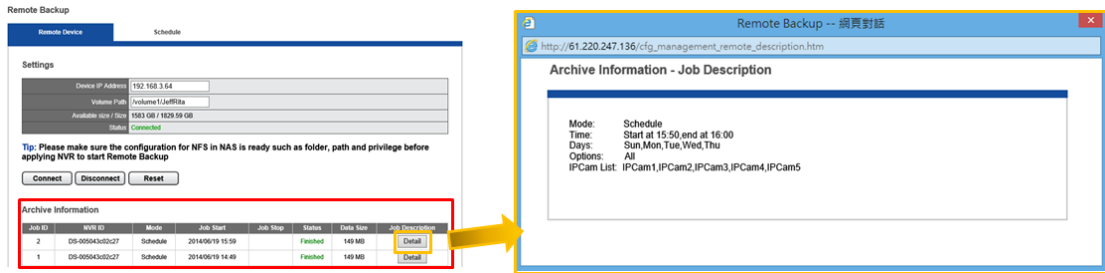
Then, click “**Apply**” button to save setting.

Note: NVR will stop remote backup when users click “**Backup Stop**” button

3. Check Job information on Remote Device page > Archive Information

Job ID	NVR ID	Mode	Job Start	Job Stop	Status	Data Size	Job Description
2	DS-005043c02c27	Schedule	2014/06/19 15:59		Finished	149 MB	Detail
1	DS-005043c02c27	Schedule	2014/06/19 14:49		Finished	149 MB	Detail

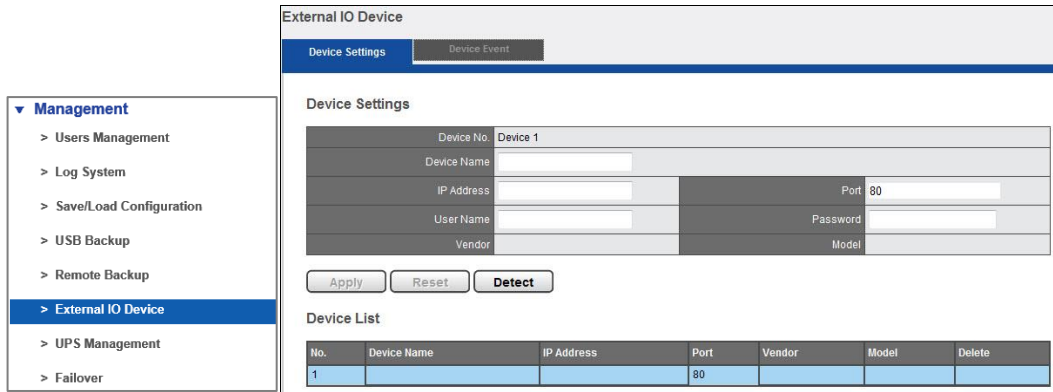
Archive Information is a remote backup history designed for users to record past remote backup jobs. Once NVR starts to back up videos, NVR will show a job ID in Archive Information



Clicking “Detail” button in Job Description column can view detailed information of remote information.

5.6.6 External IO Device

Please select “External IO Device” from the drop-down menu of Management to begin.



Enter necessary information to add devices manually, including: **Device Name, IP Address, User Name and Password.**

Click “Detect” to check whether connection is successful or not.

Please click “Apply” to finish the setting. "Vender" and "Model" will show up automatically, if detectable.

Camera List shows all available device information including: **Camera Name, IP Address, Port, Vender and Model.**

Also, **Device Event** will show the event originally set in the device.

5.6.7 UPS Management

UPS (Uninterruptible Power Supply) is designed to provide emergency power to NVR when encountering unexpected power outage.

Please select “**UPS Management**” from the drop-down menu of **Management** to begin.

UPS Device Information	
Brand	NUTHID
Model	Back-UPS RS 1000G
AC Power Status	ONLINE
Battery Capacity	100%
Estimated Protection Time	120 minutes

UPS Management Settings	
UPS Support	<input checked="" type="checkbox"/> Enabled When UPS Battery Capacity is lower than 15 %, event can be triggered. <small>(please go to Event & Action Management to do settings.)</small>

⚠️ Note: NVR supports OMRON, APC, CyberPower and YEC UPS for now.

1. UPS Device Information

Users can obtain basic UPS information from UPS device information, including **brand, model, AC power status, battery capacity and estimated protection time.**

Estimated protection time allows users to realize the estimated time to progress regular monitoring.

2. UPS Management Settings

① Smart Shutdown and Startup

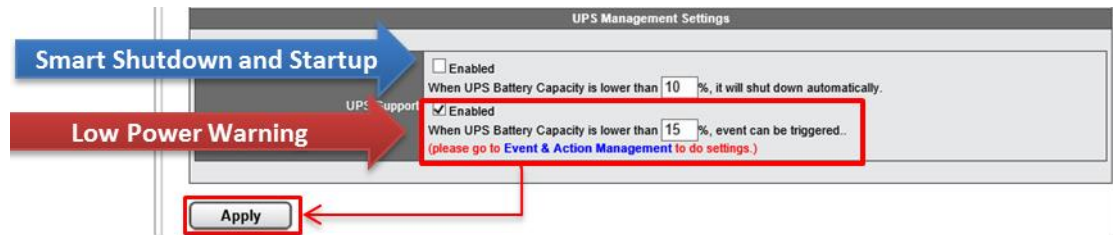
Smart Shutdown and Startup is designed to maintain usual surveillance performance when users encounter power outage. Users can set up when to automatically shut down NVR (Sleep Mode). Once UPS battery is over the percentage of capacity, NVR will start up automatically.

UPS Management Settings	
UPS Support	<input checked="" type="checkbox"/> Enabled When UPS Battery Capacity is 50 %, it will shut down automatically.

Please enable this feature and fill a number to automatically shut down or startup NVR

② UPS Low Power Warning

UPS Low Power Warning is a pre-notice to warn users that UPS is nearly out of power before NVR automatically shutdown to sleep mode.



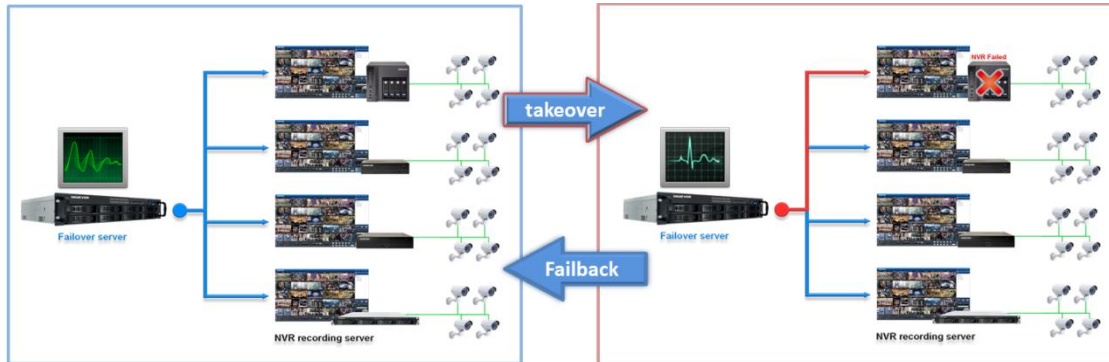
Please enable this feature and fill a number to automatically shut down or startup NVR. Click “**Apply**” button to save the setting.

Then, go to [Event & Action Management](#) page to do setting. Please refer to **5.2.4 Event & Action Management** for detail setting.

⚠ Note: Please make the percentage of Low Power Warning **higher** than that of Smart Shutdown and Startup.



5.6.8 Failover

NVR failover is a reliable backup solution to maintain IP video surveillance in case of NVR recording server failure situation. One failover can monitor up to 4 NVR recording servers in default. One failover server can monitor up to 16 NVR recording server.



1. Failover server configuration

- (1) Prepare a NVR as a failover server to monitor and take over failed NVR recording servers. Please complete **Quick Configuration** to complete system setup. You can skip camera setting since all existing camera settings of failover server will be removed when failover function is applied.

-  **Note: NVR Pro and Pro+ series** can be treated as failover server. All NVR can be monitored by failover server.
-  **Note:** To configure NVR failover feature, please **upgrade firmware 2.1.X.54 or above** on both failover server and NVR recording server.

- (2) Add NVR recording server

Please select “**Failover**” from the drop-down menu of **Management** to begin.

Management

- > Users Management
- > Log System
- > Save/Load Configuration
- > USB Backup
- > Remote Backup
- > External IO Device
- > UPS Management
- > Failover

Failover Settings

Failover Settings Advanced Settings

NVR No.

NVR Name

IP Address Port

Username Password

NVR List

No.	NVR Name	IP Address	Port	Delete
1			80	
2			80	
3			80	
4			80	

Click “**NVR Search**” to select NVR in LAN or manually fill in NVR information to add NVR recording server.

NVR Search

Failover Settings Advanced Settings

NVR No. 1

NVR Name NVR1

IP Address 192.168.1.1 Port 80

Username Password

NVR Search Apply

Manually Add

Failover Settings Advanced Settings

NVR No. 1

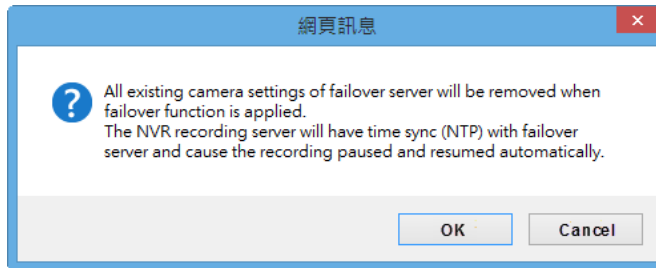
NVR Name NVR1

IP Address 192.168.1.11 Port 80

Username admin Password *****

NVR Search **Apply**

A window will pop up before failover server starts adding NVR recording server. Please read it carefully and click “OK” button to continue.



- Note:** Failover license channels must be more than NVR recording server license channels.
- Note:** NVR recording server can be added into “one” failover server.

(3) Set up the time when to take over NVR recording server in **Advanced Setting** page. Then, click “Apply” button.

Failover Settings **Advanced Settings**

Advanced Settings

Failover Take-over The sequential times of NVR fail to response to failover server: 3 (Max.:10,Min.:3)

Tip: Failover server will check the status of NVR recording server every minute.
Tip: Failover server will take over the NVR recording server if NVR recording server has no response sequentially for the set-time above.

Apply

2. Failover server monitoring

(1)NVR Status: network connection lost, NVR software and hardware failure

Failover server will check the status of NVR recording server **every minute**.

User can set up when to make failover server take over the NVR recording server if NVR recording server has no response sequentially for the set-time.

(Default is 3 times)

(2)Recording Status: HDD failure

Failover server will check the HDD status of NVR recording server **every minute**.

Once NVR recording server cannot record video to HDD, failover server will take over it, except for RAID fault tolerance situation.

3. What fails over?

Failover server only takes over below settings of failed NVR recording server to maintain IP video surveillance system:

Camera settings, Recording settings, Event and action settings, Email settings, Server setting (server name with UPnP and admin username/password)

⚠ Note: NVR failover server will synchronize NVR's configuration **each hour**.

4. Failback: cease take-over

(1)NVR Status:

Failover server will check the status of NVR recording server **every minute**.

Once failover server detects that NVR has been successfully reconnected network environment, failover NVR will stop take over that NVR.

⚠ Note: The **IP address** and **configuration** of NVR recording server must have its original setting.

(2)Recording Status: Change to a new HDD

Once failover server detects NVR recording server has changed to a new HDD, failover server will stop take over NVR recording server

5. Playback

On NVR recording server, users can playback videos recorded in failover server on **remote web browsers**. Videos recorded in failover server display in **light blue** color.



5.6.9 SNMP

To make users easily manage and monitor devices on network, NVR supports **SNMP (Simple Network Management Protocol)** to intelligently notify users of event triggered via SNMP trap.

⚠ Note: SNMP Trap is supported in Pro+ and Pro series.

Users can configure **up to 7 event types** to inform security guard of event occurred via SNMP server, including **recording error, UPS low power warning, CPU temperature warning, CPU fan warning, system fan warning, HDD error warning and HDD fail warning**

- **SNMP Settings**

Please “**Enable**” SNMP Trap setting and fill in **Trap address** and **Trap Community**. Then, click “**Apply**” button to connect SNMP device.

The screenshot displays the NVR's web management interface. On the left, a sidebar menu under 'Management' includes options like 'Users Management', 'Log System', and 'SNMP', with 'SNMP' currently selected. The main panel is titled 'SNMP Settings' and contains a sub-section 'SNMP Trap Settings'. This section includes a table of configuration options: 'Enabled' is checked, 'SNMP version' is set to 'v2c', 'Trap address' is '192.168.1.88', 'Trap Port' is '162', and 'Trap Community' is 'Public'. There is also a 'Notice' field which is empty. At the bottom of the form are 'Apply' and 'Reset' buttons.

Now, you can go to configuration page (Recording & Event > Event & Action Management) to set SNMP Trap as action.

5.6.10 ModBus IO Device

NVR supports Modbus Analog I/O-Digital I/O devices using Modbus protocol to make surveillance deployment more flexible to satisfy diverse project requirements such as factory and warehouse where users pay more attention on environment control. Users can configure desired events (digital Input or analog input) and corresponding actions (digital output or analog output) by connecting to external Modbus AI/O box.

⚠ Note: one NVR can connect up to 4 Modbus Analog I/O-Digital I/O devices in default. To connect NVR to more Modbus Analog I/O-Digital I/O devices, please contact sales.

⚠ Note: NVR supports Advantech 's Modbus Analog I/O-Digital I/O device for now:
ADAM-6024

1. Modbus IO Device

Modbus IO Device

Modbus IO Device Device Parameter Event Threshold Device Event

Device Settings

Device Number	Device 1		
Device Name	<input type="text" value="516"/>	Device Port	<input type="text" value="502"/>
IP Address	<input type="text" value="192.168.1.73"/>	Port	<input type="text" value="80"/>
Username	<input type="text" value="0"/>	Password	<input type="password"/>

Device List

No.	Device Name	IP Address	Device Port	Port	Delete
1	516	192.168.1.73	502	80	<input type="button" value="Delete"/>
2			502	80	
3			502	80	
4			502	80	

To add I/O device to NVR, please fill in **Device Name**, **IP address**, **Device Port**, **Port**, **Username** and **Password**. And, click **“Apply”** button to add new advice.

⚠ Note: If the access device has no username/password, please freely enter any words in Username and Password.

2. Device Parameter

Please choose a device in Device List to set up its parameter.

Modbus IO Device **Device Parameter** Event Threshold Device Event

Device List

No.	Device Name	IP Address	Device Port	Port
1	516	192.168.1.73	502	80
2			502	80
3			502	80
4			502	80

“Enable” I/O channel and select correct input range for AI/O parameter.

Users can also **edit I/O name** for quick event and action setting.

Enable I/O Function

DI Parameter

DI Channel 0	<input checked="" type="checkbox"/> Enabled	Alias Name	DI0
DI Channel 1	<input type="checkbox"/> Enabled	Alias Name	DI1

DO Parameter

DO Channel 0	<input checked="" type="checkbox"/> Enabled	Alias Name	DO0
DO Channel 1	<input type="checkbox"/> Enabled	Alias Name	DO1

AI Parameter

AI Channel 0	<input checked="" type="checkbox"/> Enabled	<input type="radio"/> 0 - 10V <input checked="" type="radio"/> 4 - 20mA	Alias Name	AI0
AI Channel 1	<input type="checkbox"/> Enabled	<input type="radio"/> 0 - 10V <input checked="" type="radio"/> 4 - 20mA	Alias Name	AI1
AI Channel 2	<input type="checkbox"/> Enabled	<input type="radio"/> 0 - 10V <input checked="" type="radio"/> 4 - 20mA	Alias Name	AI2
AI Channel 3	<input type="checkbox"/> Enabled	<input type="radio"/> 0 - 10V <input checked="" type="radio"/> 4 - 20mA	Alias Name	AI3
AI Channel 4	<input type="checkbox"/> Enabled	<input type="radio"/> 0 - 10V <input checked="" type="radio"/> 4 - 20mA	Alias Name	AI4
AI Channel 5	<input type="checkbox"/> Enabled	<input type="radio"/> 0 - 10V <input checked="" type="radio"/> 4 - 20mA	Alias Name	AI5

AO Parameter

AO Channel 0	<input checked="" type="checkbox"/> Enabled	<input type="radio"/> 0 - 10V <input checked="" type="radio"/> 4 - 20mA	Alias Name	AO0
AO Channel 1	<input type="checkbox"/> Enabled	<input type="radio"/> 0 - 10V <input checked="" type="radio"/> 4 - 20mA	Alias Name	AO1

Name I/O

Click “Apply” button to save setting

3. Event Threshold

Please choose a device in Device List to set up its parameter.

Modbus IO Device	Device Parameter	Event Threshold	Device Event	
Device List				
No.	Device Name	IP Address	Device Port	Port
1	516	192.168.1.73	502	80
2			502	80
3			502	80
4			502	80

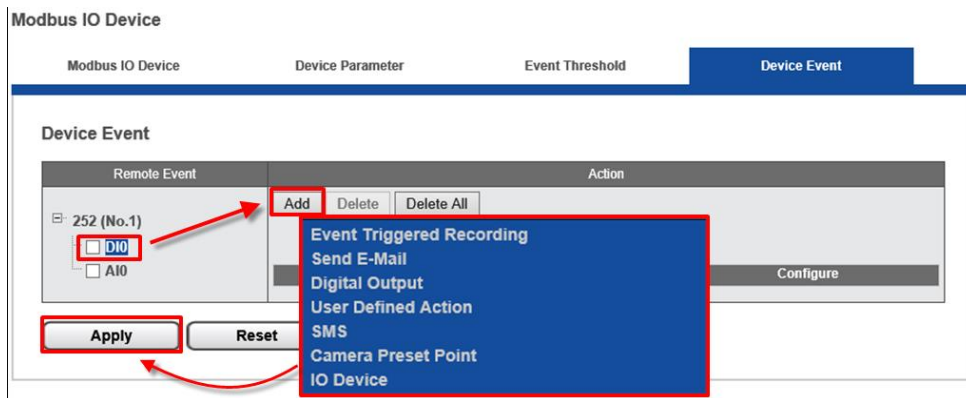
Users can base on I/O name to set up event trigger threshold which is enabled in device parameter page. Please click “Apply” button to apply setting.

I/O Name

I/O Event Threshold

4. Device Event

Select an event from event column, click “Add” button to add corresponding action. After all setting are done, please click “Apply” button to save event setting

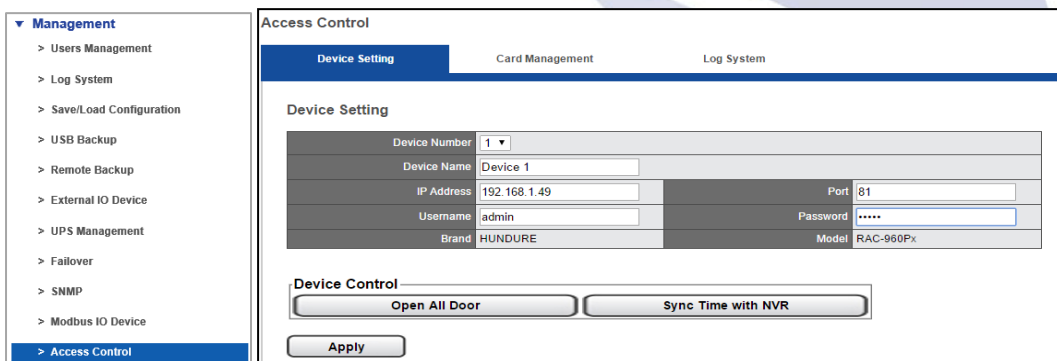


5.6.11 Access Control

NVR supports access control system for door monitoring and card management. Users can centrally monitor/open all doors and control who can access the door by adding card information to each card reader after the integration between NVR and access control. NVR also allows all access control systems to synchronize with NVR’s time for future log tracking. Besides, via **data filter**, users can easily check historical access information and export desired data to your PC.

- ⚠ Note:** One NVR can connect up to 4 access control devices in default. To connect NVR to more access controls, please contact sales.
- ⚠ Note:** NVR supports HUNDURE’s access control system for now: RAC-960 and RAC-970

1. Device Setting



To connect to access control device, please fill in **Device Name, IP address, Port, Username** and **Password**. Then, click “Apply” button to add advice.

- ⚠ Note:** If the access device has no username/password, please freely enter

any words in Username and Password.

On device control, users can click “**Sync Time with NVR**” button to synchronize its time with NVR or click “**Open All Door**” to open all doors controlled by this device.

NVR will display the device added to NVR in Device List. Users can choose a mode from **Access Control** and **Roller Shutter**.

Device List

No.	Device Name	IP Address	Port	Brand	Model	Mode	Action	Delete
1	Device 1	192.168.1.49	81	HUNDURE	RAC-960Px	Access Control Roller Shutter	Open Door	Delete
2			80					
3			80					
4			80					

- ⚠ **Note: Access control mode** means users can access the door via beeping a valid card to reader
- ⚠ **Note: Roller shutter mode** means users can push control button (up or down) to open roller shutter via beeping a valid card to the reader.

2. Card Management

In this page, users can add, modify and delete reader’s card information. Please select a device in Device List to start adding card information.

The screenshot shows the 'Access Control' interface with three tabs: 'Device Setting', 'Card Management', and 'Log System'. The 'Card Management' tab is highlighted with a red box. Below the tabs is a 'Device List' table. A red arrow points from the 'Card Management' tab down to the first row of the table, which is also highlighted with a red border. The first row contains: No. 1, Device Name: Device 1, IP Address: 192.168.1.49, Port: 81, Brand: HUNDURE, Model: RAC-960Px.

NVR offers two methods to add card information to card reader: **Add Individually** and **Group Adding**.

[Method 1] Add Individually:

Card Management
Card Information

No.	Card number	Card owner	TEL	Password	E-Mail	Note	Authorization of Card	Delete
1	00235580	---	---	---	---	---	0	Delete

Card Management

1

2

3

Upload to reader Save

- (1) Fill in **Card Number** and other optional card information such as Username, TEL, E-mail address.
- (2) Set up the authorization of card:
 - **Enable Card:** to make this card get access permission
 - **Password requested:** to enter numbers to strengthen access security level
- (3) Click "**Upload to reader**" to directly upload card information to the device
New card information will be updated to reader.

[Method 2] Group Adding:

Card Management

1

2

Upload to reader Save

3

Upload settings to reader

Device :

Card :

No.	Card number	Card owner	Password	Authorization of Card
1				
2				
3				
4				
5				
6				
7				
8				

Upload to reader

5

- (1) Fill in **Card Number** and other optional card information such as Username, TEL, E-mail address.
- (2) Set up the authorization of card:
 - **Enable Card:** to make this card get access permission
 - **Password requested:** to enter numbers to strengthen access security level

- (3) Click “**Save**” to directly upload card information to the device
 - (4) Follow (1)~(3) to add more card information
 - (5) Click “**Upload to reader**” to directly upload card information to the device
- All new card information will be updated to reader.

3. Log System

Log system allows users to easily check historical access information and export desired data to your PC.

The screenshot shows the 'Log System' interface with the following components:

- Navigation tabs: Device Setting, Card Management, **Log System**
- Section title: Log System
- Search filters on the left:
 - Device Name: Device 1
 - Card number: All
 - Event Type: All
 - Start Time: Year (2015), Month (6), Day (16), hours (15), minutes (42), sec (11)
 - End Time: Year (2015), Month (6), Day (16), hours (15), minutes (42), sec (11)
 - Buttons: Search, Reset
- Table of log entries:

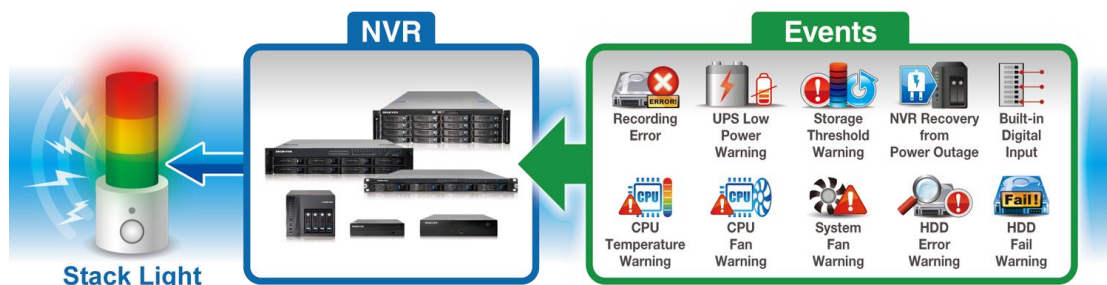
No.	Date & Time	Card number	Event Type	Log Type
1	2015/06/16-14:29:38	2807776687	操作錯誤	刷卡記錄
2	2015/06/16-14:29:46	2807776687	正常刷卡	刷卡記錄
3	2015/06/16-15:40:08	2807776687	操作錯誤	刷卡記錄
4	2015/06/16-15:40:52	2807776687	操作錯誤	刷卡記錄
5	2015/06/16-15:40:55	1062208648	操作錯誤	刷卡記錄
6	2015/06/16-15:41:03	1062208648	正常刷卡	刷卡記錄
7	2015/06/16-15:41:06	2807776687	正常刷卡	刷卡記錄
8	2015/06/16-15:41:49	2807776687	正常刷卡	刷卡記錄
9	2015/06/16-15:41:52	1062208648	正常刷卡	刷卡記錄
10	2015/06/16-15:43:14	1062208648	沒有找到卡號	刷卡記錄
11	2015/06/16-15:43:16	2807776687	沒有找到卡號	刷卡記錄
12	2015/06/16-15:43:50	2807776687	黑名单	刷卡記錄
13	2015/06/16-15:43:53	2807776687	黑名单	刷卡記錄
- Buttons: Delete record, Save

Select **Device**, **Card number**, **Event type**, **Start/End time** and click “**Search**” button to start searching log information. You may save log information to your computer by clicking “**Save**” button.

⚠ Note: Due to the design of HUNDURE’s access control system, when user uses data filter function on log system page, data saved in access control device will be deleted and saved in NVR.

5.6.12 Stack Light

NVR supports **stack light**, a visual and audible indicator, to notify users of **NVR status** and **outside environment** from 10 types of event. Based on surveillance scenario, users can flexibly configure multi-status indication such as **LED light** (red, yellow, green) and **buzzer**.



- ⚠ **Note:** NVR supports Patlite’s NHx-3FB1-RYG for now.
- ⚠ **Note:** one NVR can connect **up to 4 stack light devices**.
- ⚠ **Note:** It is necessary to press stop button on stack light to ensure the event has been checked.

Enter **Device Name, IP Address, Port, Username, Password** to add stack light. Then, click **“Apply”** button

Stack Light

Device Settings

Device Settings

Device Number	<input type="text" value="1"/>		
Device Name	<input type="text" value="Device 1"/>		
IP Address	<input type="text" value="192.168.1.33"/>	Port	<input type="text" value="80"/>
Username	<input type="text" value="rjkkj"/>	Password	<input type="password" value="•••••"/>

Now, you can configure stack light as event action. Please refer to **5.2.4**



5.7 System



5.7.1 Device Information

Please select “Device Information” from the drop-down menu of **System** to begin.



① System Information

System Information shows **Operating System, OS Version, NVR Version, CPU, Network Adapter, MAC Address, and Network Flow.**

Locate

Click "Locate", the NVR buzzer will be triggered for 3 seconds. It helps the user to locate the NVR.

Product Model	DS-4225 Pro Series
Firmware Version	2.0.0.42
MAC Address	20:10:7a:8f:b5:de, 20:10:7a:8f:b5:df
Operating System	Embedded Linux
OS Version	Linux version 3.2.29
CPU	Intel(R) family
Network Adapter	Gigabit Ethernet Card 10/100/1000 Mbps
Locate	<input type="button" value="Locate"/>

② Enclosure Information

System Information	Enclosure Information
Information	
CPU temperature normal range ≤ 58 °C	34.0°C
System Fan Speed	0RPM

⚠ Note: Temperature of operation environment for NVR is 0~40°C.

5.7.2 System Upgrade

Users can do NVR firmware upgrade via **Remote Web Browser** (Windows IE/ Opera/ Safari browser) or **Local Display** (connect directly to a local monitor via HDMI, DVI or VGA connector).

Note: Please make sure the NVR model and the firmware version are correct.

Note: Please **reboot** NVR before upgrading to accelerate and to save your process time. To successfully add all new features, it is strongly suggested to upgrade the firmware **within three versions each time**, and necessarily **via v2.1.0.49** before upgrading to the latest firmware version. Since NVR has important enhancement in v2.1.0.49.
For example, if your current firmware version is v2.0.0.45, please do the upgrade from 2.0.0.45→2.0.0.46 or 2.0.0.47 or 2.1.0.48→2.1.0.49→2.1.0.50 or 2.1.0.51 or 2.1.0.52→2.1.0.53

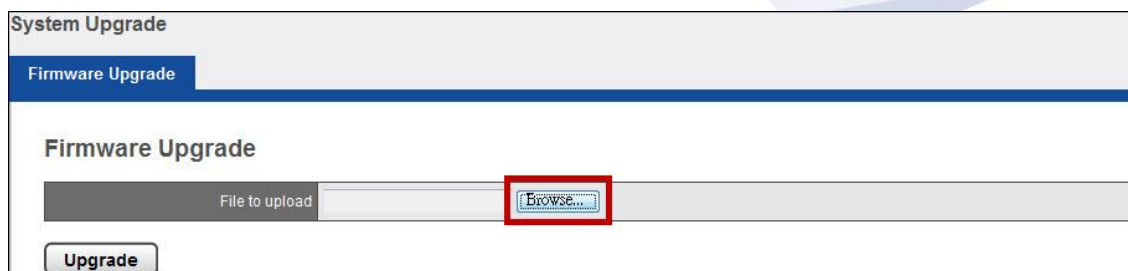
1. Upgrade via Remote Web Browser in Windows OS (IE / Chrome / Firefox / Safari/ Opera browser)

- (1) Download latest firmware file from website and save the firmware file to a local computer.
- (2) Completely unzip the file
- (3) Go to "Configuration" page→Select drop-down menu of "**System**"→"**System Upgrade**" to begin.

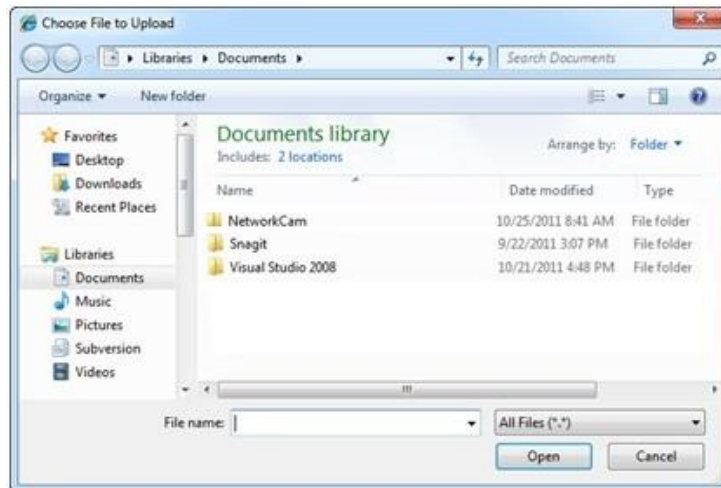


- (4) Press "**Browse**" to find the latest firmware

After downloading the firmware file, users can upgrade new firmware from a folder of local computer and browse the folder to upload it.

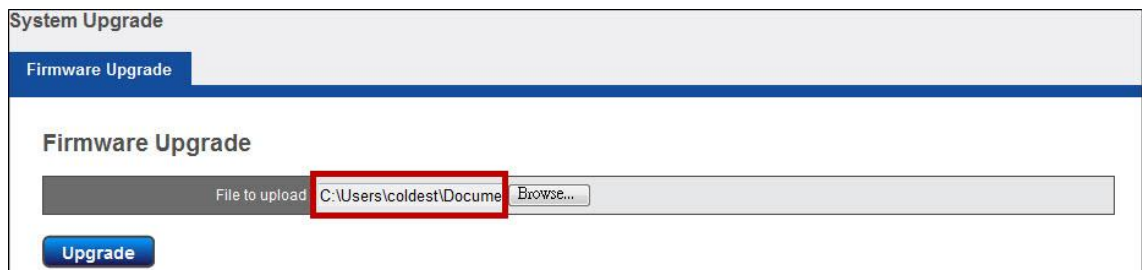


A window will pop up to ask for the folder to upload the firmware.



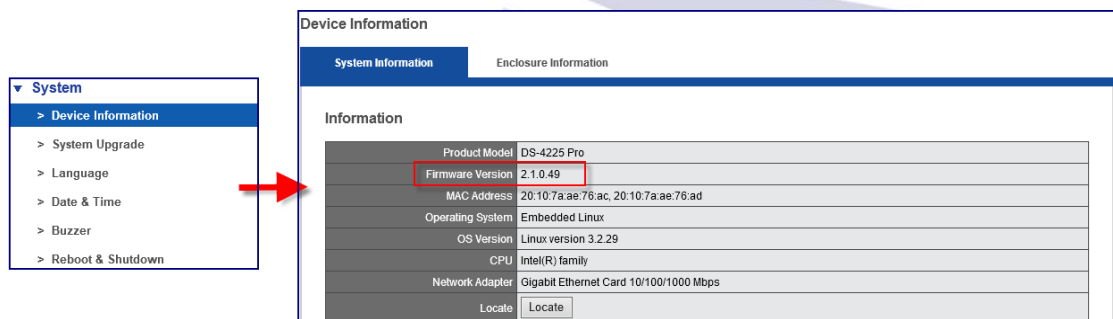
(5) Click **“Upgrade”**

After selecting the file, please click **“Upgrade”** to renew the NVR.



Once system upgrade is finished, NVR will reboot itself.

Users could go to **“Device Information”** from the drop down list of **“System”** so as to double check NVR firmware version.



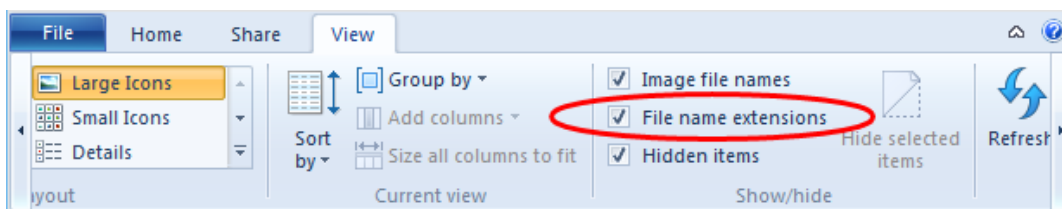
2. Upgrade via Local Display(directly connect to a local monitor via HDMI, DVI or VGA connector)

⚠ Note: Upgrade via Local Display is supported in Pro+ series and Pro series.

- (1) Download latest firmware file from website and save the firmware file to a local computer.
- (2) Completely unzip the file, and save it to USB device
Please save the file to your USB device after downloading and unzipping the firmware.

⚠ Note: If you want to upgrade the NVR via USB device on local display UI, after downloading and unzipping the file, please rename the unzipped .bin file name to "update" in the USB device, in order to have it recognized by the local NVR correctly.

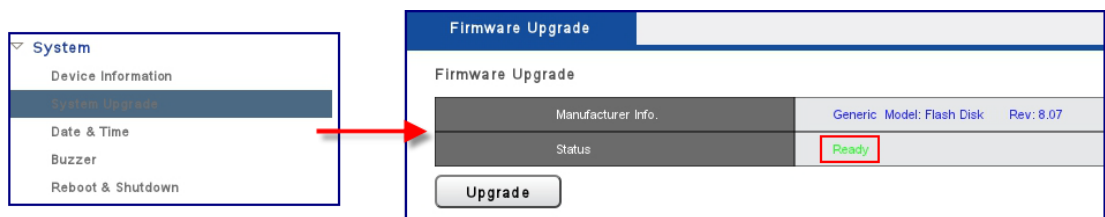
⚠ Note: If you enable **File name extensions**, the file name will become **"update.bin"**



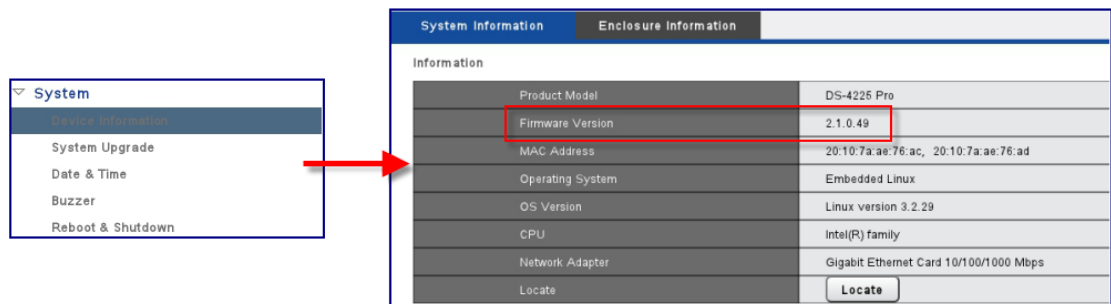
⚠ Note: To recognize the USB device well, please **format the USB device to FAT32 file system** first, and make sure you delete all other files and keep only **"update.bin"** when you enable **File name extensions**.

Instructions to format a USB device to FAT32 file system:

- I. Click on the "My Computer" shortcut on the desktop of your computer
 - II. Right-click the flash drive and choose the "Format" option
 - III. Change the selection under "File System" to FAT32
 - IV. Click the "Start" button to begin the formatting process
- (3) Connect NVR to a monitor and insert USB device to **NVR's USB Backup port**
To start local display upgrade, please connect NVR to a monitor (via HDMI or VGA) and insert USB device to the USB port of NVR.
- (4) Power on the monitor and NVR, and log in NVR.
- (5) Go to "**Configuration**" page, and then select "**System Upgrade**". When the interface shows device is '**ready**', you can start upgrading NVR.



- (6) Once firmware upgrade finishes, NVR will reboot itself.
Users could go to "**Device Information**" from the drop down list of "**System**" so as to double check NVR firmware version.



5.7.3 Language

Please select "**Language**" from the drop-down menu of **System** to begin.



NVR provides different languages for users. Users can configure the language as **AUTO** or other languages.

Language

Language

Български čeština Dansk Deutsch Dutch
 English Español Français Indonesia Italiano
 Hrvatski Magyar Norwegian Polski Português
 Русский Suomi Svenska తెలుగు Türkçe
 Tiếng Việt 한국어 日本語 正體中文 簡體中文

Apply

Please click “**Apply**” and the language will be changed.

5.7.4 Date & Time

Please select “**Date & Time**” from the drop-down menu of **System** to begin.

▼ System

- > Device Information
- > System Upgrade
- > Language
- > **Date & Time**
- > Buzzer
- > Reboot & Shutdown

1. Set up

Date & Time

Setup Time Zone

Date & Time

Year	2011
Month	8
Day	16
Time	20 : 41 : 27

Apply Reset

Select from the drop-down list and configure the time manually and the setting will be effective when you click “**Apply**”.

2. Time zone

Time Zone Setup

Time Zone	(GMT+08:00)Taiwan
	<input type="checkbox"/> Automatically adjust clock for Daylight Saving Time
Synchronize with external NTP server	time.stdtime.gov.tw <input type="checkbox"/> Automatically Sync
	<input checked="" type="radio"/> Monthly 1 Day 0 0 (hr : mins) <input type="radio"/> Weekly Sunday 0 0 (hr : mins) <input type="radio"/> Daily 0 0 (hr : mins)
	Auto synchronize when time difference is more than 30 seconds. (1-180)
NVR built-in NTP server	192.168.1.13

Apply Reset

(1) **Time zone**: set the time and date according to the correct time zone

- (2) **Automatically adjust clock for Daylight Saving Time:** adjust clock for daylight saving changes
- (3) **Automatically synchronize with external NTP server:** Define when to automatically synchronize with external NTP sever. NVR provides three methods to execute automatically sync: **Monthly**, **Weekly** or **Daily**

- ① Enter the hostname of a valid NTP server and select “**Automatically Sync**”
- ② Set up when to automatically synchronize with external NTP sever
- ③ Fill in the number to start auto synchronize when time difference exceeds user-defined seconds
- ④ Click “**Apply**” button to save setting

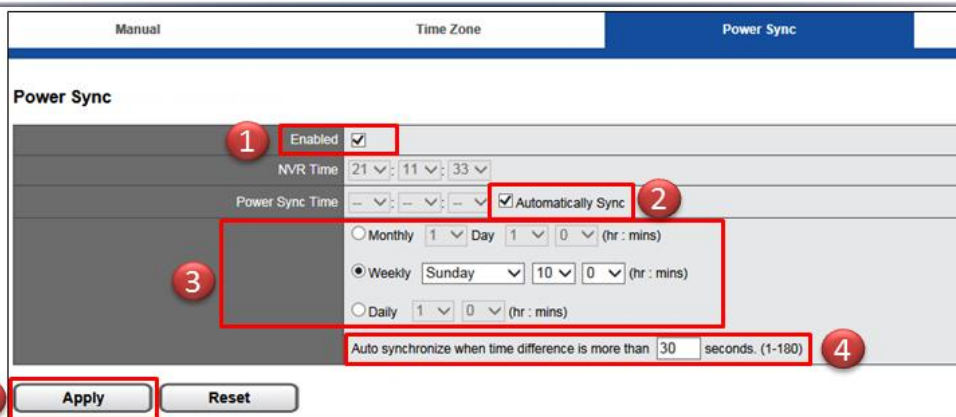
(4) Built-in NTP server in NVR

To ensure the accuracy of time, NVR provides NTP server function for client device to synchronize the time clock. The built-in NTP server address follows NVR IP address.

3. Power Sync

NVR allows you to synchronize your NVR server clock with external USB device, which can ensure NVR’s clock information is up-to-date and accurate. This feature is especially designed for surveillance environment **with no Internet access**.

⚠ Note: This feature is supported in **MASTER CLOCK’s SA101SR-FF5A** for now.



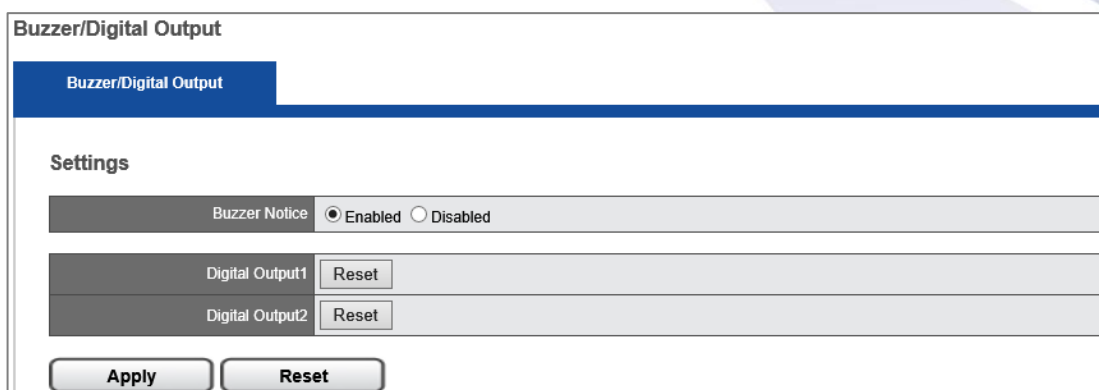
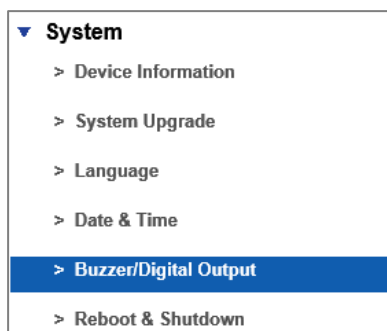
Please insert USB device to NVR USB port first.

- (1) Enable “Power Sync”
- (2) Select “Automatically Sync”
- (3) Set **automatically sync interval** to execute automatically synchronize:
Monthly, Weekly or Daily
- (4) Fill in the number to **adjust time** when time difference exceeds user-defined seconds
- (5) Click “Apply” button

⚠ Note: Overlapping recorded video will be saved in “**daylightsave**” folder and categorized as “**time overlap**” after NVR synchronized with NTP server.

5.7.5 Buzzer/Digital Output

Please select “Buzzer” from the drop-down menu of **System** to begin.



Select “**Enable**” or “**Disable**” to set Buzzer Notice.

Once the buzzer notice is enabled, the buzzer will have beep sound in HDD or NVR hardware failure situation.

⚠ Note: To stop the buzzer sound, user can press “**USB BACKUP**” button on the front panel of NVR for one second.

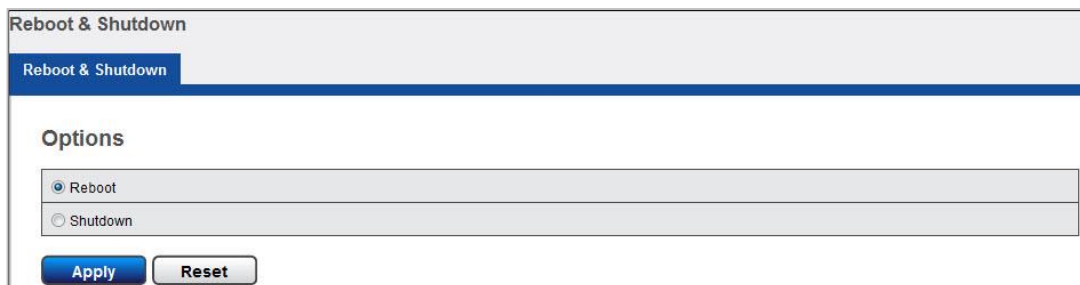
Users can click “**Reset**” button to stop the trigger of digital output when DO is in continuous notification mode.

5.7.6 Reboot & Shutdown

Please select “**Reboot & Shutdown**” from the drop-down menu of **System** to begin.



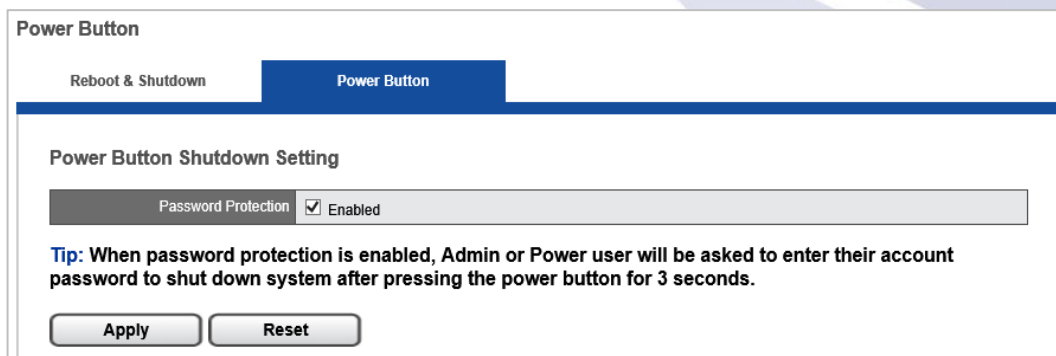
1. Reboot & Shutdown



Click “**Reboot**” to restart the NVR.

Click “**Shutdown**” to turn off the NVR.

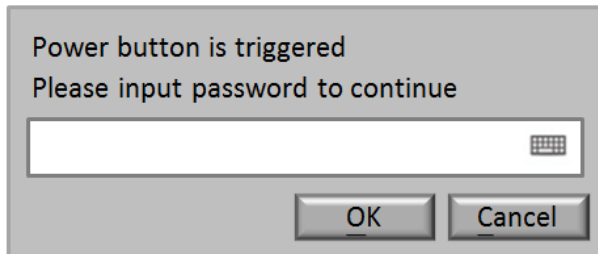
2. Power Button



Password protection can protect system from carelessly or accidentally pressing the power button. When password protection is enabled, **administrator** and **power user**

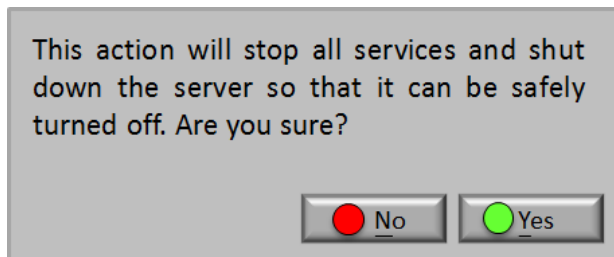
will be asked to enter their own account password to shut down system after pressing the power button for 3 seconds. (Users may hear the beep sound)

⚠ Note: The user level account is **not** allowed to shut down system with power button. (NVR will pop out “The user level account is not allowed to shut down system with power button” message.)



A window will pop up when pressing the power button for 3 seconds after login NVR. Please enter password. Then, click “**OK**” button.

⚠ Note: For security concern, NVR will back to login page if you click “**Cancel**” button.



Above window will pop up. Click “**Yes**” to shut down system.

⚠ Note: For security concern, NVR will back to login page if you click “**No**” button.

Appendix: Notice and Warning

Notice

* This equipment is for home use, and has acquired the electromagnetic conformity registration. So, it can be used not only in residential area, but also other areas.

* 이기기는가정용(B급) 전자파적합기기로서주로가정에서사용하는것을목적으로하며, 모든지역에서사용할수있습니다.

Warning

* Risk of explosion if battery is replaced by an incorrect type. Please dispose of used batteries according to the instructions.