



# GV-LPR CAM 20A Installation Guide V2.0 (Type B Model)

## Models

The GV-LPR CAM is available in both EIA and CCIR video format. The camera gives a 570 TVL high-contrast license plate recognition video to the GV-LPR software that identifies license plates. It features 24 high-efficient LEDs for an illumination range of 15 ~ 25 meters / 49.21 ~ 82.02 feet. It also features a weather-sealed, IP66-compliant housing with the heater and blower inside. This installation guide will take you through the functionality and use of the GV-LPR CAM.

### Note:

The GV-LPR CAM comes with a free GV-LPR Software, and you need to insert the supplied GV-USB Dongle to the PC to run the software. The free GV-LPR Software is a Trial Edition. It can only capture the license plate images and does not support the license plate recognition function.

## Packing List

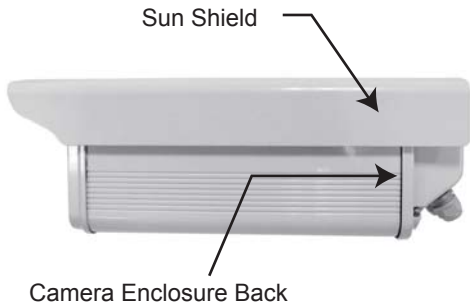
- AC Power Cable (110-125V, 10A) x 1
- Power Adapter (100-240V, 12V/5A) x 1
- Outdoor Mounting Bracket x 1
- GV-LPR Software DVD
- GV-USB Dongle

There are hardware types A, B and C for GV-LPR CAM 20A. Your current device is a type B. You can find this information on your product box.

- GV-LPR CAM 10A PAL DC12V
- GV-LPR CAM 10A NTSC DC12V
- GV-LPR CAM 20A PAL DC12V
- GV-LPR CAM 20A NTSC DC12V
- A  B  C

# Installing Camera Module

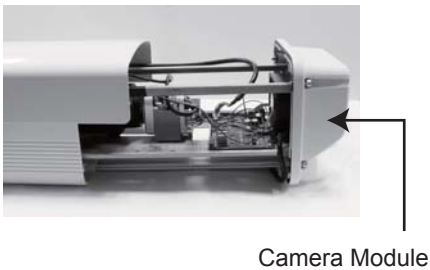
1. Push the sun shield forward to align with the back of camera enclosure.



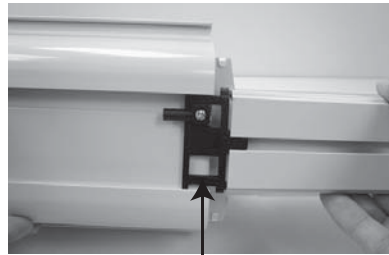
2. Loosen the set screws on the back of the camera enclosure.



3. Pull out the camera module.



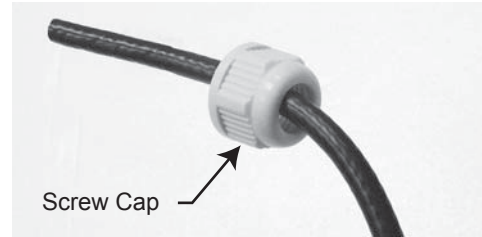
4. Slightly lift the camera module and slide it out completely.



5. Loosen the screw cap on the left.



6. Insert the video cable through the screw cap.



7. Attach the video cable to the BNC connector and plug it into the "VIDEO OUT" jack.



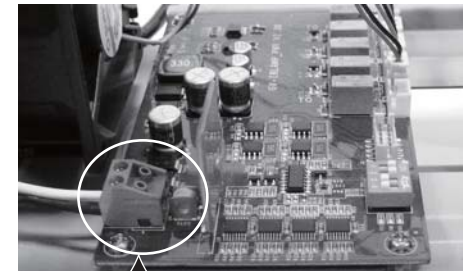
8. Adjust the length of the video cable and then tightly screw the cap.



9. Loosen the screw cap on the right, insert the power cable through the screw cap.



10. Remove the terminal block. Plug black and white wires of the power cable to the terminal block. Reinsert the terminal block onto the camera. The white wire is required to connect to the positive pin (+) on the camera and the black wire to the negative pin (-).



11. Adjust the length of the cable and then tightly screw the cap (see Steps 8 for the picture).

# Adjusting Camera Settings

## Overview



No	Function
1	Auto Iris lens connector
2	Video out
3	Power Terminal (It is already connected. Follow Steps 11 to 12 in <i>Installing Camera Module</i> to insert the Power Cable.)
4	Moves down the OSD menu.
5	Moves the focus rightward to select menu options.
6	Power LED
7	Moves up the OSD menu.
8	Enters the OSD menu option and confirms the selection
9	Moves the focus leftward to select menu options.

## Shutter Speed

See the lists below for shutter speed settings.

Distance between the object and the camera is 550 cm (18.04 ft).

165 SEC
182 SEC
183 (*) SEC
184 SEC
185 SEC
225 SEC

Distance between the object and the camera is 1100 cm (36.08 ft).

145 SEC
150 SEC
155 SEC
170 SEC
180 SEC
200 SEC

### Note:

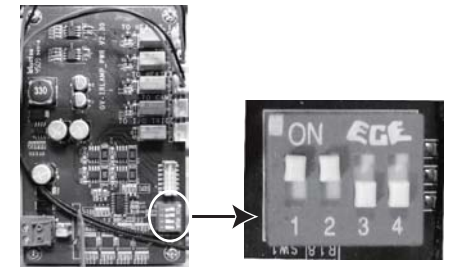
- The default settings are marked with (\*).
- The gray areas in the charts are not recommended for use.

## LED Brightness Settings

The GV-LPR CAM is designed with 24 high-efficient LEDs which you can adjust the brightness. You can push up (ON) and down (OFF) the switches of SW2, SW3 and SW4 for LED brightness settings. See the table below for 8 LED brightness setting values.

Note: The factory default setting of SW1 is ON. If you find the images of license plates captured in the day time or sufficient lights are unclear, check the SW1 and make sure it is switched to ON.

	SW2	SW3	SW4	LED Brightness (mA)
1	ON	ON	ON	470 (Default Setting)
2	ON	ON	OFF	400
3	ON	OFF	ON	350
4	ON	OFF	OFF	300
5	OFF	ON	ON	250
6	OFF	ON	OFF	200
7	OFF	OFF	ON	150
8	OFF	OFF	OFF	100



## OSD Menu Options and Functions

Main Menu	Sub Menu	Options	Function	Default
Exposure	Lens	Manual (ELC Level)	Manually adjusts the camera lens.	-
		DC (DC Level)	Press <b>SET</b> to adjust the lens brightness.	17
	E. Shutter	1/60, 1/100FLC, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000, 1/100000	Sets the shutter speed for the camera.	1/500
	BLC	ON, OFF	The backlight compensation (BLC) processes the scene for objects to appear clearly when they have strong backlighting. Select <b>ON</b> and press <b>SET LEVEL</b> to adjust the BLC ratio at the center, top, down, left and right of the camera. The higher value, the stronger the compensation.	OFF
	AGC	OFF, 12 DB, 15 DB, 18 DB, 21 DB, 24 DB, 27 DB, 30 DB, 33 DB, 36 DB	Automatically adjusts the camera light sensor to accommodate for different illumination level and produce clear image. The higher the value, the brighter the image.	33 DB
RGB	WB Mode	AWC	Automatically adjusts the white balance under fixed level of illumination.	AWC
		ATW	Dynamically adjusts the color intensity according to illumination level of the scene.	
		Manual	Not functional	
		Pushlock	Select this option to apply the current white balance settings to all the scenes later.	
	R-Y Gain	Not functional		128
B-Y Gain	Not functional		128	
Privacy	Mask 1	ON, OFF	Sets up to 4 solid blocks on the live view to keep sensitive areas invisible. Select <b>ON</b> to enable the mask and select <b>SET WINDOW</b> to define the size of the privacy mask.	OFF
	Mask 2			
	Mask 3			
	Mask 4			
	Color Set	BLACK, GRAY, Color1 ~ Color6	Sets the color of the privacy mask.	BLACK

Main Menu	Sub Menu	Options	Function	Default	
Day & Night	Auto	Burst	ON, OFF	Automatically switches between color and black-and-white mode based on the illumination conditions. <ul style="list-style-type: none"> <li>● Burst: Enable this function if your LCD monitor only displays in colors.</li> <li>● Color ► BW: The threshold value at which the camera changes from color to black-and-white.</li> <li>● BW ► Color: The threshold value at which the camera changes from black-and- white to color.</li> <li>● Read time: The time taken for the camera to change from color to black-and- white mode or the reverse</li> </ul>	B & W
		Color ► BW	0 ~ 214		
		BW ► Color	0 ~ 214		
		Read time	3 ~ 12		
	Color	n/a	Sets the scene in colors.		
	B & W	n/a	Sets the scene in black and white.		
Function	Mirror	ON, OFF	Select <b>ON</b> to reverse the image.	OFF	
	Sharpness	0 ~ 49	Adjusts the sharpness value.	20	
	Gamma	User, 0.45, 0.6, 1.0	Adjusts the gamma value.	0.45	
	SLC	ON (0 ~ 50), OFF	Enable and configure the Side Light Compensation (SLC) to compensate scenes with brighter center and darker surroundings.	OFF	
	HME	ON (0 ~ 50), OFF	Enable and configure the Highlight Masking Exposure (HME) to mask areas of strong illumination and compensates low-light areas within a scene.	OFF	
	DRC	ON, OFF	Enable the Dynamic Range Compressor (DRC) to reduce the illumination difference within a scene.	OFF	
Exit	Exit	n/a	Press <b>ENTER</b> to exit the OSD menu.	-	
	Save & Exit	n/a	Press <b>ENTER</b> to save configurations and exit the OSD menu.	-	
	Factory Set	n/a	Press <b>ENTER</b> to load factory default settings.	-	

## Installing Camera Enclosure

Main Menu	Sub Menu	Options	Function	Default	
Set	Camera ID	0 ~ 254	Names the camera.	1	
	Title	Edit	n/a	Sets a title.	-
		Reset	n/a	Edits the title.	-
		Position	Top-L, Top-R, Bot-L, Bot-R	Sets the position of the title.	TOP-L
	DPC Set	White Thr	0 ~ 254	Reduces the defective white pixels.	50
		Black Thr	0 ~ 254	Reduces the defective black pixels.	100
		DPC Level	0 ~ 254	Sets the area of effect pixels used to compensate for the defective ones.	50
	Language	Chinese	n/a	Sets the language of the OSD menu.	English
English		n/a			
	PC Cont.	ON, OFF	Not functional	ON	
Motion	Alarm (ON)	Set window	n/a	Sets the detection zone in blocks. Use the direction buttons and the <b>ENTER</b> button to configure.	Full-screen detection zone
		All set	n/a	Sets the full scene as the detection zone.	-
	All clear	n/a	Clears the previously set detection zone.	-	
	Sensiti.	0 ~ 55	Adjusts the alarm sensitivity.	44	
	Show Indi	OFF, ICON, TRACE	Sets the type of alarm indicator. <ul style="list-style-type: none"> <li>● <b>ICON</b>: shows an icon at the top left corner when motion is detected anywhere in the detection zone.</li> <li>● <b>TRACE</b>: shows color blocks where motion is detected.</li> </ul>	OFF	
	Delay out	1, 3, 5, 7, 9, 13, 15	Sets the time taken for the alarm message to show after a motion is detected.	1	

### Note:

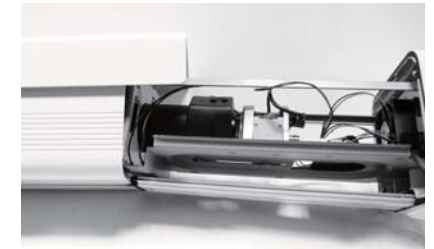
The factory default GAMMA value is set to be 1. It will be adjusted to 0.45 every time when you select RESET. For optimal image performance, it is recommended to adjust the GAMMA value to 1.

After the installation of camera module and settings adjustment, you are now ready to install the camera enclosure back.

1. Adjust the lens focus.



2. Lift the camera module.



3. Align the camera module to the camera enclosure and slide it back.



4. Secure the camera enclosure with the screws on both sides.



5. Push the sun shield back.



# Specifications

GV-LPR CAM 20A 1/3" B/W License Plate Recognition Camera		
Model	GV-LPR CAM 20A EIA DC 12V	GV-LPR CAM 20A CCIR DC 12V
Camera		
Image Sensor	1/3" B/W EXview CCD	
Resolution	570 TVL	
Video Standard	EIA	CCIR
Min. Illumination	Color	N/A
	B/W	N/A
	IR ON	0 Lux
Shutter Speed	Automatic, Fixed (1/60 ~ 1/100000; Deault 1/500)	
White Balance	AWB	
Image Setting	Brightness, Contrast, Saturation, Sharpness, Gamma, White Balance, Flicker-less, Image Orientation, Shutter Speed	
IR LAMP		
LED Quantity	24 high-efficient LEDs	
IR Distance	18 m / 59.06 ft (optimal)	
	15 ~ 25 m / 49.21 ~ 82.02 ft	
Illuminator Life	25,000 hrs	
Lens		
Focal Length	10 ~ 120 mm	
Max. Aperture	1.6	
Mount	CS Mount	
Image Format	1/3"	
Operation	Focus	manual
	Zoom	manual
	Iris	DC
Mechanical		
Lens Mounting	N/A	
Connectors	Power	DC Jack
	Auto Iris	DC drive
	TV-Out	BNC
General		
Operating Temperature	Operation: -30 °C ~ 50 °C / -22 °F ~ 122 °F	
	Storage: -30 °C ~ 70 °C / -22 °F ~ 158 °F	
Heater	≤ 5 °C (ON), > 5 °C (OFF) ; 20W	
Power Source	12V DC	

Max. Power Consumption	30W (normal), 50W (heater on)
Dimensions (L x W x H)	425.01 x 155 x 156.75 mm / 16.73 x 6.10 x 6.17 in (with sun shield)
Weight	5 kg / 11.02 lb (with sun shield)
Construction	Robust aluminum with weatherproof sun shield
Regulatory	CE, FCC, C-Tick
Protection classification	IP66

**Note:**

All specifications are subject to change without notice.



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