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# PERIDECT

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## PERIDECT-CC module

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### HANDBOOK



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# 1. Peridect-CC integration module

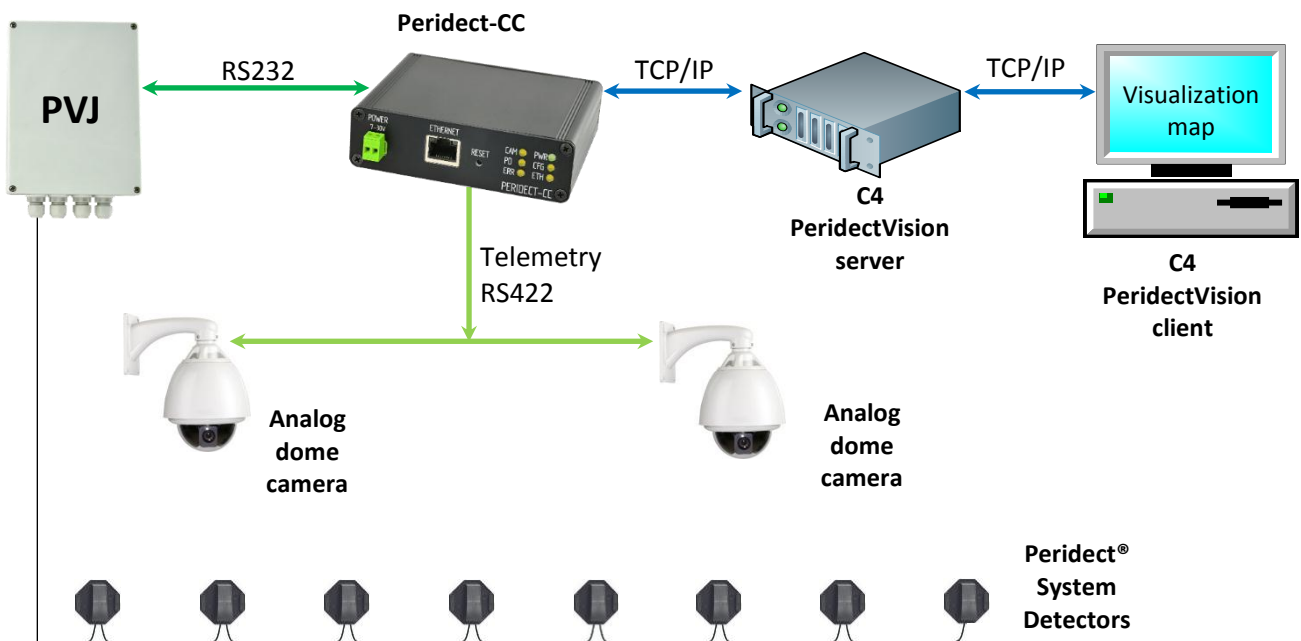
## 1.1. Using of Peridect-CC integration module

The Peridect-CC integration module - Camera Controller is designed for direct control of analog dome cameras or other systems by alarms from the Peridect® system.

At the same time it provides SDK Peridect at the Ethernet interface, i.e. it serves the function of a converter between an RS232 communication line to Ethernet. The SDK Peridect® enables an easy integration of the Peridect® system by the customers into their integration and visualization systems.

With a suitable program for the creation of a virtual port (e.g. CPR from Lantronix). It enables to connect the service software for remote configuration of the PVJ unit via a network. Configuration of the Peridect-CC module itself is done through its web interface.

Each Peridect-CC module enables to connect one Peridect-PVJ unit over the RS232 interface. Power supply for the module is rated at 9-36 VDC. It is possible to use the Peridect-PVJ unit power source for powering Peridect-CC.



Typical connection diagram for the Peridect-CC module

## 1.2.Peridect-CC integration module as camera controller

Communication with the cameras takes place through transmission of telemetry commands over the RS422 bus interface, and in practice, only the transmitting pair is used; thus the communication is unidirectional.

The feature of controlling the dome cameras provides the ability to move the camera in response to an alarm from a detector upon a specific preset (pre-configured position). Up each detector may be configured with an individual preset.

It is necessary to save the preset in the camera beforehand in such a way, so that the view conveniently covers the detector and its surroundings. In practice, presets are saved in such a way that the view covers 2 to 20 detectors including their close surroundings, and each of the detectors in the view is assigned the same preset.

Alternatively, it is possible to send more dome cameras to the preset upon an alarm at one detector. This mostly means in practice that two adjacent cameras can view the detector with alarm from two different sides.

An optional feature of the Peridect-CC module is the return of the camera after a set time period back to the defined starting or so called "home" or "parking" preset.

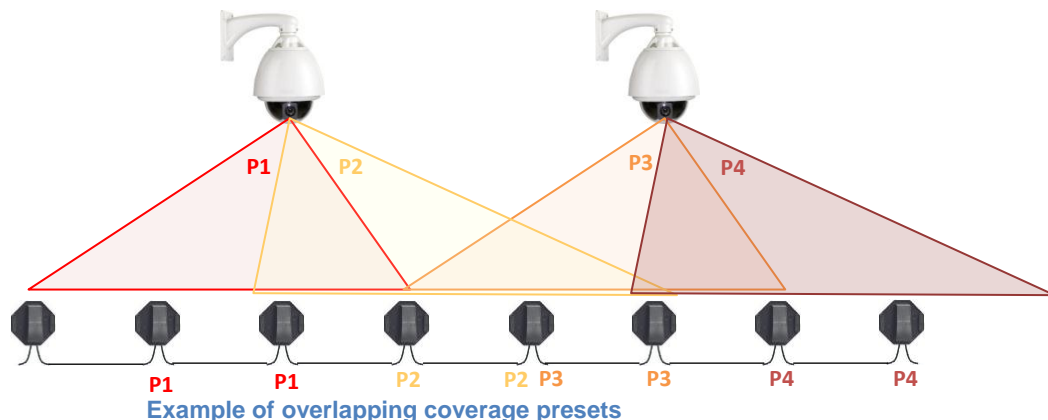
It is also possible to configure the module so that it returns to one home preset with an alarm at one portion of the detectors, and to a different home preset with an alarm at another portion of the detectors. This can be utilized in practice at the perimeter site to make the camera return to a home position with a wide-angle view in the direction of the perimeter where the alarm originated.

The number of called homing presets of one Peridect-CC module is limited to 20, while each has an individually configurable return delay of 1 to 600 seconds.

A Preset is called by sending a corresponding text string with a suitable protocol in hexadecimal format to the telemetry bus of the dome cameras. Usually we use the Pelco D and Pelco P protocol, however, you can use the majority of common telemetry protocols, if you know preset commands.

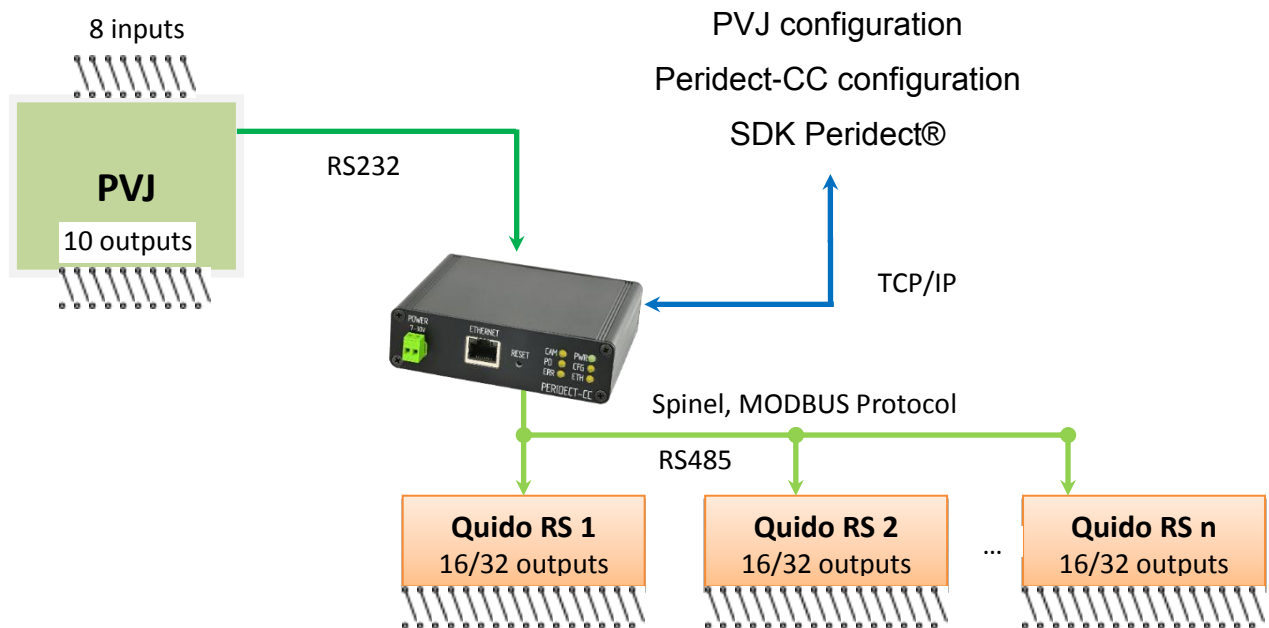
Any combination of text string can be sent to the bus, i.e. the telemetry commands can apart from the several basic command 'camera X to preset Y' (GoToPreset), send also for example 'run a pattern with specific camera', or any other telemetry protocol command or command sequence.

Be careful when you save in camera presets. Home preset is usually very wide. You must save next presets in such a way as to overlap the adjacent preset, each preset must be wider about neighboring detectors. Too close angle may cause situation when intruder is not on camera record, because alarm was on adjacent fence sections.



### 1.3.Using of Peridect-CC with I/O modules

Apart from telemetry protocols also commands of other communication protocols may be sent to the bus. An example of such use can be I/O modules Quido RS that can be controlled with suitable commands of Spinel or Modbus protocols. This way, the number of outputs from one Peridect-PVJ can be increased, i.e. each sensor, input, Peridect-PIO module is assigned a switched output on Quido RS. Peridect-CC also enables within the Spinel or Modbus protocols to switch multiple outputs on different Quido RS with a single alarm.



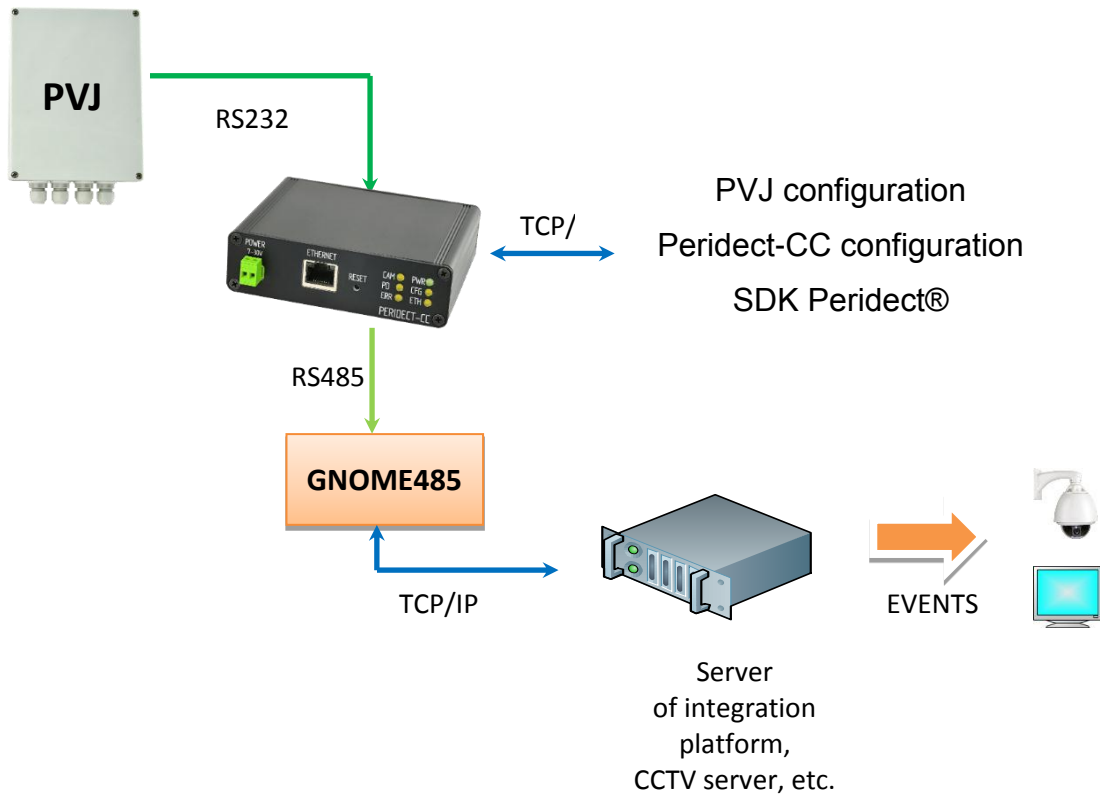
Connection diagram with Quido RS I/O modules



Quido RS I/O module with 16 outputs

## 1.4.Using of Peridect-CC with protocol converters

Another possibility of use of the Peridect-CC module is to send a freely defined text string combination when there is an alarm at a detector, and to place a converter on the bus that transfers the characters into Ethernet. The texts then can be manipulated within different integration softwares customized for their management, and based on these texts, diverse events may be launched. This provides a solution for simple integration without the need for implementation of SDK of the Peridect® system.



Connection diagram with an RS485 – TCP/IP converter



Example of RS485 – TCP/IP converter

## 1.5. Connector and LED arrangement



Indicator LEDs:

- PWR – power supply connected, continuous green light
- CFG – configuration SW Peridect connected, continuous light
- ETH – Ethernet communication over SDK, typically with integration platform, continuous light
- CAM – transmission on RS422 bus, blinking during transmission
- PD – communication with Peridect-PVJ unit detectors, periodic blinking 2× in a second
- ERR – fault (communication, module, etc.), blinking, power cycle to restart module

RESET – hardware reset, including network settings. It should hold reset button, simultaneously power off, power on, hold the reset button 10 seconds, and release - reset is done.

## 1.6. Programming cable PGC232

The programming cable simplifies connection of Peridect-PVJ for its configuration, e.g. to connect a portable PC with the configuration program. It is equipped with a Canon 9F connector to connect to a PC or Peridect-CC. The other end is to be connected to a 3pin connector located directly on the Peridect-PVJ unit board, and thus it is not necessary to use the screw-on terminal block connector intended for permanent installation.

Only one RS232 communication cable can be connected to the Peridect-PVJ unit at the same time. Prior to connecting the service cable, check that the cable coming from the terminal block is disconnected.

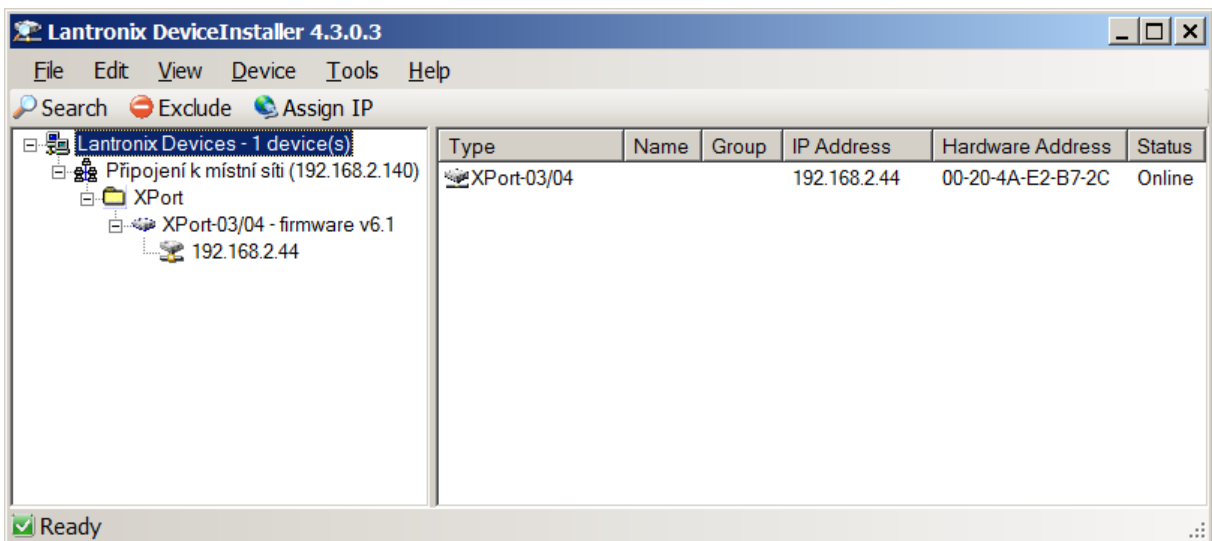


Programming cable PGC232

## 1.7.Connection to Peridect-CC

Configuration of Peridect-CC is carried out through a web-based interface via TCP/IP. Type the device IP address into the address line in a web browser (Internet Explorer). The default address is from a range of 192.168.1.254

If you do not know the IP address, use the newest version Lantronix DeviceInstaller software <http://www.lantronix.com/support/downloads/> to search for the device on the network. Once the Search button is pressed, the device appears named XPort:



The last option is to perform a hardware reset of the unit described in the chapter 1.5, but when it you lose all settings of the unit.

When connecting directly with a cable, it is advisable to assign a fixed IP address. DeviceInstaller can find also other, in our systems frequently used devices as the Ganitor, Gnome converters, etc. When you click a specific device, the DeviceInstaller shows the device data, and it enables its configuration on further tabs over the build-in web interface, and the Telnet interface. Telnet provides access only to basic settings of the module.



Once you enter the correct IP address, you can be prompted to enter a password.

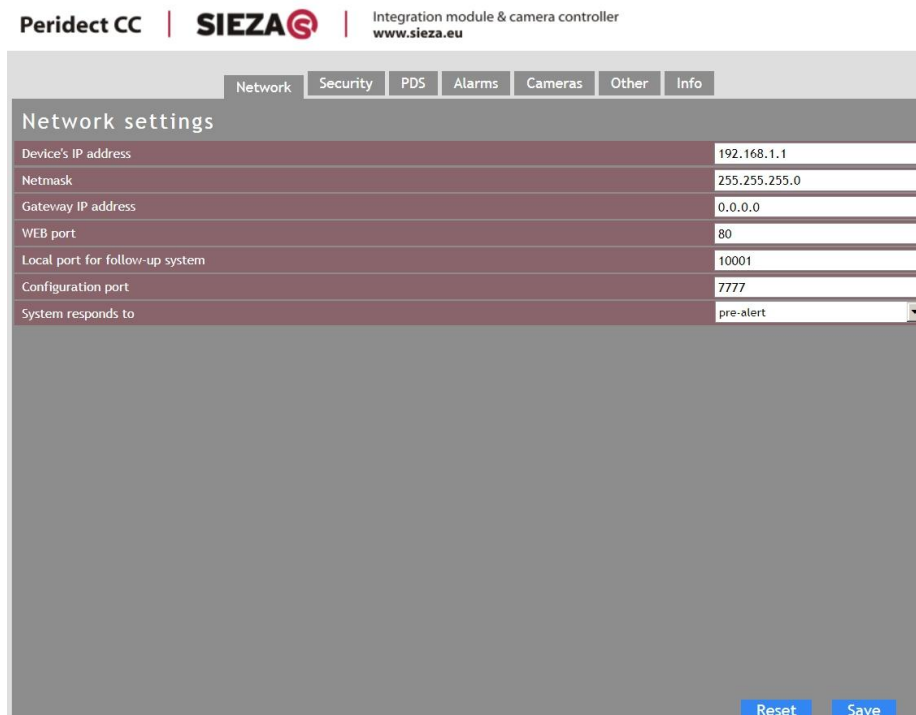


The Login name is always admin, and in the default setting password is disabled. If password is not set, the prompt does not appear.

## 1.8. Peridect-CC Web Interface

### 1.8.1. Network

Setting the network parameters and other connection parameters. The context help pops up after pointing the mouse cursor over the line.



**Device's IP Address** – static IP address of the Peridect-CC module. Since integration systems commonly require a static IP address, its assignment by a DHCP server is not available. Default is 192.168.1.254.

**NetMask** – default value is 255.255.255.0

**Gateway IP Address** – to access from the Internet; default value is No Gateway 0.0.0.0

**Web Port** – web interface for managing the Peridect-CC module; default value: port 80. When the port is modified, the address must be entered in the browser as xx.xx.xx.xx:yy, where yy is the port number.

**Local Port for follow-up System** – port used in the integration system for the Peridect-PVJ unit, e.g. C4 Peridect Vision. Default value is 10001.

**Configuration Port** – port for the configuration of connected Peridect-PVJ unit using Peridect® configuration software. Prior to connecting the configuration program, a virtual RS232 port must be created and assigned to the Peridect-CC IP address. A suitable tool is for example software CPR Manager from Lantronix, see Chapter Creating a Virtual COM Port.

**System responds to** – can assume values „pre-alarm“ or „alarm“. Reaction to a pre-alarm means that the Peridect-CC module sends a text string to the bus immediately with the first evaluation of an alarm value at the sensor (the sample in graphic view gets "to the red field"). Reaction to an alarm means that the text string is sent to the bus at a point of time, when the complete alarm condition is met (typically 2 to 3 samples over a period go "to the red field"), i.e. at the same time when the alarm output of Peridect-PVJ is switched on.

If in Peridect-PVJ the AlrmCnt value on the CONFIG LINE tab is set to 1, the reaction to a "pre-alarm" is identical to the "alarm" setting.

The difference for the user is that when the reaction is set to start with the "pre-alarm", the dome camera starts its movement to position earlier, and the situation is thus also recorded from an earlier point of time, however, in many cases the alarm is not raised at all at the system outputs. With reaction set to an „alarm“, the camera starts only with the actual alarm resulting in less camera movements, but the recording of the alarm area also starts from a later point of time (usually by 1 to 5 sec depending on Peridect-PVJ settings).

In case of an automatic camera system without permanent presence of operators, in practice it can be more advantageous to initiate the cameras at "pre-alarm". In the opposite, e.g. with text string controlled outputs, the "alarm" setting can be used.

**Reset** – after confirming the message, this resets all Peridect-CC module settings to the default state, erases all values and passwords, and resets the device. Does not modify network settings, except Web Port.



**Save** – saves the current page modifications into the module, and reloads the page as well as all values. This takes usually 20 to 30 seconds. In case that a password is set, a table appears intended for the authentication process, and then the user name 'admin' and the current password must be entered.

Peridect CC | SIEZA® | Integration module & camera controller  
www.sieza.eu

Network Security PDS Alarms Cameras Other Info

### Network settings

Device's IP address	172.27.2.14
Netmask	255.255.0.0
Gateway IP address	172.27.2.1
WEB port	80
Local port for follow-up system	10001
Configuration port	7777
System responds to	peridect

Settings were saved. The device is rebooting now. Please wait...The browser will try to reconnect the device on its new IP address.

[Reset](#) [Save](#)

### 1.8.2. Security

Setting of a password for accessing the configuration of the Peridect-CC module. The Login name is always admin, and in the default setting password is disabled. The administrator's password may be up to 8 characters long, it can contain numbers 0-9, A-Z, a-z, hyphen (-), underscore (\_), and a dot.

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Network Security PDS Alarms Cameras Other Info

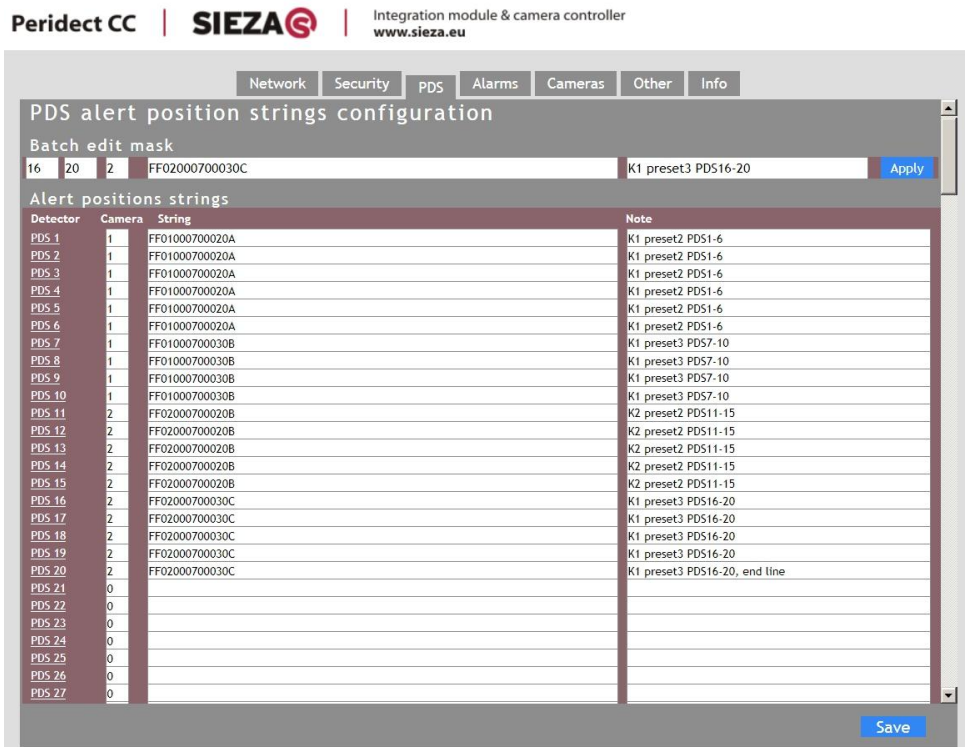
### Security settings

Administrator's password	<input type="password"/>
Administrator's password for confirmation	<input type="password"/>
Current Administrator's password	<input type="password"/>

[Save](#)

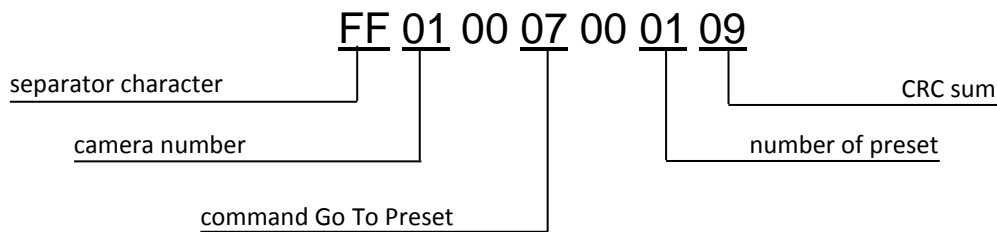
### 1.8.3. PDS

A tab used to set the text strings for each detector which are sent to the bus in case of an alarm.



The principal of controlling the cameras and other devices is based on sending text strings of specific telemetry commands to the RS422 bus when there is an alarm at a detector. The method is fully tested with Pelco D and Pelco P protocols.

Example of Pelco D protocol command 'camera 1 to preset 1':



**Batch edit mask** – serves to ease filling in the table. Specify the number of the first and last detector with the same values. After you make Apply it will automatically fill all the rows of detectors in interval by the same values.

**Detector** – detector address assigned to Peridect-PVJ bus.

**Camera** – a value of 0 means that the camera does not automatically receive a command from Peridect-CC to return to the home preset. This is a typical setting for cameras that return to their home positions automatically based on their own settings which we recommend to use always when enabled by the camera settings.

If a value of 1 to 20 is set, the camera returns back after an alarm in accordance with the command and the time period set on the camera tab in the specific row 1 to 20. If several rows contain the same value, the same home preset command is used for multiple detectors.

**String** – text string serving as a command, comprised for example in line with the above sample. There is a conversion table (Excel 2007, 2010) available for the string entry in

Pelco D or Pelco P protocol for any camera a preset number. It is possible to enter several commands on a row at the same time one after another, for instance in a situation when we need two cameras to rotate towards one location from different sides. The maximum number of characters on one row is 60. This was tested also with commands of different protocols at the same time and at the same speed to initiate functions in different systems connected to the same bus. If a row stays blank, nothing will be sent.

**Note** – text to a command meaning description, to a camera view or other comments relating to a specific solution.

**Save** – stores the current value to the module.

### 1.8.4. Alarms

Tab for setting the strings for alarm inputs of Peridect-PVJ and Peridect-PIO.



**Input** – Peridect-PVJ unit input number or Peridect-PIO module address.

**Camera** – same function as with Camera under the Peridect-PDS tab.

**String** – row function same as with String under the Peridect-PDS tab.

**Note** – text to a command meaning description, to a camera view or other comments relating to a specific solution.

## 1.8.5. Cameras

A tab for setting the strings for camera parking position and the time to elapse before the parking command is to be sent.

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Network Security PDS Alarms Cameras Other Info

### Strings setting for parking positions

Camera	Time [s]	Parking position string	Name
Camera 1	30	FF010007000109	K1 home preset 1
Camera 2	30	FF02000700010A	K2 home preset 1
Camera 3	0		
Camera 4	0		
Camera 5	0		
Camera 6	0		
Camera 7	0		
Camera 8	0		
Camera 9	0		
Camera 10	0		
Camera 11	0		
Camera 12	0		
Camera 13	0		
Camera 14	0		
Camera 15	0		
Camera 16	0		
Camera 17	0		
Camera 18	0		
Camera 19	0		
Camera 20	0		

Save

**Camera x** – camera number assigned on the Peridect-PDS and Alarms tabs

**Time [s]** – the time to elapse before the text string is to be sent which returns the camera or device into its starting position.

**String** – text string serving as a command used to induce the idle state of the device, e.g. camera home position.

**Name** – text string function name to allow for better orientation within the system; functionally identical with Note.

### 1.8.6. Other

Setting the module name, language, Peridect-PVJ address, communication rate at the unit and at the camera bus.

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Network Security PDS Alarms Cameras Other Info

#### Other settings

Name of the device	NONAME
Language	English
PVJ address	1
Peridect port baud rate	57600 Bd
Camera port baud rate	9600 Bd

Save

**Name of the device** – module name showed in the web page heading.

**Language** – selection of language for the Peridect-CC web interface

**PVJ address** – address saved within the Peridect-PVJ unit; almost always equal to 1, however, values of 1 to 15 may be entered.

**Peridect port baud rate** – value of 57600 Bd must be used. It must correspond to the contents of the Config.txt file.

**Camera port baud rate** – communication rate at the camera bus RS422, it depends on telemetry bus protocol settings.

### 1.8.7. Info

Information about the Peridect-CC module and its producer. Downloading the configuration in .xml format.

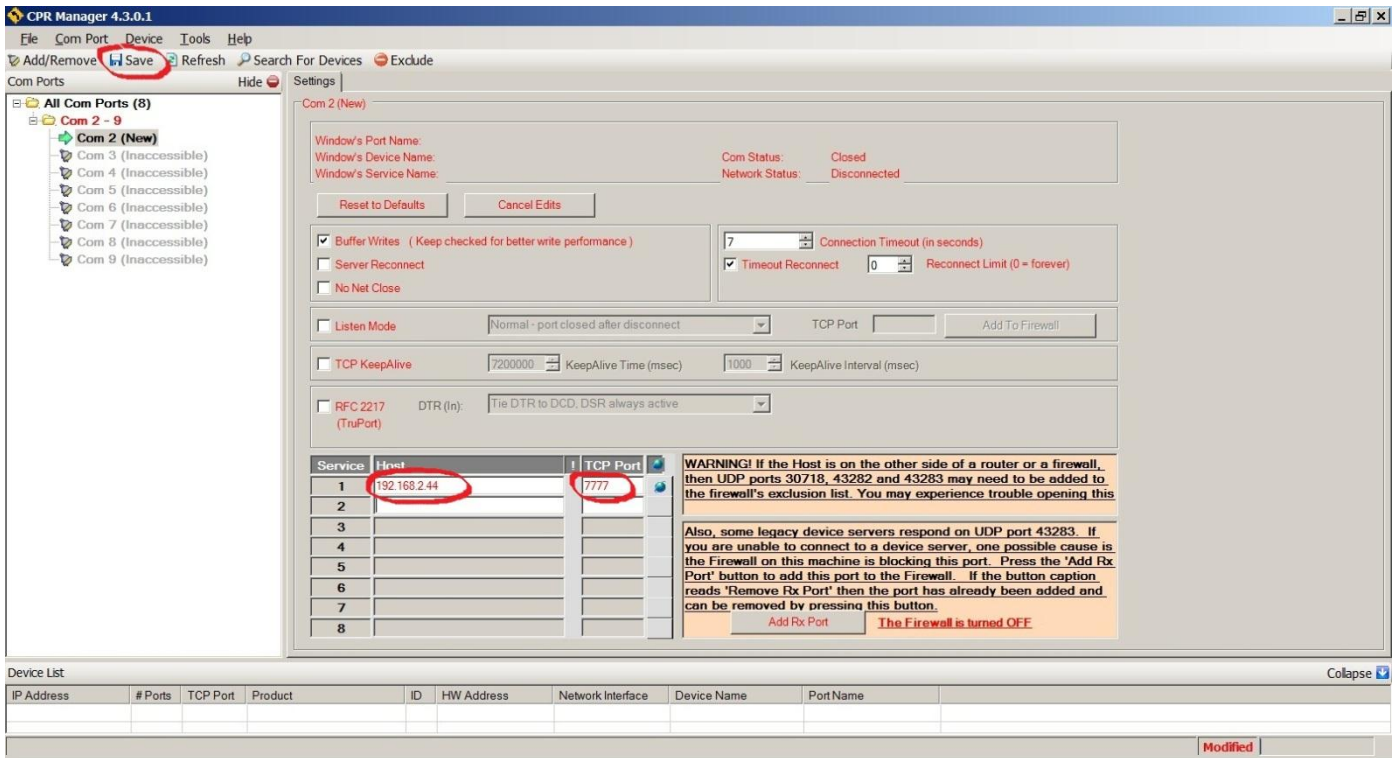
Information about the device	
MAC address:	00-20-4A-E2-BE-9E
Firmware version:	2
Manufacturer	
Name:	Sieza s.r.o.
Web pages:	<a href="http://www.sieza.eu">www.sieza.eu</a>
Browser	
Browser core:	trident v.6
System:	win
Links	
XML file containing current configuration:	<a href="#">settings.xml</a>

An .xml file with the current configuration of Peridect-CC can be downloaded from the website to enable its back-up in the form of text. The file cannot be uploaded back into the Peridect-CC unit (due to insufficient communication bandwidth between the unit's internal processors).

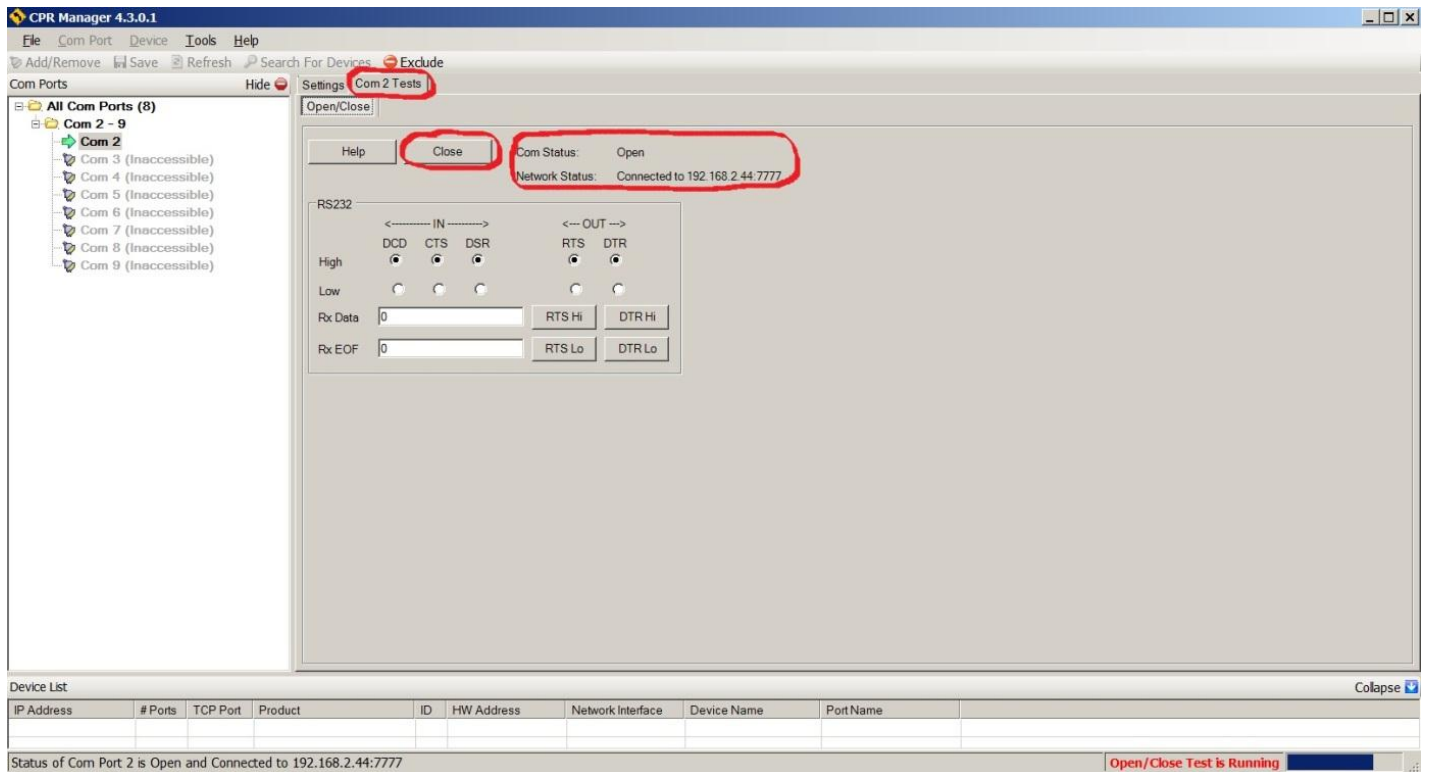




A new COM port of the number selected appears on the page. Click on it to open its configuration. Enter the Peridect-CC module IP address, and the configuration port (default value is 7777). Click Save.



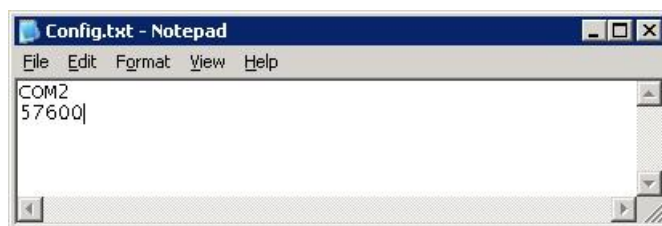
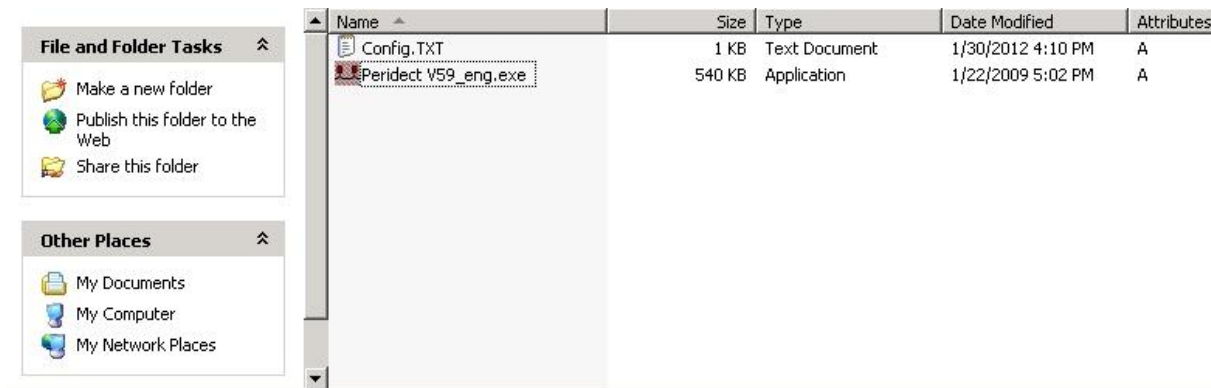
A new tab appears allowing to test the function. If the configuration is correct, then upon clicking Open, the Com Status: changes to Open and Network Status changes to Connected to ..., see screenshot.



Subsequently, Close must be pressed.

## 2.2. Peridect configuration software

Now we have prepared a port for the unit. We must now type in the set COM port into the Config.txt file in the folder containing the Peridect® configuration software, and save the Config.txt file.



Now we can run the Peridect® configuration software.

In case that the Peridect® software does not communicate after start-up, it is necessary to check the communication rate of the Peridect-CC module again (57600 Bd) on the Other tab – Peridect port baud rate (see chapter Other Tab), eventually to change the Peridect-PVJ unit address within the Peridect® configuration software. Almost always address value 1 is used, exceptionally address value 2, when there are two adjacent units in one control panel.

In some cases, a window appears in the configuration software with a text indicating that the COM port cannot be opened, typically in a situation when during the connection test in the CPR Manager you do not press Close (see above), or if some integration and visualisation software is connected to the unit (e.g. PeridectVision).

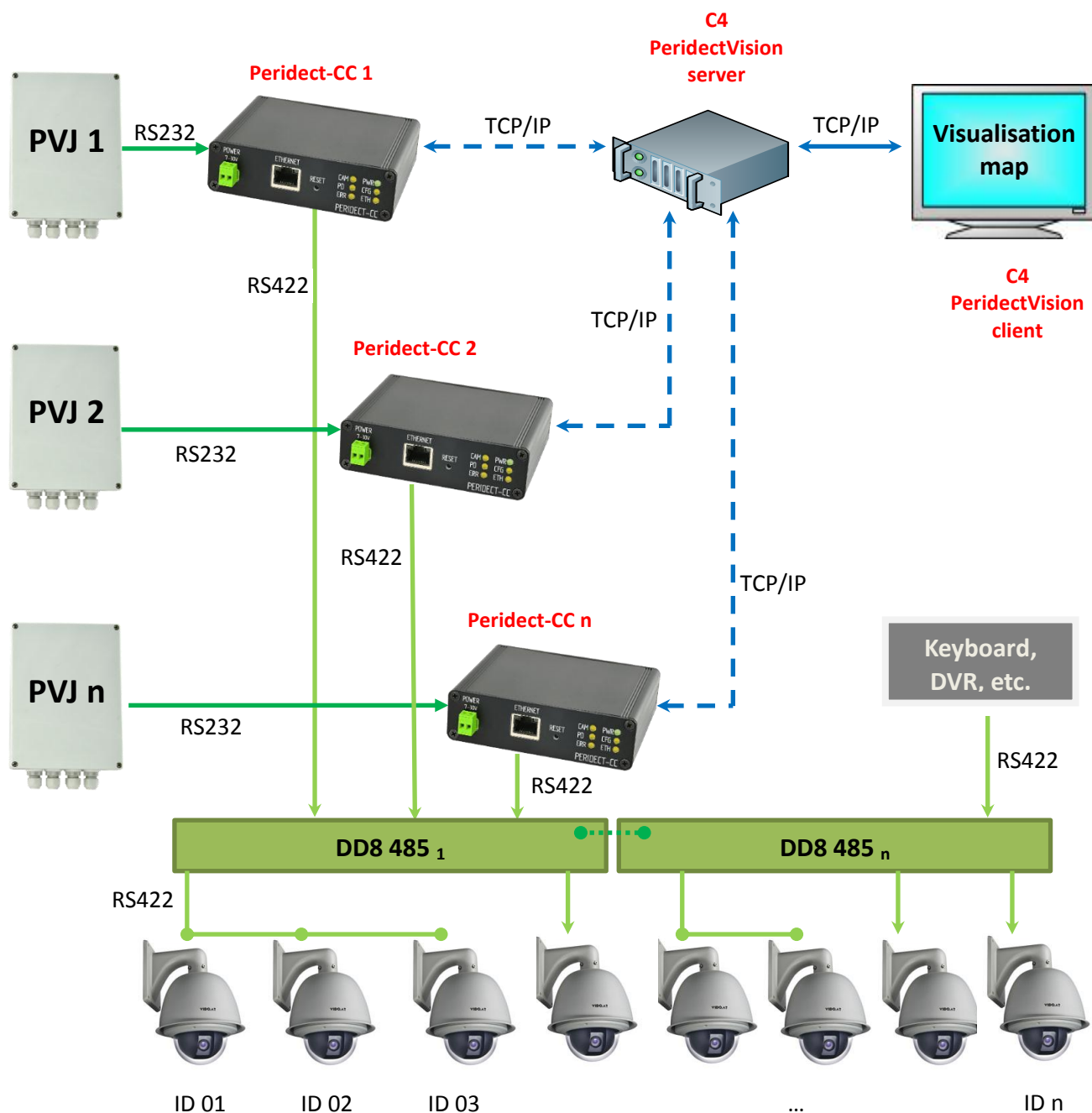
Note: Within the CPR Manager application, you can add multiple COM ports at the same time, and create a separate folder for each unit containing a copy of the Peridect® configuration software and the Config.txt file with a different COM port. This allows you to easily switch over between different Peridect-PVJ units, and to create separate log files from each of them.

# 3. How to build larger installations

## 3.1. System topology

On longer perimeters it is necessary to use several Peridect-PVJ. It is possible to combine multiple Peridect-PVJ and up to 128 dome cameras in one bus system (depends on used telemetry protocol).

Each dome camera has a unique ID, alarm can control any camera preset. Dome cameras can also be controlled from the keyboard or from DVR (remote client).



Example bus topology with multiple PVJ units and multiple dome cameras

### 3.2.Connecting bus telemetry

For joining RS422 buses is suitable telemetry distributor/hub, for example model DD8-485 from Metel ([www.metel.eu](http://www.metel.eu)).

One telemetry distributor/hub DD8-485 can manage up to eight RS422 buses. You can choose whether the bus is transmitting or receiving by switch.

To one transmitting bus can be connected one Peridect-CC, or one keyboard, or one DVR output. To one receiving bus can be connected one up to several dome cameras.



Distributor/hub DD8-485 from Metel

Is possible to connect up to eight telemetry distributor/hub DD8-485 together – it has a special bus for connection. This way you will get up to 64 RS422 buses in one telemetry system. Each camera bus can be up to 1200 m long.

### 3.3.Distance in the system

In system design is necessary to consider the distances. Peridect-PVJ units are often placed near the fence, but Peridect-CC modules are better placed in the central, usually near the DVR. Maximum distance RS232 is 1200m, but or these installations are more suitable to use RS232/optical converters. Optical transmitter is located close to the Peridect-PVJ, optical receivers are placed close to Peridect-CC.

In practice, the two Peridect-PVJ units are placed side by side, one guarding fence on the right, second fence on the left. It is appropriate to choose a RS232/fibre converter that can convert two RS232 signals simultaneously.

Issued by: Ing. Václav Dobes  
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Vendor: SIEZA, s.r.o., Štúrova 1282, 142 00 Prague 4, [www.sieza.eu](http://www.sieza.eu)