[FAQ]

How do I connect an external alarm device to GV-IP devices?

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Applied to

GV-Video Server
GV-Compact DVR V3 Series
GV-IPCAM H.264 Series

Question

How do I connect an external alarm device to GV-IP device?

Answer

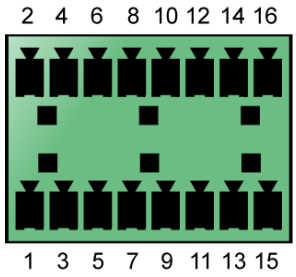
Find the I/O terminal block from the unit to install the I/O device. After installing the I/O device, you need to enable the I/O settings on the GV-IP device. As for how to install the I/O device to the GV-IP device, see the following sections.

Contents

GV-Video Server

VS04H and VS14

The 16-pin terminal block, located on the rear panel, provides interfaces for four digital inputs, four relay outputs, an RS-485 interface, a Wiegand interface, a GPS interface and auxiliary power. The terminal block can be used to develop applications for motion detection, event alerts via E-mail and FTP, center monitoring by Center V2 and VSM, PTZ control, Wiegand-interface card reader and a variety of other functions.



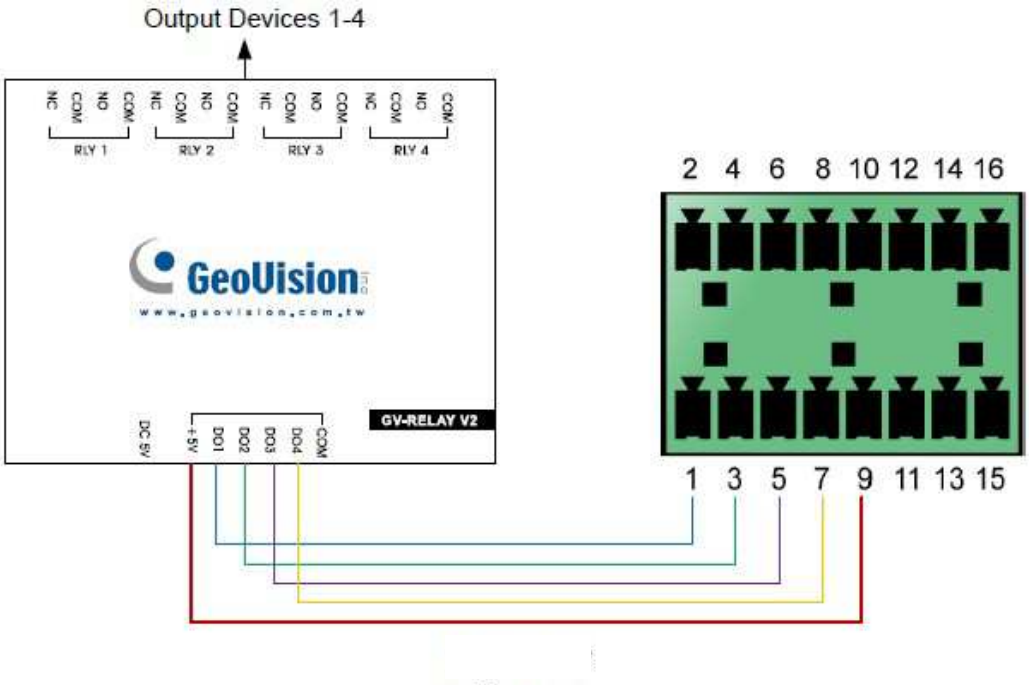
The table below lists the pin assignment for the terminal block.

Pin	Function	Pin	Function
1	Relay Output 1	9	DC 5V Out for GV-Relay Module, or GPS Module
2	Digital Input 1	10	Ground, or GPS Ground
3	Relay Output 2	11	RS 485+
4	Digital Input 2	12	Wiegand D0, or GPS RX
5	Relay Output 3	13	RS 485-
6	Digital Input 3	14	Wiegand D1, or GPS TX
7	Relay Output 4	15	Ground
8	Digital Input 4	16	DC 12V Out for Wiegand Card Reader
Note: To connect the GPS module, use the Pin 9 for power supply, Pin 10 for ground, Pin 12 for GPS RX and Pin 14 for GPS TX.			

Relay Output

The relay outputs on the terminal block only drives a maximum load of 5 volts. Working in conjunction with the GV-Relay V2 module, it is capable of driving heavier loads. Refer to the figure and table below to connect the GV-Relay V2 module to the GV-Video Server.

Note: The GV-Relay module is an optional product.

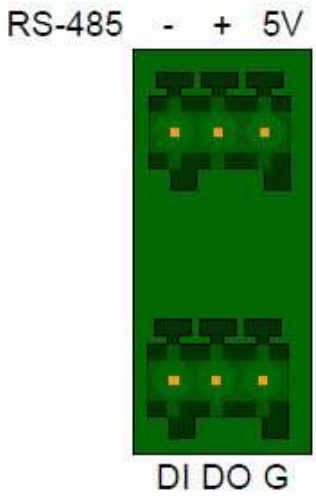


GV-Relay V2	I/O Terminal Block
DO 1	Pin 1
DO 2	Pin 3
DO 3	Pin 5
DO 4	Pin 7
+ 5V	Pin 9

Note that you don't need to use the DC 5V connector on the GV-Relay V2 module for power supply, since the power is supplied from the GV-Video Server.

VS11

The terminal block on the rear panel of GV-VS11 provides one digital input and output, an RS-485 interface and auxiliary power.

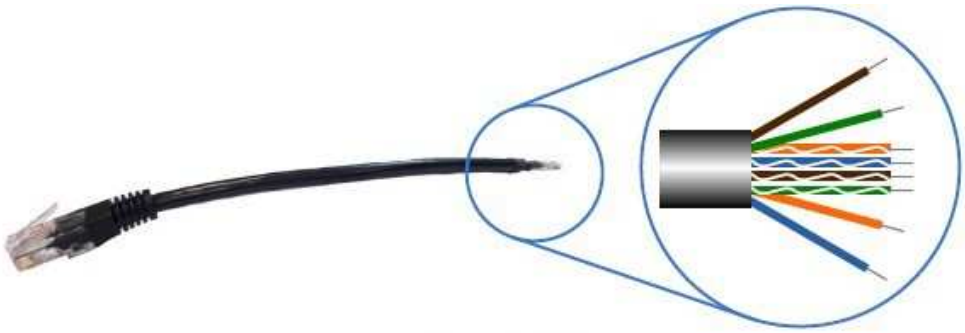


Pin	Function
RS-485-	RS-485-
RS-485+	RS-485+
5V	DC 5V Out
DI	Digital Input
DO	Digital Output
G	Ground

VS12

Owing to the model size, GV-VS12 provides the **I/O Cable with RJ-45 Connector** for the extensible connection to other I/O devices and PTZ cameras. A RJ-45 connector and a bundle of shielded wires are on the each end of the cable.

Strip the desired wires first, and connect the auxiliary devices with the right wires according to the following pin assignment in the section 9.2.1. Then insert the RJ-45 Connector to the I/O/PTZ Port on GV-VS12.



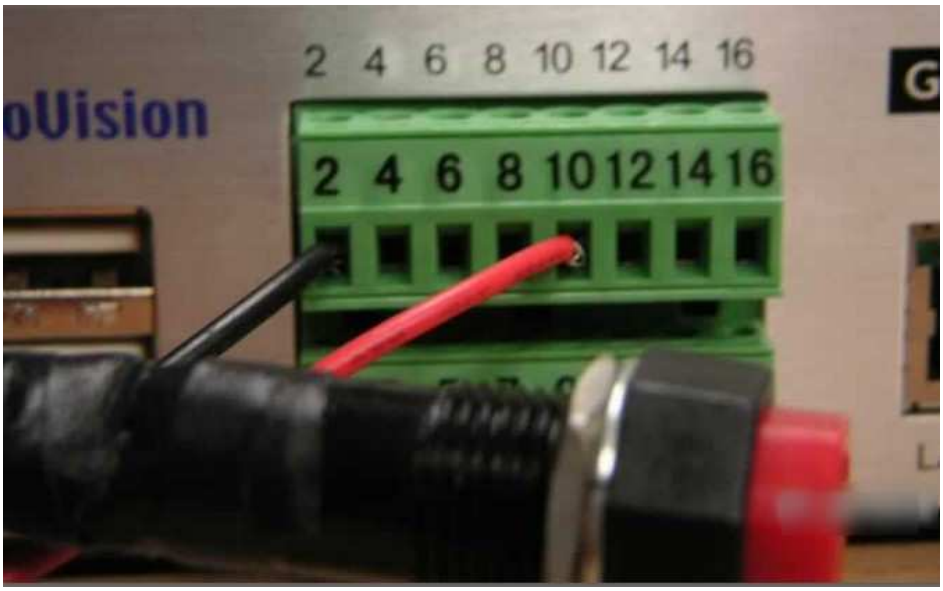
Pin Assignment

The table below lists the pin assignment for the shielded wires of the I/O Cable with RJ-45 Connector.

Pin	Wire	Function
1	Brown	Digital Out 1
2	White with Brown Stripe	Digital Out 2
3	White with Green Stripe	Ground
4	White with Blue Stripe	Digital In 1
5	Blue	Digital In 2
6	Green	Ground
7	Orange	RS-485 -
8	White with Orange Stripe	RS-485 +

GV-VS04H external device's input sample

To integrate a N/O button to trigger input one of the video server, connect the two wires of the button to Terminal block pin 2 (Digital Input 1) and pin 10 (Ground) as shown in the sample photo below.

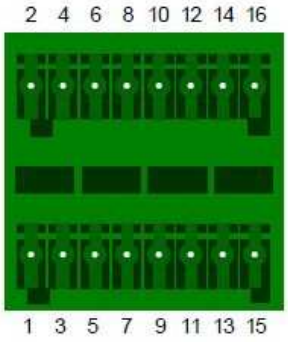


GV-Compact DVR V3

The I/O terminal block, located on the rear panel, can be used to develop applications for alarm input and output, motion detection, PTZ control, GPS tracking or a variety of other functions.

Pin Assignment

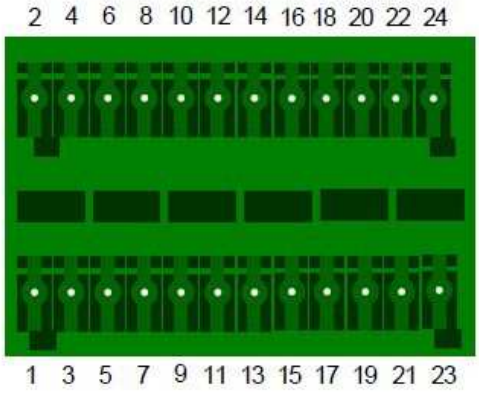
The Four-Channel Unit



Pin	Function	Pin	Function	
1	Relay Output 1	9	Relay COM	
2	Digital Input 1	10	Ground	
3	Relay Output 2	11	DC 12V Out for camera power supply	
4	Digital Input 2	12	(reserved)	
5	Relay Output 3	13	RS-485 + for PTZ control	
6	Digital Input 3	14	Standard	(reserved)
			Anti-Vibration ACC	12V_Standby
7	Relay Output 4	15	RS-485 – for PTZ control	
8	Digital Input 4	16	Standard	(reserved)
			Anti-Vibration ACC	ACC wire connection

Note: Currently the standard models (GV-LX4C3D1 / GV- LX4C3D2 / GV- LX4C3D2W / GV-LX8CD1 / GV-LX8CD2 / GV-LX8CD2W) do not support GPS receiver and GPS function.

The Eight-Channel Unit



Pin	Function	Pin	Function	
1	Digital Output 1	13	Digital Output 7	
2	Digital Input 1	14	Digital Input 7	
3	Digital Output 2	15	Digital Output 8	
4	Digital Input 2	16	Digital Input 8	
5	Digital Output 3	17	DC 12V Out for camera power supply	
6	Digital Input 3	18	Ground	
7	Digital Output 4	19	DC 12V Out for camera power supply	
8	Digital Input 4	20	Ground	
9	Digital Output 5	21	RS-485 + for PTZ control	
10	Digital Input 5	22	Standard	(Reserved)
			Anti-Vibration ACC	12V_Standby
11	Digital Output 6	23	RS-485 – for PTZ control	
12	Digital Input 6	24	Standard	(Reserved)
			Anti-Vibration ACC	ACC wire connection

Note: Currently the standard models (GV-LX4C3D1 / GV- LX4C3D2 / GV- LX4C3D2W / GV-LX8CD1 / GV-LX8CD2 / GV-LX8CD2W) do not support GPS receiver and GPS function.

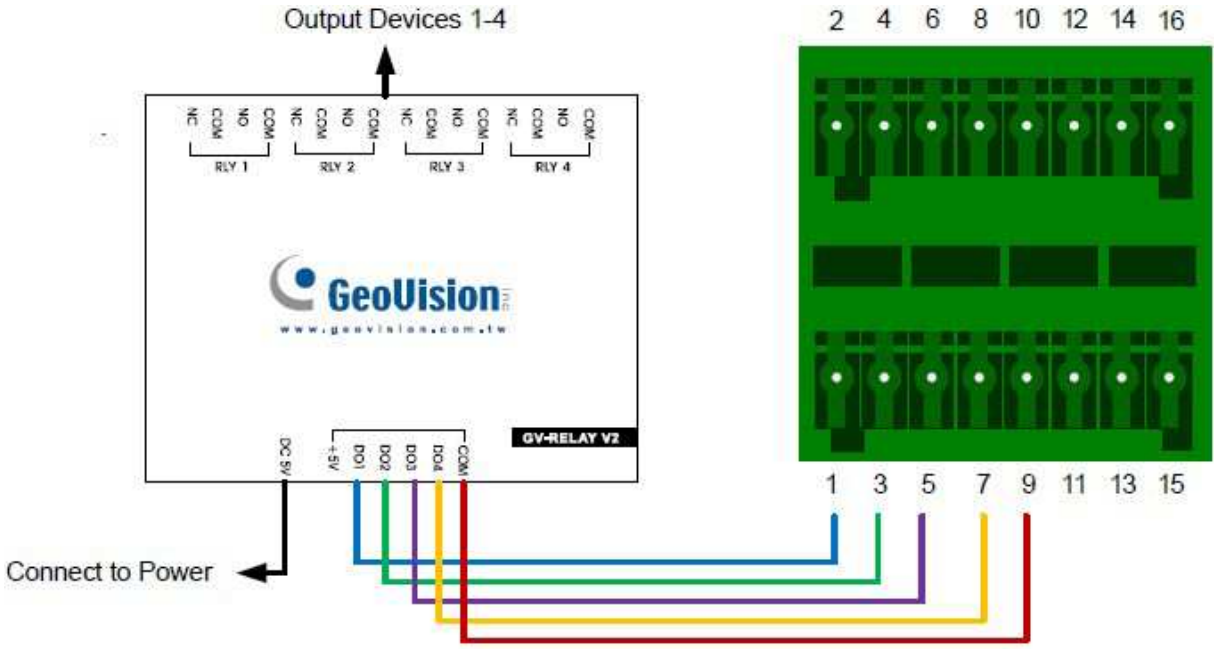
Output Devices

The Four-Channel Unit

The relay outputs on the terminal block can only drive a maximum load of 0.3A 125V AC or 1A 30V DC. Working in conjunction with the GV-Relay V2, which is an optional product, the GV-Compact DVR V3 can drive heavier loads.

GV-Compact DVR V3	Without GV-Relay V2	With GV-Relay V2
Maximum load of voltage	0.3A 125V AC, 1A 30V DC	10A 250V AC, 10A 125V AC, 5A 100V DC

To connect the GV-Relay V2 to the GV-Compact DVR V3, refer to the figure and table below.



GV-Relay V2	Terminal Block
DO 1	Pin 1
DO 2	Pin 3
DO 3	Pin 5
DO 4	Pin 7
COM	Pin 9

The Eight-Channel Unit

The digital outputs on the terminal block can only drive a maximum load of 0.15A DC. Working in conjunction with the GV-Relay V2, which is an optional product, the GV-Compact DVR V3 can drive heavier loads.

GV-Compact DVR V3	Without GV-Relay V2	With GV-Relay V2
Maximum load of voltage	0.15A DC	10A 250V AC, 10A 125V AC, 5A 100V DC

The eight-channel GV-Compact DVR V3 can connect to up to two GV-Relay V2 modules. To connect the GV-Relay V2 modules to the GV-Compact DVR V3, refer to the figure and table below.