

# GV-NET/IO Card V3.2

The GV-NET/IO Card is a RS-485 / RS-232 interface converter, and provides 4 inputs and 4 relay outputs as well. It supports both DC and AC output voltages.

## Key Features

- A USB port is provided for PC connection, and it is used with 30 DC output voltages.
- It can switch between two modes, NET/IO Card Mode and I/O Box Mode, which expand its capability.
- Up to 4 GV-NET/IO Cards can be chained together when it is on the I/O Box Mode.
- It can act as an independent device when it is on the I/O Box Mode.

## System Requirements

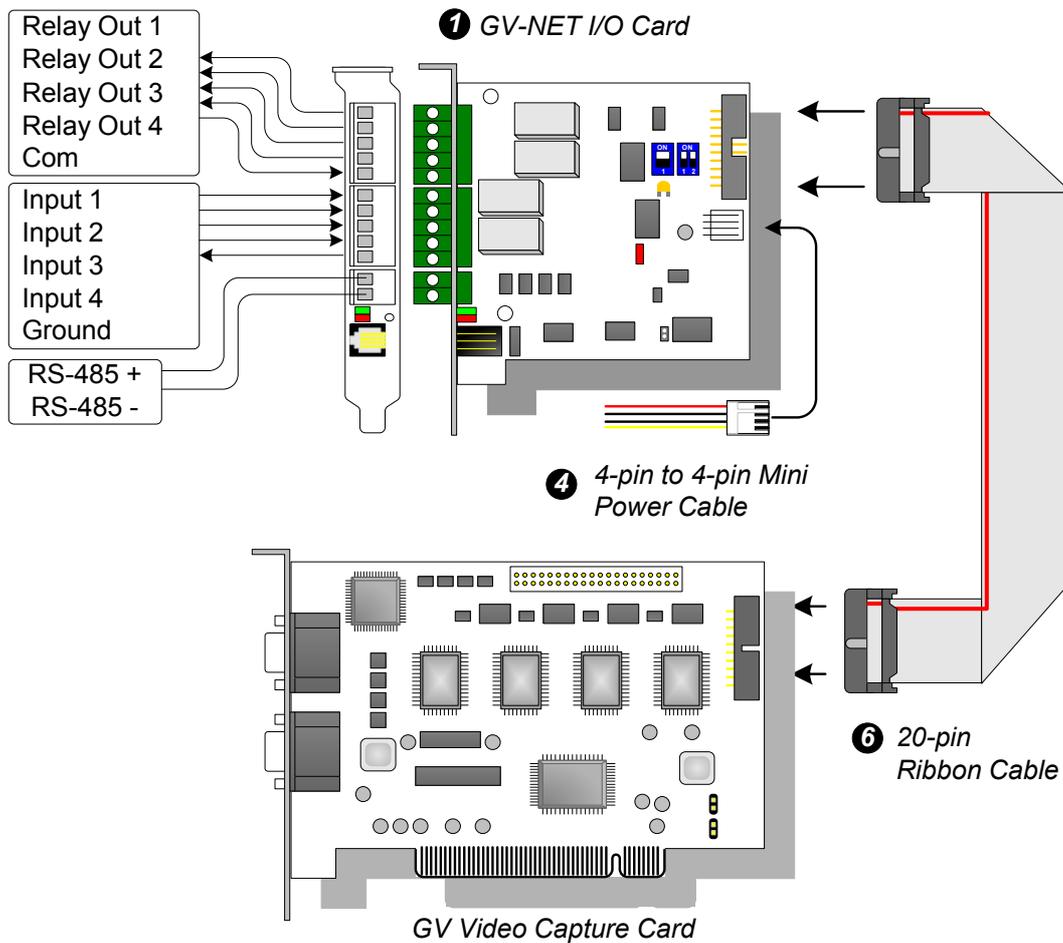
If the GV-NET/IO Card is listed as **Prolific USB-to-Serial Comm Port** under Windows Device Manager, GV-System version 8.2 or above is required. If the GV-NET/IO Card is listed as **XR21B1411 USB UART** under Windows Device Manager, GV-System version 8.5.7.0 or above is required.

To see how to check the device name under Windows Device Manager, refer to *Installing USB Driver* later in this Installation Guide.

## Packing List

1. GV-NET/IO Card x 1
2. 20-Pin Ribbon Cable with 4 Connectors x1
3. RJ-11 to DB9 Cable x 1
4. RJ-11 to USB Cable x 1
5. 3-Pin Internal USB Cable x 1
6. 4-Pin to 4-Pin Mini Power Cable x 1
7. Installation Guide x 1
8. Software DVD x 1

## Overview

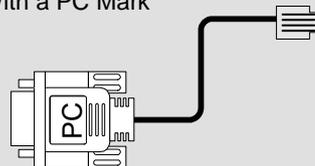


GV-NET/IO Card connections

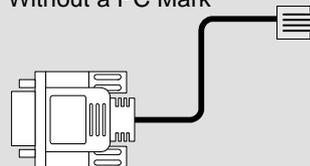
### Note:

1. The supplied RJ-11 to DB9 Cable of older versions is not compatible with the GV-NET/IO Card V3.1 or later.

**Version 3.1 or later**  
With a PC Mark

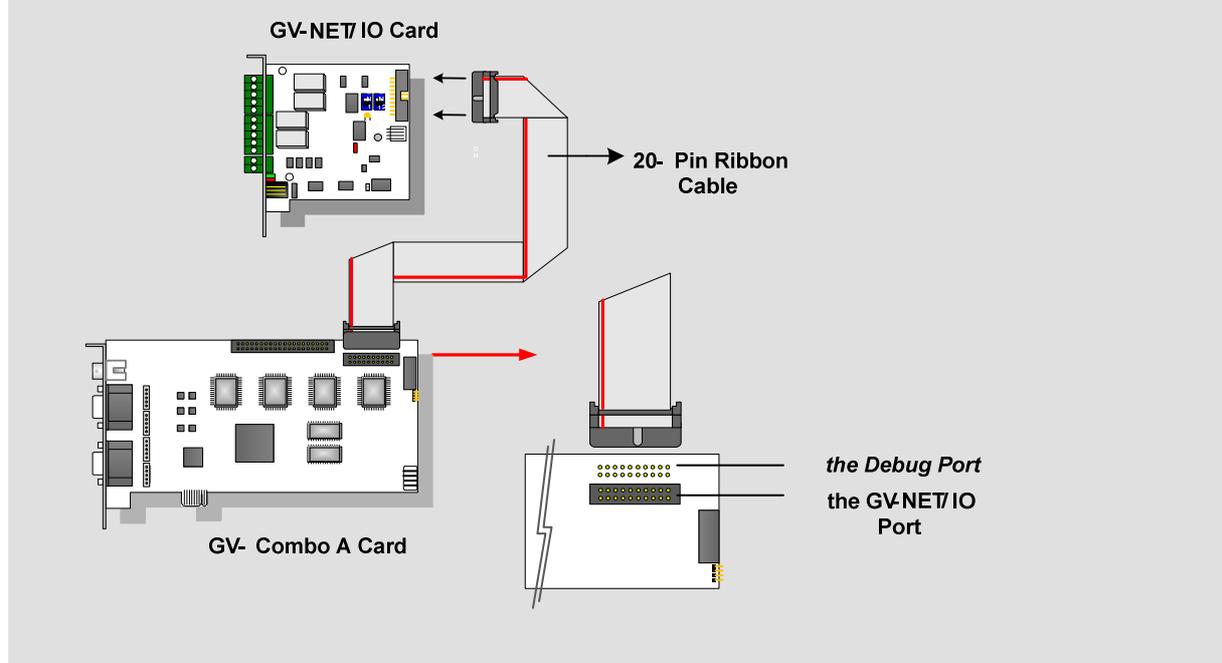


**Older Versions**  
Without a PC Mark



2. When the GV-NET/IO Card V3.1 or later is in the I/O Box mode, it is incompatible with the GV-IO 12-In Card of versions earlier than V3.
3. To prevent the noise interference in I/O operation, tightly screw the GV-NET/IO Card V3.1 or later to the PC case.

4. Ensure to connect the GV-NET/IO Card to the 20-pin GV-NET/IO port on the GV-Combo A Card as illustrated below. Wrong connection may damage the GV-NET/IO Card or the GV-Combo A Card, causing Video Lost or an error message of “can’t find keypro” to pop up.



## Connections with Two Video Capture Cards

If your system is equipped with two video capture cards, connect the GV-NET/IO Card to the video capture card of 1-16 channels.

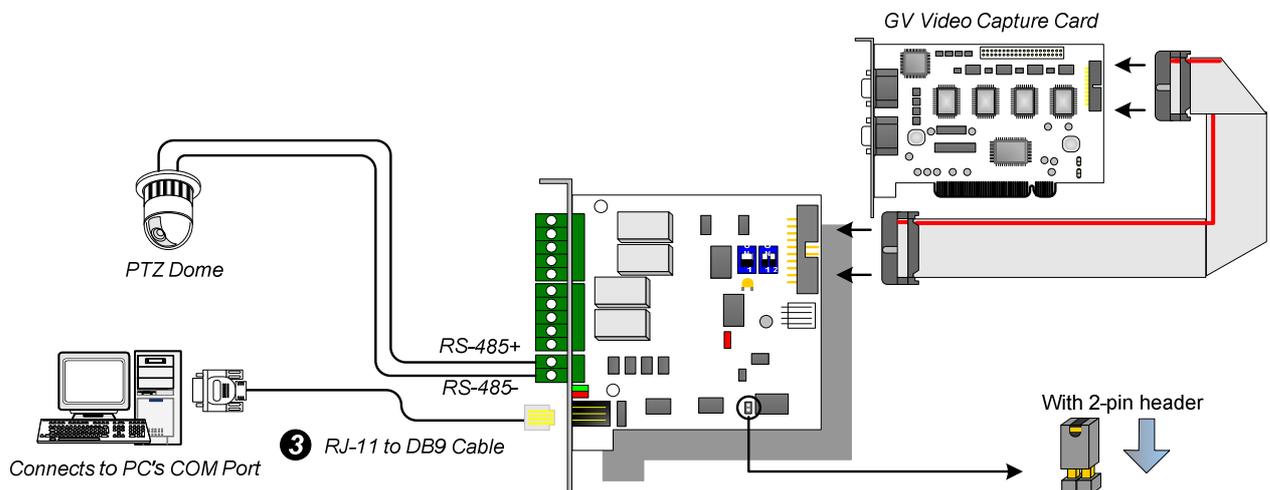
## Connections in NET/IO Card Mode

For the connections in the NET/IO Card Mode, please follow the instructions below:

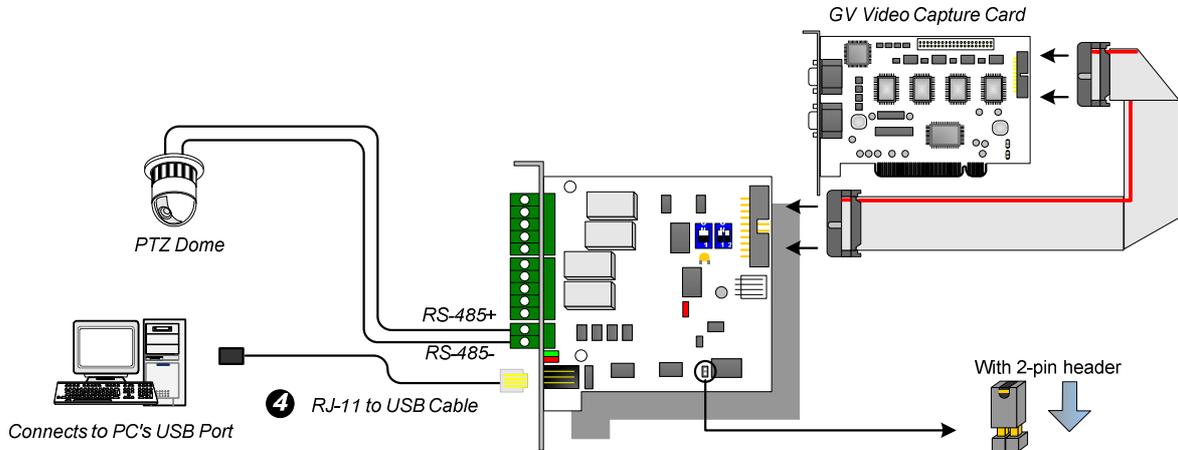
- It is required to connect the GV-NET/IO Card to GV-Video Capture Card with the 20-Pin Ribbon Cable.
- If you want to connect the GV-NET/IO Card to RS-485 devices, you have three ways of connections. See below.

### Three Ways of Connections of GV-NET/IO Card and RS-485 Devices:

1. You can connect a RJ-11 to DB9 Cable to the PC's COM Port when a RS-485 device is connected. **(Allowed for AC/DC Output Voltage)**

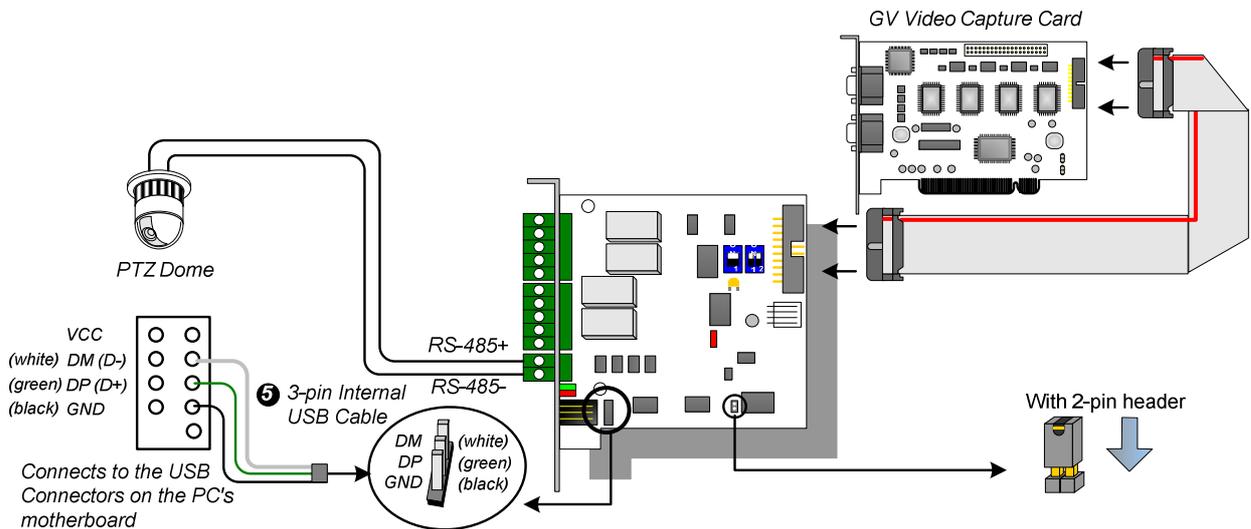


- You can connect a RJ-11 to USB Cable to the PC's USB Port when a RS-485 device is connected. **(Allowed for AC/DC Output Voltage)**



**Note:** It is required to install the USB driver. For details, see *Installing USB Driver* later in the Installation Guide.

- You can connect a 3-Pin Internal USB Cable to the USB Connectors on the PC's Motherboard when a RS-485 device is connected. **(Allowed for AC/DC Output Voltage)**



**Note:** It is required to install the USB driver. For details, see *Installing USB Drive* later in the Installation Guide.

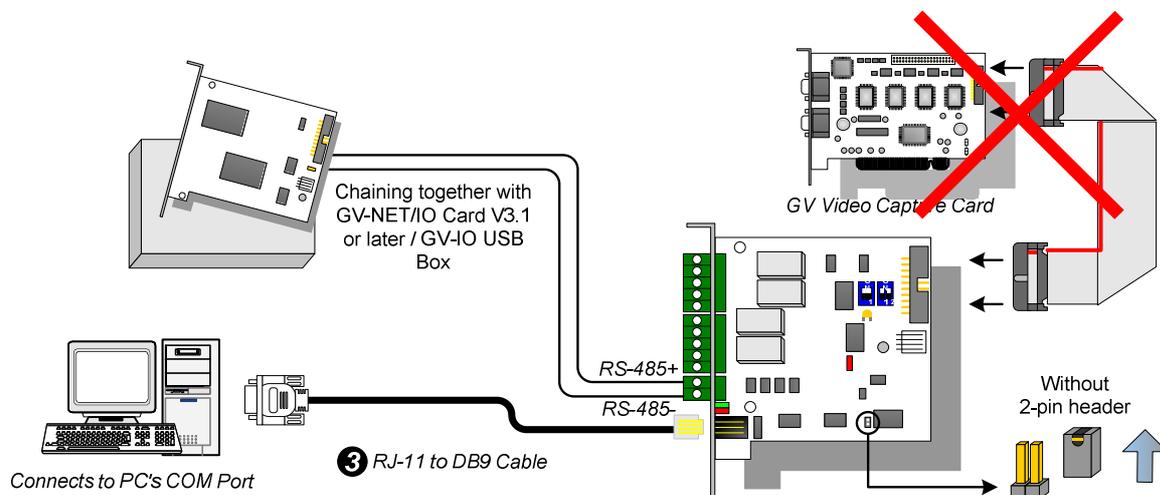
## Connections In I/O Box Mode

For the connections in the I/O Box Mode, please follow the instructions below:

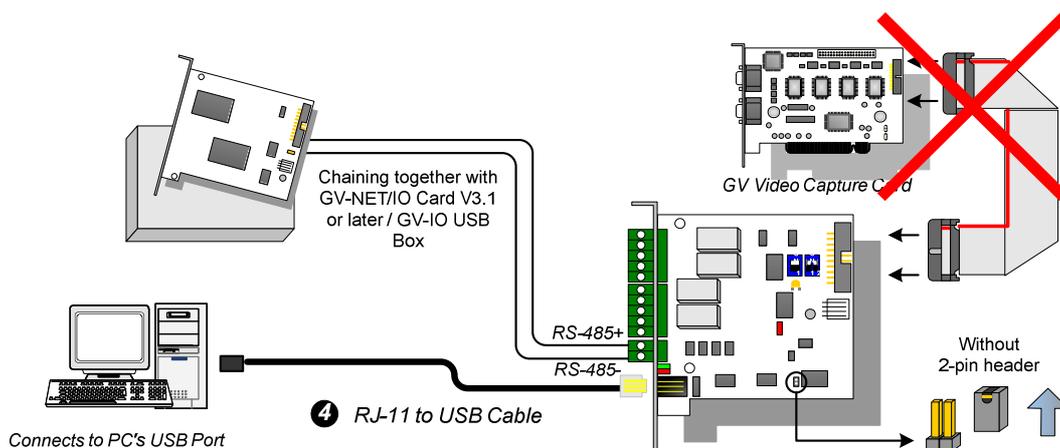
- It is not necessary to connect the GV-NET/IO Card to GV-Video Capture Card.
- Connect the GV-NET/IO Card to the PC by one of the following three ways.

### Three Ways of Connections of GV-NET/IO Card and PC:

1. You can connect a RJ-11 to DB9 Cable to the PC's COM Port. **(Allowed for AC/DC Output Voltage)**

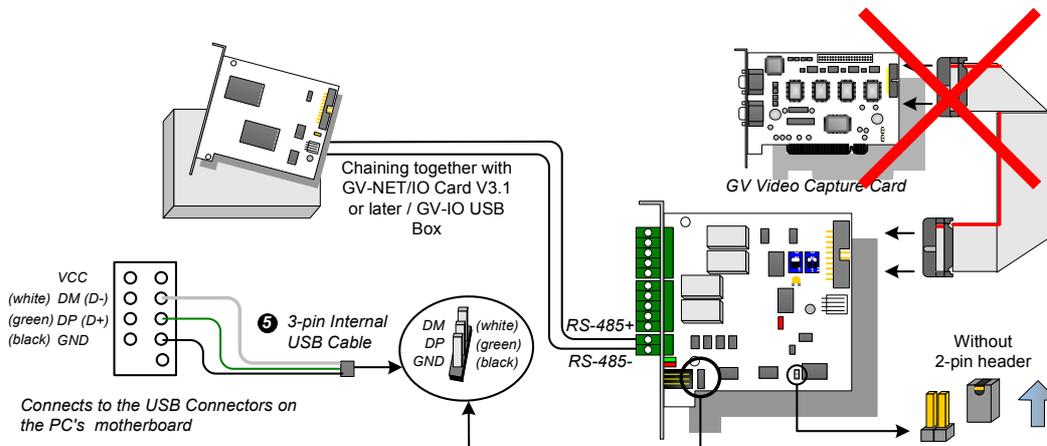


2. You can connect a RJ-11 to USB Cable to the PC's USB Port. **(Allowed for DC Output Voltage only)**



**Note:** It is required to install the USB driver. For details, see *Installing USB Driver* later in the Installation Guide.

- You can connect a 3-Pin Internal USB Cable to the USB Connectors on the PC's Motherboard. **(Allowed for DC Output Voltage only)**

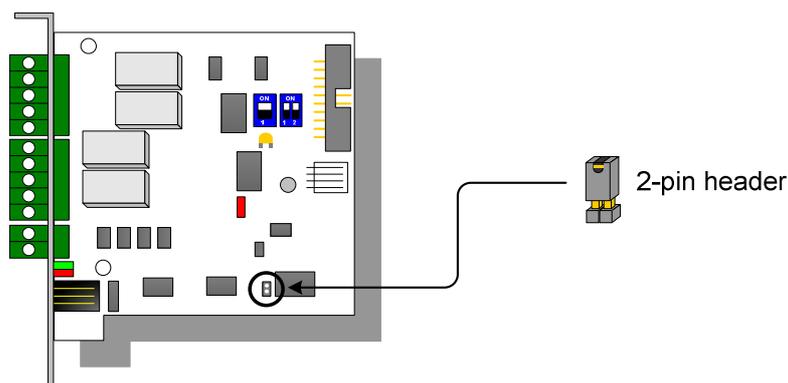


**Note:** It is required to install the USB driver. For details, see *Installing USB Driver* later in the Installation Guide.

## Switching Modes

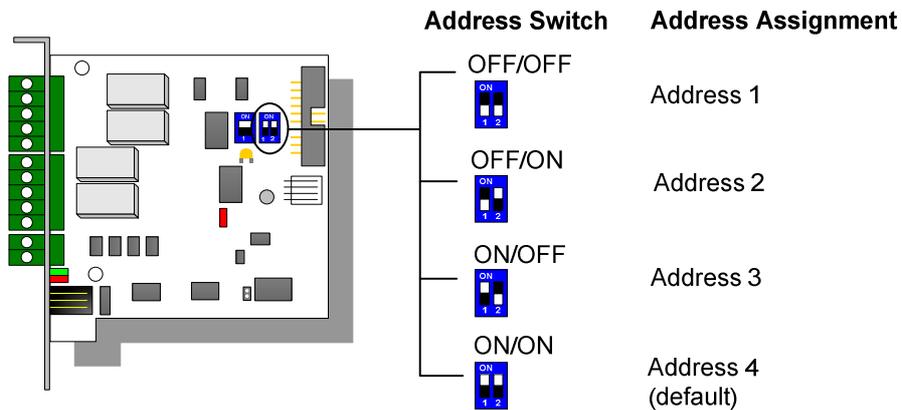
The GV-NET/IO Card provides two modes for users to expand its capability: I/O Box Mode and NET/IO Card Mode. With a mode-switch jumper to insert on the 2-pin header, you can switch between modes.

- NET/IO Card Mode (default):** With the switch jumper inserted, this default mode acts as a GV-NET/IO Card. It is required to connect the GV-NET/IO Card to the GV-Video Capture Card for usage.
- I/O Box Mode:** Without the switch jumper inserted, the GV-NET/IO Card can work as an independent device. It is NOT necessary to connect to the GV-Video Capture Card for usage.



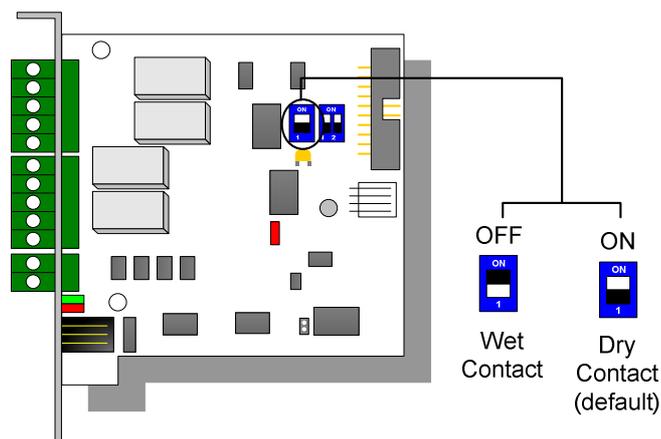
## Extended Connections

Via the RS-485 connectors, up to 4 GV-NET/IO Cards can be chained together when the GV-NET/IO Card is on the I/O Box mode. For extended connections, the address assignment is shown below.



**Note:** When the GV-NET/IO Card is set to the I/O Box Mode, it can have extended connections with GV-I/O Boxes.

## DIP Switch



## Installing USB Driver

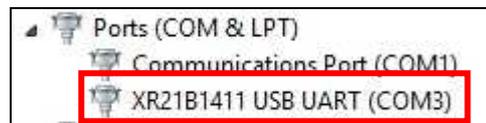
To use the USB function, it is required to install the driver on the PC. Follow these steps to install the driver:

1. Insert the software DVD. It will run automatically and pop up a window.
2. Click **Install GeoVision USB Devices Driver**. This dialog box appears.



3. Click **Install** to install the drivers. When the installation is complete, this message will appear: *Install Successfully*.
4. Click **Exit** to close the dialog box and restart the PC.

To verify the drivers are installed correctly, go to Windows **Device Manager** after restarting the PC. Expanding the **Ports** field, you should see **Prolific USB-to-Serial Comm Port** or **XR21B1411 USB UART** depending on the version of the driver. The COM number in the parenthesis indicates the COM port currently in use.



**Note:** If you unplug the GV-NET/IO Card from the PC and connect another GV-Net/IO Card to the same USB port, the COM port may still be changed. Access the Windows **Device Manager** again to look up the new COM port number.

## Specifications

<b>OS</b>	<b>32-bit</b>	Windows XP / Vista / 7 / 8 / Server 2008		
	<b>64-bit</b>	Windows 7 / 8 / Server 2008 / Server 2012		
<b>Input</b>	<b>Input</b>	4		
	<b>Input Signal</b>	Dry Contact, Wet Contact 9~30V AC / DC		
<b>Output</b>	<b>Relay Output</b>	4		
	<b>Relay Status</b>	Normal Open		
	<b>Relay Capacitance</b>	USB Connection	30V DC, 3A	
		RS-232 Connection	125 / 250V AC, 3A 30V DC, 3A	
<b>Interface</b>	RJ-11 to DB9			
	RJ-11 to USB			
	3-Pin Internal USB to Internal USB			
<b>Mode Switch</b>	<b>I/O Box Mode</b>	Without GV-Video Capture Card		
	<b>NET/IO Card Mode</b>	With GV-Video Capture Card		
<b>Address</b>		1~4		
<b>Communication</b>		RS-485, USB, RS-232		
<b>Operating Temperature</b>		0° C ~50° C / 32°F ~122 °F		
<b>Humidity</b>		5% ~ 95% (Non-Condensing)		
<b>Compatible Model</b>		All GV-Video Capture Card Models		
<b>Dimensions (W x H)</b>		99 x 90 mm / 3.90 x 3.54 in		

## Ordering Information

55-IOCRD-310