GV-I/O USB Box

The GV-I/O USB Box provides 16 inputs and 16 relay outputs. It supports both DC and AC output voltages, and provides a USB port as well.

Key Features

❶ It is a combination of both GV-I/O Box and GV-Relay Box.

❷ 16 inputs and 16 outputs are provided. See *Important Notice* for details.

❸ A USB port is provided for PC connection, and it is used for 30 DC output voltage.

❹ Up to 9 GV-I/O USB Boxes can be chained together. See *Important Notice* for details.

Packing List

❶ *GV-I/O USB Box x 1*

❷ *Terminal Resistor x 1*

❸ *Power Adaptor DC 12V x 1*

❹ *Installation Guide x 1*

❺ *USB Cable (Type A to Type B) x 1*

Specifications

Input	Input	16
	Input Signal	Dry Contact
		Wet Contact, 9-30V AC/DC
Output	Relay Output	16
	Relay Status	Normal Open
	Relay Capacitance	USB Connection	30V DC, 3A
		RS-485 Connection	125 / 250V AC, 3A 30V DC, 3A
DC IN	DC 12V, 1A	
Address	1-15	
Environmental Conditions	0~50 degree C , 5%~95% (non-condensing)	
Dimensions	180 (W) x 27 (H) x 183 (D) mm	

Off: Voltage Input
On: Dry Contact Input
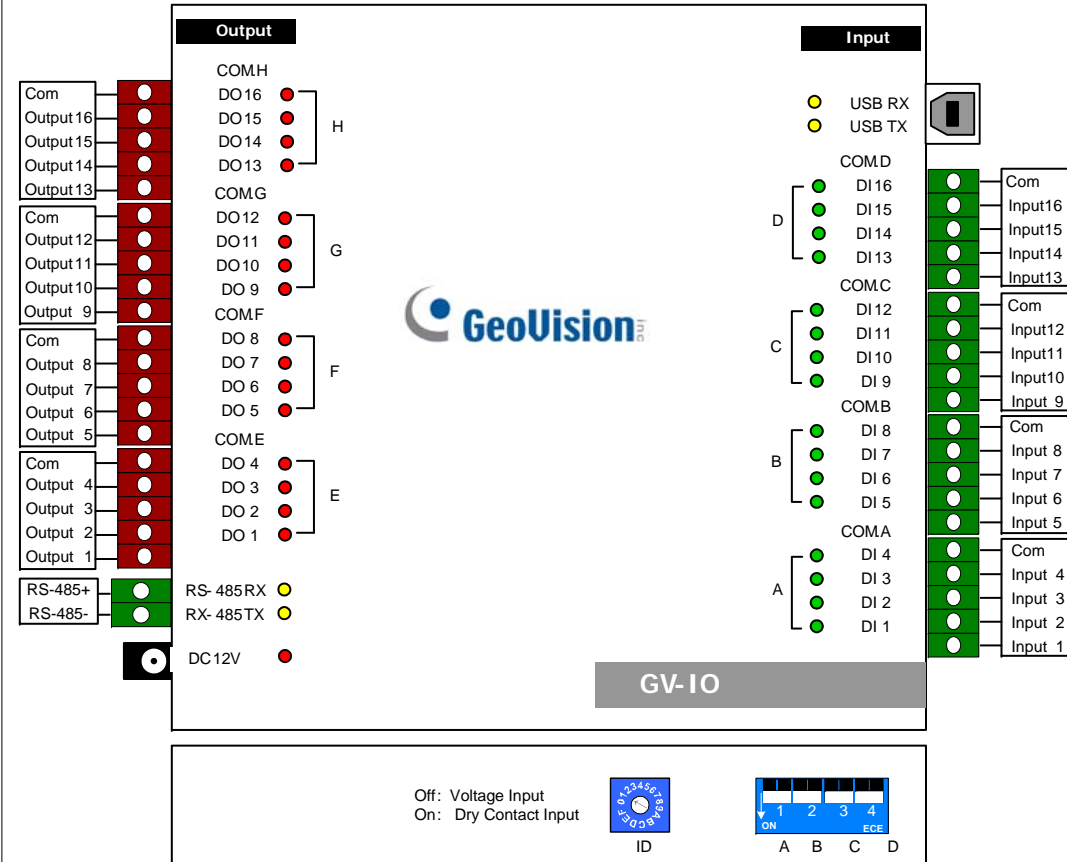
Important Notice:

1. Running with the GV-System earlier than V8.2, the GV-I/O USB Box only supports 8 inputs and 16 outputs. Up to 9 GV-I/O USB Boxes can be chained together.

2. Running with the GV-System V8.2 and later, the GV-I/O USB Box can support 16 inputs and 16 outputs. Up to 9 GV-I/O USB Boxes can be chained together.

Connections to PC

There are two ways to connect the GV-I/O USB Box to PC:

(1) Use the USB cable to connect to the PC, and

(2) Through the option of GV-Hub, GV-COM, GV-NET Card or GV-NET/IO Card, use the RS-485 connectors to connect to the PC.

1. Connecting to PC with the USB cable **(Allowed for DC Output Voltage only)**

PC   USB cable   GV-I/O USB Box
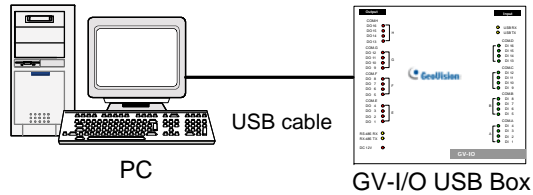
NOTE: To use this function, it is required to install the USB driver. For the driver installation, see *USB Driver Installation* later in this document.
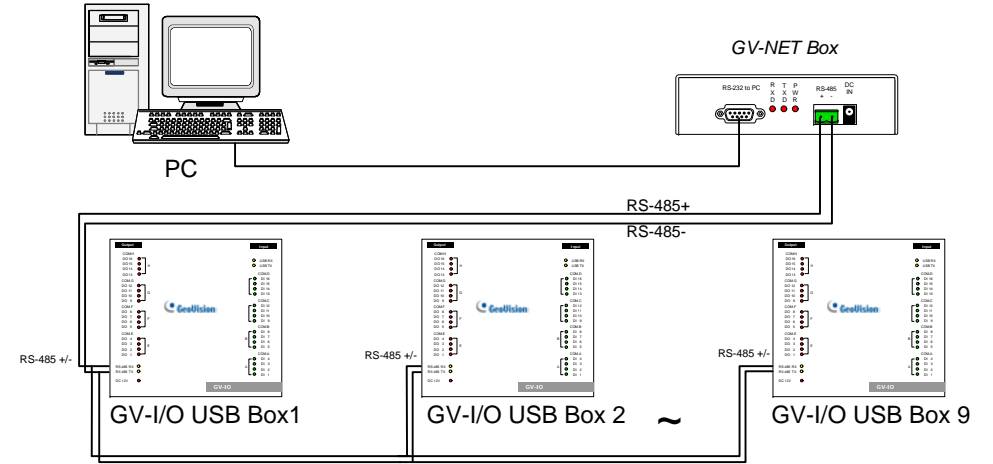
2. Connecting to PC with the RS-485 connectors **(Allowed for AC/DC Output Voltage)**

PC   GV-Hub / GV-COM GV-NET Card / GV-NET/IO Card   RS-485+ RS-485-   GV-I/O USB Box
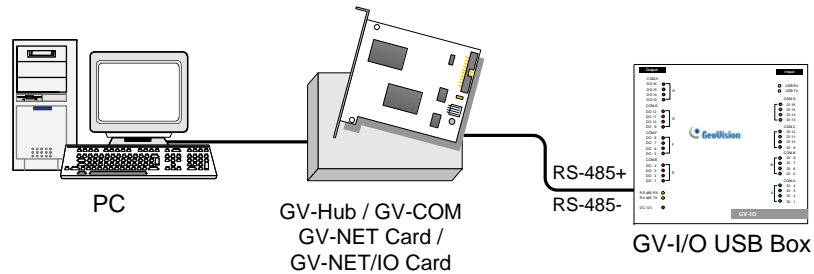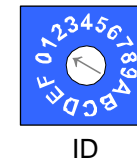
Assigning Addresses to GV-I/O USB Boxes

Up to 9 GV-I/O USB Boxes can be chained together to expand the I/O capacity. Use the ID Switch (1~9) to assign addresses 1~ 9 to the connected GV-I/O USB Boxes.

Up to 9 GV-I/O USB Boxes chain together.

PC   GV-NET Box   RS-485+ RS-485-

RS-485 +/-   GV-I/O USB Box1   RS-485 +/-   GV-I/O USB Box 2   ~   RS-485 +/-   GV-I/O USB Box 9
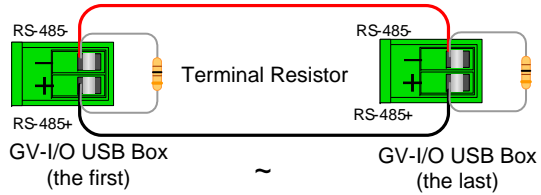
ID Switch

ID

NOTE: 1. **Address 0** is NOT functional.

2. When the GV-I/O USB Box is connected with the GV-NET/IO Card:
   Assign Addresses 1 ~ 4 to the connected GV-NET/IO Cards.
   Assign Addresses 5 ~ 9 to the connected GV-I/O USB Boxes.

3. If you want to change the assigned address of the connected GV-I/O USB Box, set the switch to the new address, and then re-plug the power adaptor.

Long-Distance Connection

The supplied Terminal Resistor must be used when the connection distance is greater than 200 meters.

When one GV-I/O USB Box is connected to another GV-I/O USB Box or more, only insert the Terminal Resistors in the RS-485 connectors of the first and the last connected GV-I/O USB Boxes.

RS-485-

RS-485-

Terminal Resistor

RS-485+

RS-485+

GV-I/O USB Box
(the first)

~

GV-I/O USB Box
(the last)

When one GV-I/O USB Box is connected to one GV-NET/IO Card, only insert the Terminal Resistor in the GV-I/O USB Box.

RS-485-

RS-485-

Terminal Resistor

RS-485+

RS-485+

GV-I/O USB Box

GV-NET/IO Card
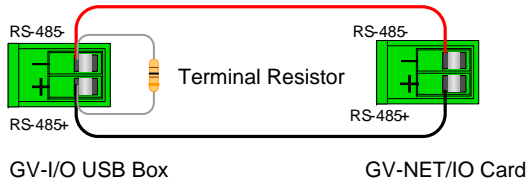
DIP Switch

The GV-I/O USB Box allows the use of mixing dry and wet contact devices together. The 16 inputs divided as four-in-one groups (A, B, C and D) are related to the 4 switches on the box for dry and wet contact.

To change the inputs to different kind of contact, push the switch upward (wet contact) or downward (dry contact).

1   2   3   4
ON   ECE
A   B   C   D
Wet Contact
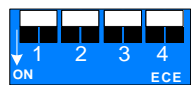
1   2   3   4
ON   ECE
A   B   C   D
Dry Contact (Default)

USB Driver Installation

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 CD. It will run automatically and pop up a window.

(2) Select **Install or Remove GeoVision GV-Series Driver**, and then click **Install GeoVision USB Devices Driver**. This dialog box appears.

Install USB Driver - USB Dongle ...
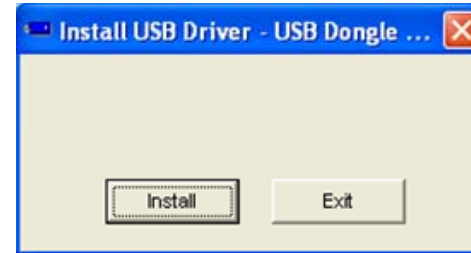
Install   Exit

(3) Click **Install** to install the drivers. When the installation is complete, this message will appear: *Install done!*

(4) Click **Exit** to close the dialog box.

(5) To verify the drivers are installed correctly, go to Device Manager. Expanding the Ports field, you should see one entry for Prolific USB-to-Serial Bridge.

Network adapters
Ports (COM & LPT)
    Communications Port (COM1)
    ECP Printer Port (LPT1)
    Prolific USB-to-Serial Bridge (COM3)
Processors