

GV-Card Reader

User's Manual



Before attempting to connect or operate this product, please read these instructions carefully and save this manual for future use.



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October 2021

Scan the following QR codes for product warranty and technical support policy:



[Warranty]



[Technical Support Policy]

Notice

Notice for GV-R1352 V2B and GV-R1352 V2C: This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Notice for GV-RKD1352

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

Preface

Welcome to the *GV-Card Reader User's Manual*.

This Manual applies to the following GV-Card Readers:

Reader Models
GV-Reader1251 and 1352 V2
GV-SR1251
GV-RK1352 / R1352
GV-DFR1352 (Rev. B)
GV-RKD1352

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Chapter 1 GV-Reader1251 / 1352 V2 and GV-SR1251

GV-Reader1251 / 1352 V2 / SR1251 includes transmit-receive antenna and electronics. It has both Wiegand and RS-485 outputs that can be connected to any standard access control panel. The LED indicator is controllable by the host system and changes from red to green to indicate access granted. GV-Reader1251 / 1352 V2 / SR1251 also has a host-controllable buzzer.

1.1 Packing List

If any of the items are missing or damaged, contact your dealer to arrange a replacement.

For GV-Reader 121 / 1352 V2

1. GV-Reader1251 / 1352 V2
2. Bag of screws
3. GV-Reader Software CD
4. Warranty Card

For GV-SR1251

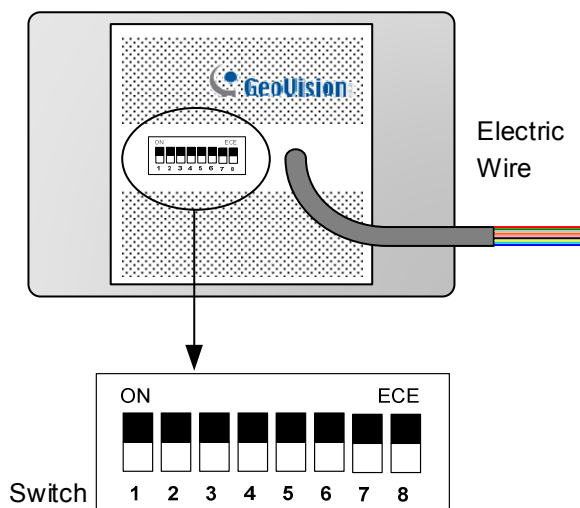
1. GV-SR1251
2. Screw x 6
3. Plastic Screw Anchor x 4
4. Plastic Case
5. Warranty Card

1.2 Installation

1.2.1 Electric Wire

Wire Color	Function
Red	DC 7.5 ~ 12 V
Black	GND
Green	Wiegand Data 0
White	Wiegand Data 1
Blue	RS-485 +
Light Blue	RS-485 -
Yellow	Beeper
Orange	Green LED
Light Red	Red LED

1.2.2 Switch Setting of GV-Reader1251 / 1352 V2



Default settings are all ON.

- SW 1 Beeper Control:** The default mode for the Beeper Control is the internal control. When the setting is "On", the Reader is sounded after a card is read. When the setting is "Off", the Beeper is controlled externally. You can use the external beeper control line to activate the beeper.

- **SW2-SW3 Green/Red LED Control:** The default mode for the Green/Red LED Control is the internal control. The LED is normally red. When a card is read, the LED flashes green. When the setting is “Off”, the Green/Red LED is controlled externally. The external control lines can then be used to operate the LEDs.
- **SW4 Master/Slave:** The switch is used to select the Reader’s communication interface. When the setting is “On”, the Reader is controlled by Wiegand signal. When the setting is “Off”, the Reader is for RS-485 signal.
- **SW5-SW7 ID Setting:** Switch 5 to switch 7 is used to set the Reader’s ID for wiring in a daisy chain.

ID	0	1	2	3	4	5	6	7
SW5	OFF	OFF	OFF	OFF	ON	ON	ON	ON
SW6	OFF	OFF	ON	ON	OFF	OFF	ON	ON
SW7	OFF	ON	OFF	ON	OFF	ON	OFF	ON

- **SW8 RS-485 Terminal Resistor:** When the setting is “On,” a 120-ohm resistor is connected between RS-485+ and RS-485-. This setting is used in the last device when multiple RS-485 devices are connected together.

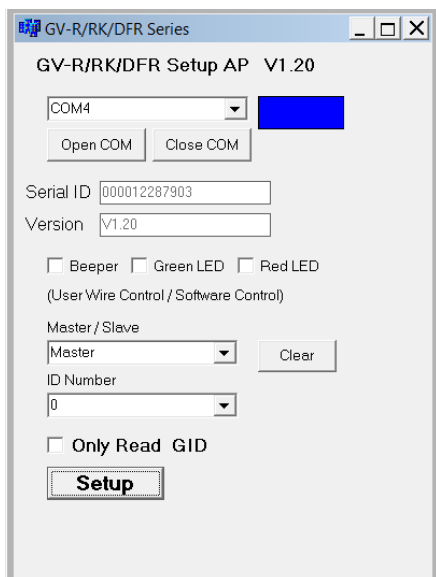
Note: After changing the dip switch settings, the unit must be reset by powering down then up again before the new switch setting will take effect.

1.2.3 Defining the ID Number of GV-SR1251 by Using GV-Reader

Config Utility

Through a single RS-485 cable, you can connect up to 8 GV-Reader1251 / 1352 V2 / SR1251 to a GV-AS Controller. To form a daisy chain connection, follow the steps below to define each reader's ID number by using GV-Config Utility.

1. Install and download GV-Reader Config Utility. For details, see *2.4 Installing GV-R/RK/DFR Config AP*.
2. Run **GV-R/RK/DFR Config AP**.



3. Select the COM port that is connected to the reader and click **Open COM**. The red square next to the COM port box should change to blue to indicate the COM port is correct.
4. Select an **ID number** for the reader. The ID number ranges from 0 to 7.
5. Click **Setup**. The serial number and firmware version of the reader will be automatically detected. The settings are sent to the reader.

Note:

1. To define the ID number of GV-Reader1251 / 1352 V2, use the switches at the back of the reader.
 2. GV-SR1251 only reads UID. Therefore, the **Only Read GID** option in the GV-R/RK/DFR Series dialog box is not functional for GV-SR1251.
-

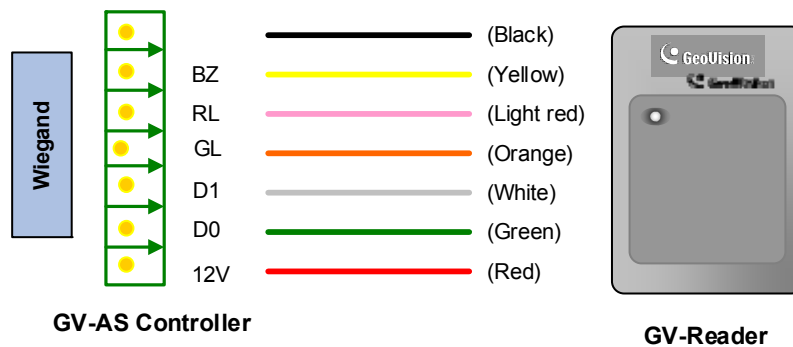
1.3 Connecting the Reader to GV-AS Controller

The GV-Reader1251 / 1352 V2 / SR1251 is compatible with any standard access controllers. The following diagrams illustrate how to connect the GV-Reader1251 / 1352 V2 / SR1251 to GV-AS Controller through Wiegand interface or RS-485 interface, and how to connect the GV-Reader1251 / 1352 V2 / SR1251 to third-party access controllers and GV-DVR/NVR.

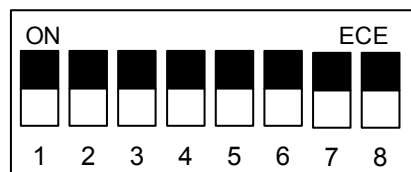
For GV-Reader1251 / 1352 V2, after you wire the connection between the reader and the access controller, ensure the related switch setting on the GV-Reader1251 / 1352 V2 is configured correctly.

Note: Each reader consumes 60 mA of power. The total power consumption of the output devices and readers connected to GV-AS Controller must be under **2.5A** (for GV-CS1320), **3A** (for GV-AS1620, GV-AS210 / 2110 / 2120), **3.5A** (for GV-AS410 / 4110) or **5A** (for GV-AS810 / 8110). Connect an external power supply if the power supplied from GV-AS Controller is insufficient.

1.3.1 Connecting GV-AS Controller through Wiegand Interface

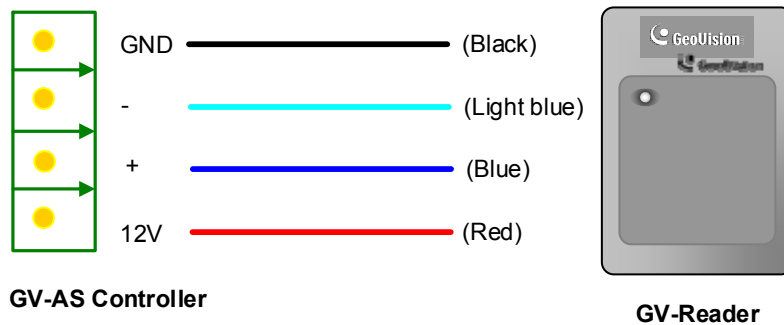


- Switch Setting for Wiegand Connection (GV-Reader1251 / 1352 V2 only)

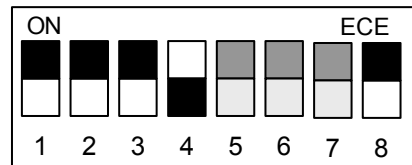


SW4 must be turned ON.

1.3.2 Connecting to GV-AS Controller through RS-485 Interface



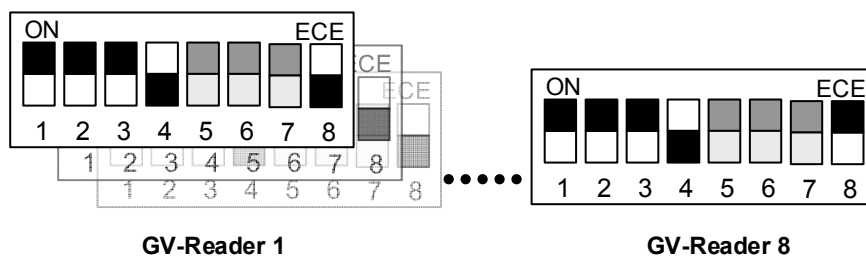
- Switch Setting for RS-485 Connection (GV-Reader1251 / 1352 V2 only)



SW4 must be turned OFF.

- Switch Setting for Connecting Multiple GV-Readers (RS-485) (GV-Reader1251 / 1352 V2 only)

Multiple readers can be connected to GV-AS Controller through a single RS-485 cable. When you connect more than one GV-Reader to GV-AS Controller, on the last connected GV-Reader turn SW8 to ON. Make sure to define the ID of each reader with SW5 to SW7 first.



- ID Number Setting for Connecting Multiple GV-Readers (RS-485) (GV-SR1251 only)
- Multiple readers can be connected to GV-AS Controller through a single RS-485 cable. To define the ID of each GV-SR1251, see *1.2.3 Defining the ID Number of GV-SR1251 by Using GV-Reader Config Utility*.

Defining Readers on GV-AS Controller Web Interface

After configuring the switch settings of GV-Reader1251 / 1352 V2 or defining the ID number of GV-SR1251 with GV-Reader Config Utility, you need to specify which door each reader controls on the Web interface of GV-AS Controller.

1. Type the GV-AS Controller’s IP address in the Web browser.
2. Type the username and password to login.
3. In the left menu, click **Extended Reader**. This page appears.

AS210 Extended Reader Configuration

GV-Reader/CR420/GF1921/GF1922 Function

RS485	Serial Number	Function	Connection Status
<input checked="" type="checkbox"/>	ID 0 <input type="text"/>	Door/Gate 1 Entry	
<input type="checkbox"/>	ID 1 <input type="text"/>	No Function	
<input type="checkbox"/>	ID 2 <input type="text"/>	No Function	
<input type="checkbox"/>	ID 3 <input type="text"/>	No Function	
<input type="checkbox"/>	ID 4 <input type="text"/>	No Function	
<input type="checkbox"/>	ID 5 <input type="text"/>	No Function	
<input type="checkbox"/>	ID 6 <input type="text"/>	No Function	
<input type="checkbox"/>	ID 7 <input type="text"/>	No Function	

GeoFinger Server IP Address: . . . : (from 1025 to 65535)

GF1901/GF1902/GF1911/GF1912 Function

RS485	Serial Number	Function	Connection Status
<input type="checkbox"/>	<input type="text"/>	No Function	
<input type="checkbox"/>	<input type="text"/>	No Function	

4. If the readers are connected using RS-485, select the **RS485** checkbox in front of the ID number. The ID number must match the ID you configured using SW5 – SW7 (for GV-Reader1251 / 1352 V2) or GV-R/RK/DFR Config AP (for GV-SR1251).
5. Leave the serial number field blank.
6. Select a door/gate for the reader under **Function**. Click **Submit**.

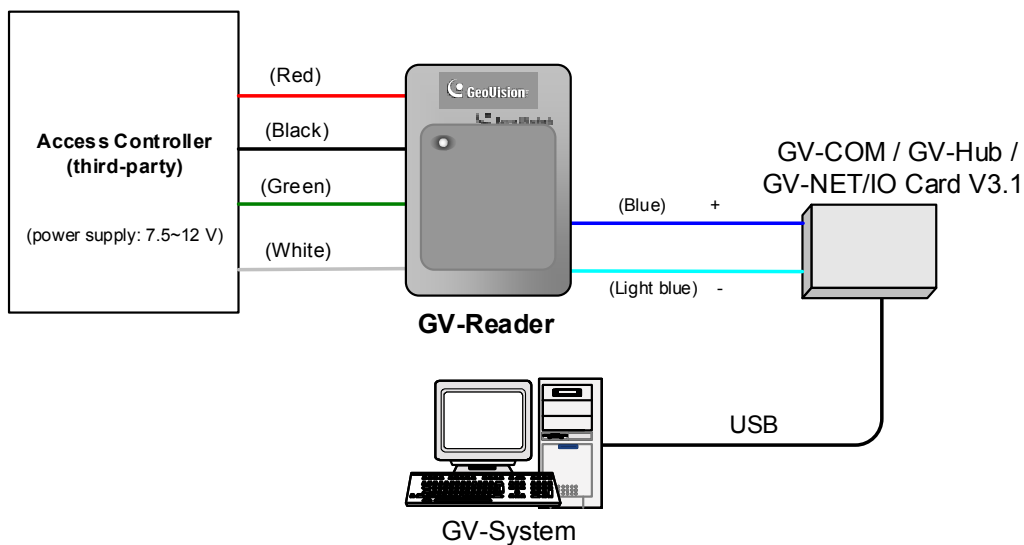
1.3.3 Connecting to GV-DVR/NVR and Third-Party Access

Controllers

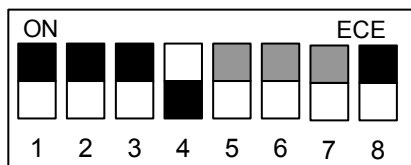
GV-Reader1251 / 1352 V2 / SR1251 is also compatible with third-party access controllers. With its compatibility, you can also add a GV-DVR/NVR to this connection to empower your management.

After connecting the GV-Reader1251 / 1352 V2 / SR1251 to the access controller through the Wiegand interface, connect the reader to GV-DVR/NVR via GV-COM, GV-Hub or GV-NET/IO Card V3.1.

Note: The GV-Reader1251 / 1352 V2 / SR1251 is not compatible with the GV-NET Card and the GV-NET/IO Card of versions earlier than V3.



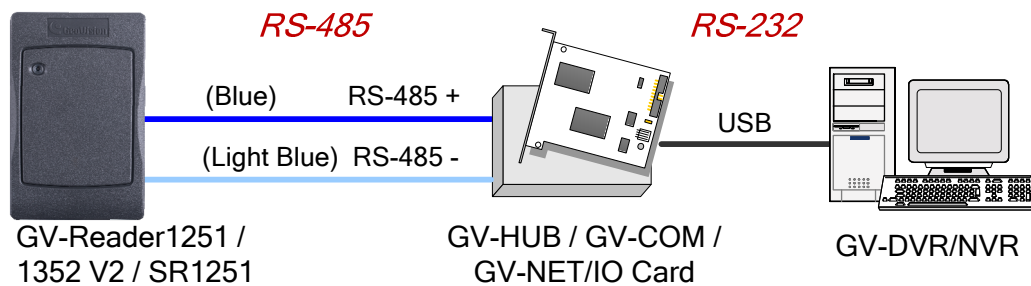
- Switch Setting (GV-Reader1251 / 1352 V2 only)



SW4 must be turned OFF.

1.4 Overlaying Card Numbers on GV-DVR/NVR Live View

You can overlay card numbers recognized at GV-Reader1251 / 1352 V2 / SR1251 onto a camera channel on GV-DVR/NVR. To overlay card numbers on GV-DVR/NVR channels, connect the reader to GV-DVR/NVR through a RS-485 / USB converter (e.g. GV-COM, GV-Hub or GV-NET/IO Card V3.1) as illustrated below. For details, see *2.5 Overlaying Card Numbers on GV-DVR/NVR Live View*.



Note:

1. For GV-Reader1251 / 1352 V2, make sure to define the ID number and set the reader to slave by configuring the switch settings. For details, see *1.2.2 Switch Setting of GV-Reader1251 / 1352 V2*.
 2. For GV-SR1251, make sure to define the ID number and set the reader to slave with the GV-Reader Config Utility. For details, see *2.5.1 Defining the ID number and Setting the Reader to Slave*.
-

1.5 Changing the Default Settings of Beeper and LED

You can change the default settings of the LED and the beeper by enabling GV-AS210 / 2110 / 2120 / 410 / 4110 / 810 / 8110 to externally control the LED and Beeper. Through the Web interface of the controller, you can set the controller to trigger the red LED, green LED or beeper when the specified alert event occur.

1. For GV-SR1251, enable external control of the reader's Beeper and LED by using the **GV-R/RK/DFR Config AP**. For details, see *2.6.1 Setting up Beeper and LED on GV-R/RK/DFR Config AP*.
2. For GV-Reader1251 / 1352 V2, enable external control of the reader's Beeper and LED by configuring the switch settings. For details, see *1.2.2 Switch Setting*.
3. Wire the Beeper, Red LED and Green LED from the reader to GV-AS Controller. For details, see *2.6.2 Wiring the Beeper and LED to GV-AS Controller*.
4. Specify the Beeper and LED settings for each door through the Web interface of GV-AS Controller. For details, see *2.6.3 Configuring the Beeper and LED Settings for Each Door/Gate*.

Note: GV-AS1620 can also externally control the reader's LED and Beeper for access granted and denied. For details, see *GV-AS1620 User's Manual*.

1.6 Specifications

	GV-Reader1251	GV-SR1251	GV-Reader1352 (V2)
CPU	8-bit microprocessor		
Wiegand Interface	Wiegand 26 bits, distance 30 m (98.43 ft) with GV-AS210 / 410 / 810; distance 100 m (328.1 ft) with GV-AS2110 / 2120 / 4110 / 8110, GV-AS1620		Wiegand 26 / 34 bits, distance 30 m (98.43 ft)
Power Source	DC 7.5~12V		
Power Consumption	60 mA		
LED	Red, Green LED	Red, Green, Blue LED	Red, Green LED
Beeper	Buzzer		
Frequency	125 KHz (Proximity EM Card)		13.56 MHz for ISO14443A (Mifare Class)
RS-485	9,600 bps, distance 600 m (1968.50 ft)		
Color	Gray		
Operating Temperature	-35 °C ~ 65 °C (-31 °F ~ 149 °F)		
Operating Humidity	10 ~90% RH (non-condensing)		
Dimensions (W x H x D)	75 (W) x 115 (H) x 15 (T) mm, with enclosure 35 (T) mm 3 (W) x 4.5 (H) x 0.6 (T) in, with enclosure 1.38 (T) in		
Weight	150 g / 0.33 lb	125 g / 0.27 lb	150 g / 0.33 lb
Ingress Protection	IP54	IP66	IP54
Certification	CE, FCC, RoHS		

For the number of readers supported by a variety of GeoVision controllers, see the [compatibility table](#).

Chapter 2 GV-RK1352 / R1352 / DFR1352

GV-RK1352 / R1352 / DFR1352 are card readers capable of recognizing access cards. GV-RK1352 comes with keypad, allowing it to also recognize PIN codes. GV-DFR1352 is designed to be installed on the door frame.

Featured with the Wiegand and RS-485 outputs, the readers can be connected to any standard access control panel. The readers are protected by a weather sealed and IP66 compliant housing for outdoor use.

2.1 Packing List

GV-RK1352



1. GV-RK1352 Card Reader
2. Screw x 2
3. Screw Anchor x 2
4. Front Cover Plate x 1



5. Software CD
6. Installation Guide
7. Warranty Card

GV-R1352



1. GV-R1352 Card Reader
2. Screw x 3
3. Screw Anchor x 2
4. Security Torx
5. Software CD
6. Installation Guide
7. Warranty Card

GV-DFR1352



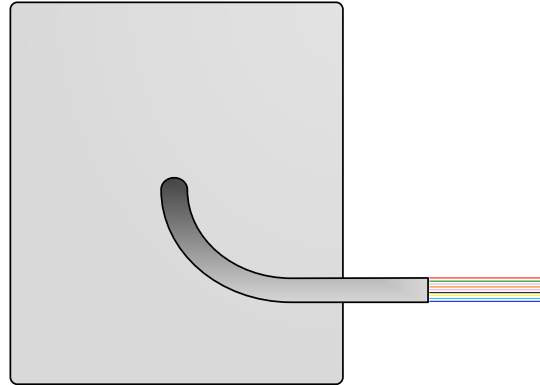
1. GV-DFR1352 Card Reader
2. Screw x 2
3. Screw Anchor x 2
4. Front Cover Plate x 2
5. Software CD
6. Installation Guide
7. Warranty Card

2.2 Physical Descriptions

2.2.1 Electric Wire

GV-RK1352

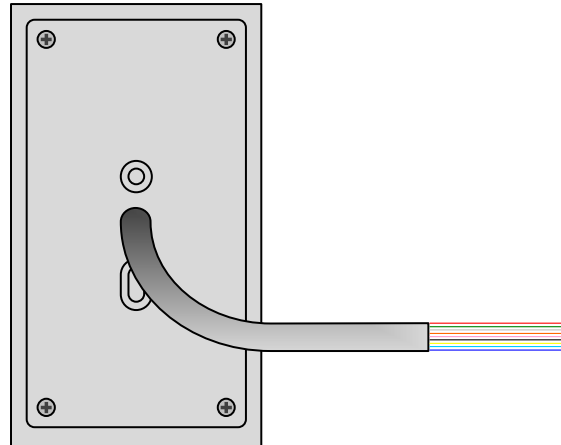
Wire Color	Function
Red	DC 7.5 ~ 12 V
Black	GND
Yellow	Beeper
Orange	Green LED
Light Red	Red LED
Green	Wiegand Data 0
White	Wiegand Data 1
Blue	RS-485 +
Light Blue	RS-485 -



Rear View

GV-R1352

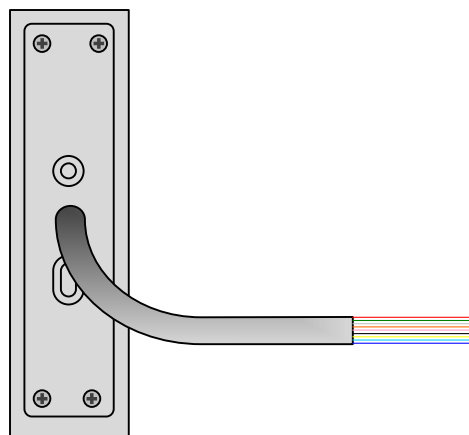
Wire Color	Function
Red	DC 7.5 ~ 12V
Black	GND
Yellow	Beeper
Orange	Green LED
Light Red	Red LED
Green	Wiegand Data 0
White	Wiegand Data 1
Blue	RS-485 +
Light Blue	RS-485 -
Gray	N/A
Purple	N/A
Brown	N/A



Rear View

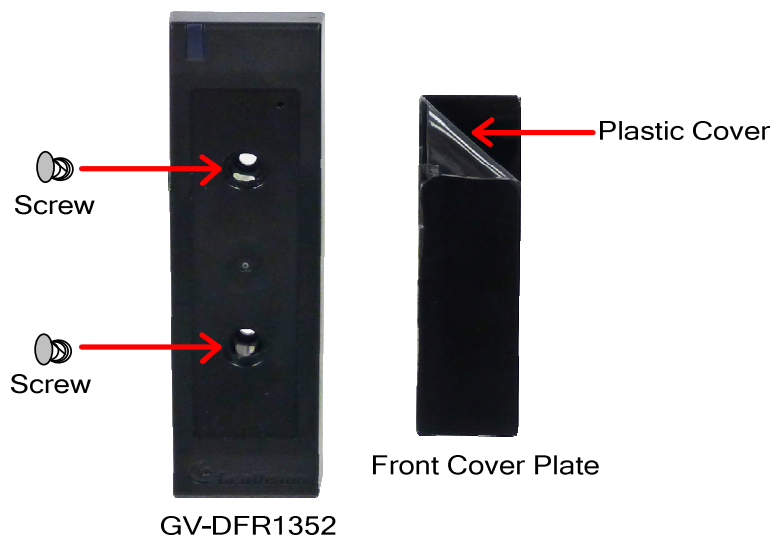
GV-DFR1352

Wire Color	Function
Red	DC 7.5 ~ 12V
Black	GND
Yellow	Beeper
Orange	Green LED
Light Red	Red LED
Green	Wiegand Data 0
White	Wiegand Data 1
Blue	RS-485 +
Light Blue	RS-485 -
Gray	N/A
Purple	N/A
Brown	N/A



Rear View

Install the GV-DFR1352 to the door frame using the supplied screws and screw anchors. Before placing and sticking the front cover plate to the GV-DFR1352, remove the Plastic Cover to prevent scratches to the cover after installed.



2.2.2 Keypad (GV-RK1352 Only)

When accessing an entry using GV-RK1352, you can enter the door's PIN code on the keypad or present the card and then enter the card's PIN code on the keypad to be granted access. The access mode is defined on GV-ASManager.

1. **0~9 Number Keys:** Press the number keys to enter the PIN code.
2. **# Key:** Press the # key to confirm the PIN code.
3. *** Key:** Press the * key to cancel the PIN code.

IMPORTANT: For Card and PIN Code mode, users need to enter the card's PIN on the keypad and then present the card for access granted.

2.2.3 LED Indicator and Beeper

In standby mode, the LED is blue. When a card is read, the LED flashes green and the beeper beeps once.

The reader comes with external control wires for Green LED, Red LED and Beeper. You can connect these control wires to GV-AS Controller to change the default settings of the LED and Beeper. For details on how to configure the settings, see *2.6 Changing the Settings of Beeper and LED* later in this installation guide.

Note:

1. The following controllers support LED and beeper wiring: GV-AS210 / 2110 / 2120 / 410 / 4110 / 810 / 8110, and GV-AS1620.
 2. The LED indicator and beeper functions are currently unavailable for GV-RK1352 when it is accessed by the built-in keypad.
-

2.3 Connecting the Reader to GV-AS Controller

You can connect the readers to GV-AS Controllers through Wiegand or RS-485 interface. Note that the connection between the reader and GV-AS Controller varies among controller models. For the number of readers supported by a variety of GeoVision controllers, see the [compatibility table](#).

Note:

1. GV-RK1352 / R1352 / DFR1352 is compatible with GV-AS100 / 1010 / 110 / 120 / 210 / 2110 / 2120 / 410 / 4110 / 810 / 8110, GV-AS1620, GV-CS1320. However, to enable the **keypad** function on GV-RK1352, you can only connect GV-RK1352 to the controllers through the following interfaces.
 - GV-AS100 / 110 / 120: Wiegand
 - GV-AS1010: RS-485
 - GV-AS210 / 2110 / 2120 / 410 / 4110 / 810 / 8110: Wiegand and RS-485
 - GV-AS1620: Wiegand and RS-485
 - GV-CS1320: RS-485

2. Each GV-RK1352 / R1352 / DFR1352 consumes 60 mA of power. The total power consumption of the output devices and readers connected to GV-AS Controller must be under **2.5A** (for GV-CS1320), **3A** (for GV-AS1620, GV-AS210 / 2110 / 2120), **3.5A** (for GV-AS410 / 4110) or **5A** (for GV-AS810 / 8110). Connect an external power supply if the power supplied from GV-AS Controller is insufficient.

2.3.1 Connecting through Wiegand Interface

The following diagrams use **GV-RK1352** and **GV-AS810 Controller** as an example. Up to eight readers can be connected to GV-AS810 Controller through the controller's Wiegand interface.



Note: Connection through Wiegand interface is not supported for GV-AS1010.

2.3.2 Connecting through RS-485 Interface

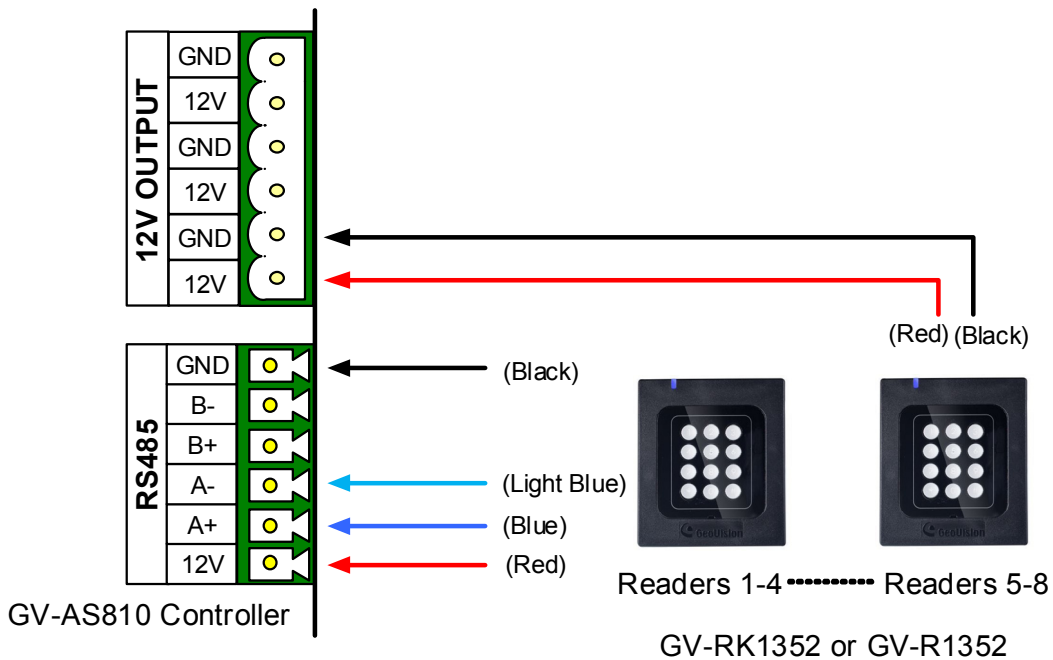
The following diagrams use **GV-RK1352** and **GV-AS810 Controller** as an example. Up to eight readers can be connected together to the RS-485 interface on GV-AS810 Controller.

- Connecting four or less readers to GV-AS810 Controller:



- Connecting five or more readers to GV-AS810 Controller:

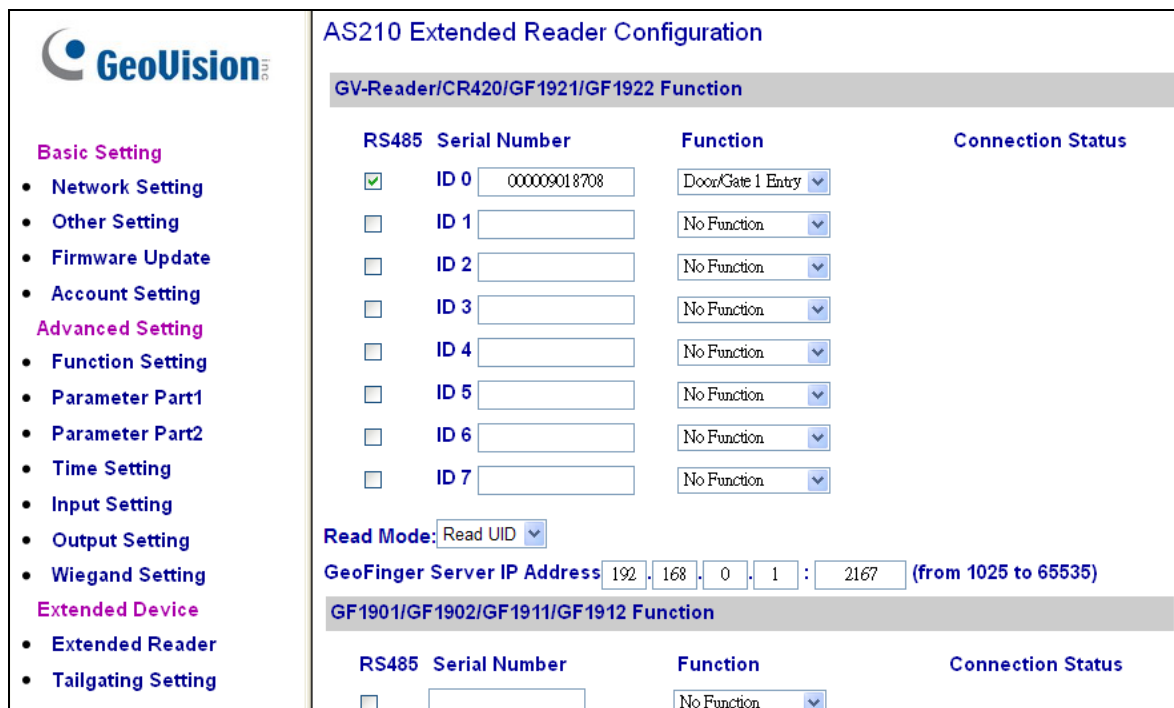
For readers five to eight, connect the RS-485 cable to the RS-485 interface on GV-AS810 Controller and then connect the 12V power output and GND of the reader to a 12V DC power output on the controller.



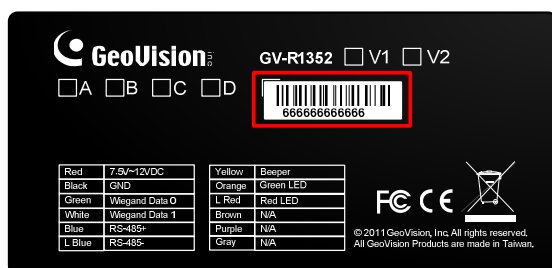
2.3.3 Defining Readers on GV-AS Controller Web Interface

Since multiple readers can connect to GV-AS Controller using one RS-485 interface, you need to specify which door each reader controls. This section explains how to define readers on the Web interface of GV-AS Controller. On the Web interface, you can also set the reader to read the GID or UID on GV-AS ID Cards / Key Fobs. Note that the Web interface of different GV-AS Controller models varies.

1. On the controller's Web interface, click **Extended Reader**. This dialog box appears.



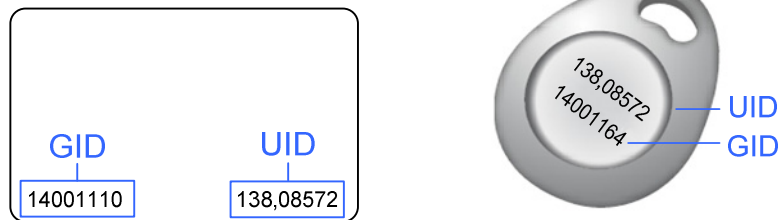
2. In the GV-Reader/CR420/GF1921/GF1922 section, select the **RS485** checkbox in front of the ID number and type the **Serial Number** on the rear panel of the reader. The ID number will be assigned to the reader.



3. Select a door/gate for the reader from the **Function** drop-down list.

- Next to **Read Mode**, select **Read UID** or **Read GID** to set the connected readers to read UID (unique identifier) or GID (GeoVision ID) on GV-AS ID Cards / Key Fobs.

If you select **Read GID**, make sure there are two numbers on your GV-AS ID Cards / Key Fobs as shown below. If there is only one number on your GV-AS ID Cards / Key Fobs, GID is not supported, and you must select Unique Identification (UID).



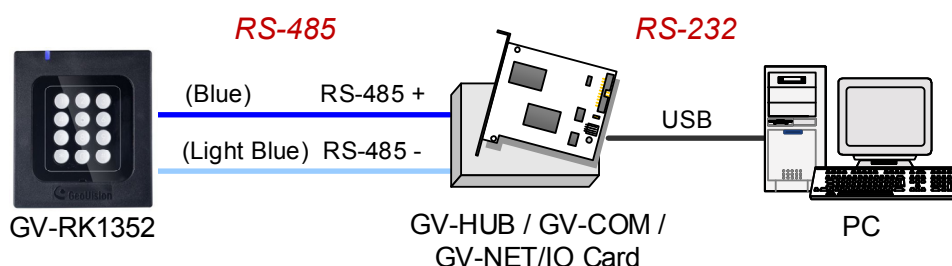
- Click **Submit**.

Note:

- When you click **Submit** on the Extended Reader page of GV-AS1010 / 210 / 2110 / 2120 / 410 / 4110 / 810 / 8110, GV-AS1620, GV-CS1320, all readers connected through RS-485 interface will reboot.
 - GID ID format is **only** supported in GV-RK1352 / GV-R1352 / GV-DFR1352 (Rev. B) V1.2 or later.
 - If you are using third-party cards or key fobs, you must set the reader to read UID.
-

2.4 Installing GV-R/RK/DFR Config AP

GV-R/RK/DFR Config AP allows you to set the reader's beeper, LED, ID number, master / slave status, and whether it reads UID or GID. To use the Config AP, you need to connect the reader to a PC through a RS-485 / USB converter (e.g. GV-COM, GV-Hub or GV-NET/IO Card V3.1), as illustrated below.



You can install the Config AP from the GeoVision website. To use a GV-COM, GV-Hub or GV-NET/IO Card V3.1, you also need to install GV-USB Device Driver to enable the device.

Downloading from GeoVision Website

1. Go to the download page of GeoVision Website:

<https://www.geovision.com.tw/download/product/GV-RK1352>

2. Download **GV-RK1352 & GV-R1352 & GV-DFR1352 Config Utility**.

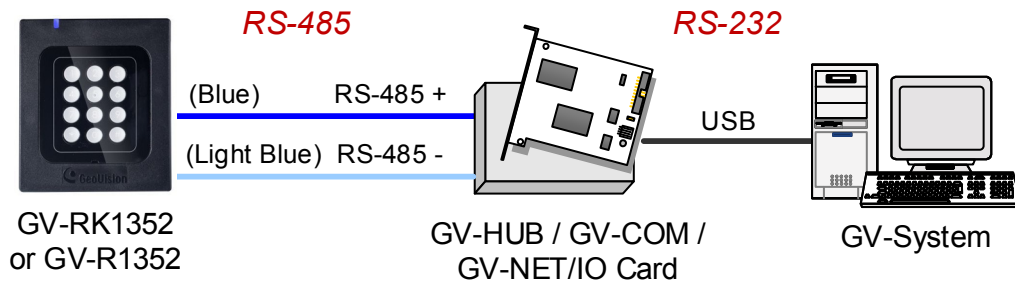


3. To download GV-USB Device Driver, go to the download page:

<https://www.geovision.com.tw/download/product/GV-NET%20IO%20card%20V3.2>

2.5 Overlaying Card Numbers on GV-DVR/NVR Live View

You can overlay card numbers recognized at the reader onto a camera channel on GV-DVR/NVR. To overlay card numbers on GV-DVR/NVR channels, connect the reader to GV-DVR/NVR through a RS-485 / USB converter (e.g. GV-COM, GV-Hub or GV-NET/IO Card V3.1) as illustrated below.

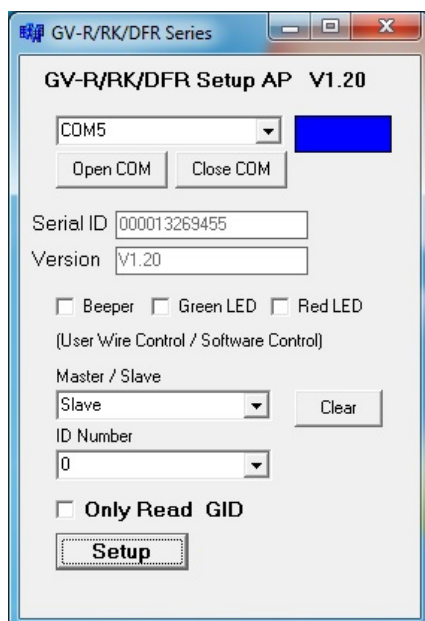


Note: GV-RK1352 / R1352 / DFR1352 is not compatible with GV-NET Card and GV-NET/IO Card of versions earlier than V3.

2.5.1 Defining the ID Number and Setting the Reader to Slave

After the reader is connected to the computer of the GV-DVR/NVR, use the **GV-R/RK/DFR Config AP** to define the ID number of the reader and set the reader to Slave.

1. Run **GV-R/RK/DFR Config AP**. See 2.4. *Installing GV-R/RK/DFR Config AP* above for how to install.

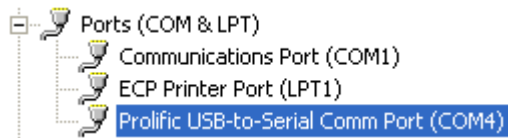


2. Select the COM port that is connected to the reader and click **Open COM**. The red square next to the COM port box should change to blue to indicate the COM port is correct.
3. Under **Master / Slave**, set the reader to **Slave**.
4. Select an **ID number** for the reader. The ID number ranges from 0 to 7.
5. Click **Setup**. The settings are sent to the reader. The serial number and firmware version of the reader will be automatically detected.

If you want to connect multiple readers to the GV-DVR/NVR, you need to set up a unique ID number for each reader. For this you need to connect each reader to the computer one reader at a time, and follow the instructions above to set up an ID number.

Note:

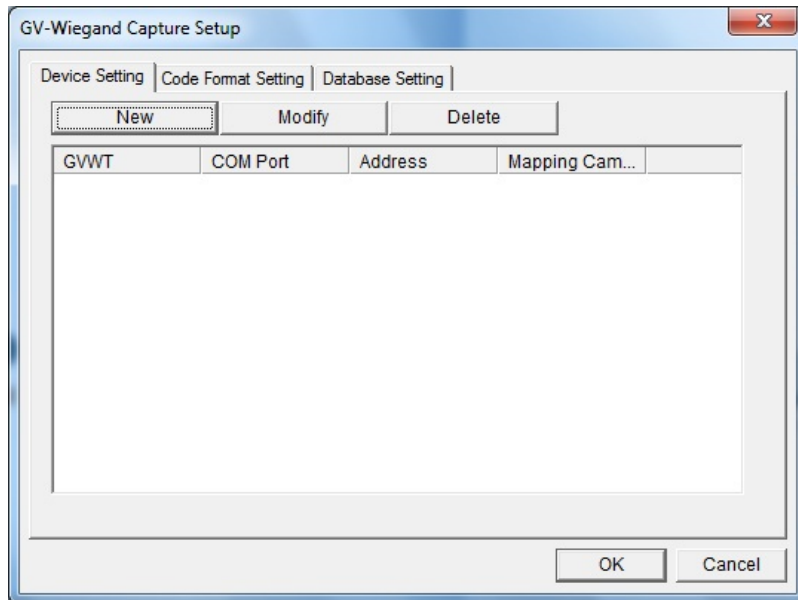
1. If the COM port is incorrect, an “**Error opening serial port**” message will appear. To verify the COM port that is connected to the reader, go to Windows Device Manager. In the Ports (COM & LPT) field, you should see the entry for **Prolific USB-to-Serial Comm Port** and the COM number currently in use.



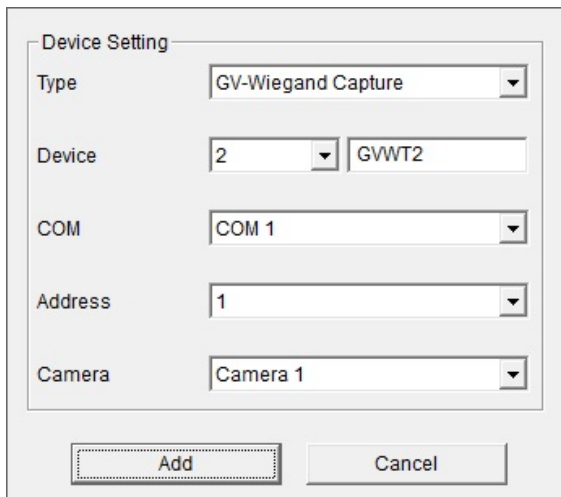
2. If you are using an older version of the Config AP, you will have to manually type the serial number of the reader. The serial number is on the rear panel of the reader.
-

2.5.2 Adding the Reader to GV-DVR/NVR

1. In GV-DVR/NVR, click the **Configure** button, select **Accessories**, and select **GV Wiegand Capture Device Setting**. This dialog box appears.



2. Click the **New** button. This dialog box appears.



- **Type:** Select GV-Wiegand Capture.
 - **Device:** Type a number and name to help you identify the reader.
 - **COM:** Select the COM port connected to the reader.
 - **Address:** Select the ID of the connected reader you set in GV-R/RK/DFR Config AP.
 - **Camera:** Assign the reader to a channel to overlay card numbers on the live view.
3. Click the **Add** button.

2.6 Changing the Default Settings of Beeper and LED

You can change the default settings of the reader's LED and the beeper by enabling GV-AS210 / 2110 / 2120 / 410 / 4110 / 810 / 8110 to externally control the reader. Through the Web interface of the controller, you can set the controller to trigger the reader's red LED, green LED or beeper when particular alert event occurs.

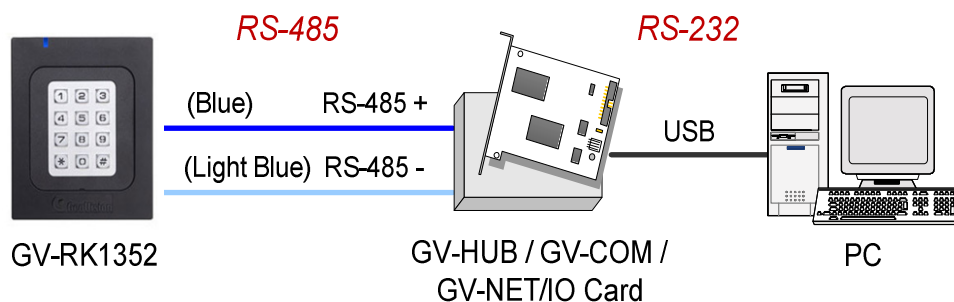
For this function to work, complete the following 3 settings:

1. Enable external control of the reader's Beeper and LED by using **GV-R/RK/DFR Config AP**. See *section 2.6.1*.
2. Wire the Beeper, Red LED and Green LED from the reader to GV-AS Controller. See *section 2.6.2*.
3. Specify the Beeper and LED settings for each door through the Web interface of GV-AS Controller. See *section 2.6.3*.

Note: GV-AS1620 can also externally control the reader's LED and Beeper for access granted and denied. For details, see *GV-AS1620 User's Manual*.

2.6.1 Setting up Beeper and LED on GV-R/RK/DFR Config AP

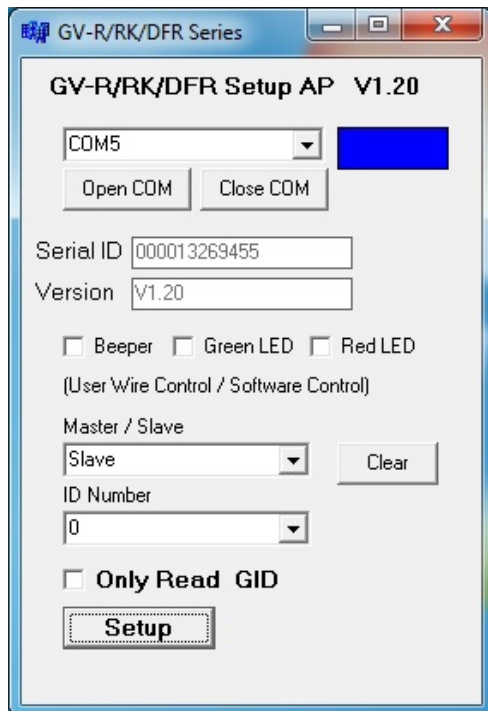
To enable the external controls of the reader's Beeper and LED, you need to connect the reader to a computer through a RS-485 / USB converter (e.g. GV-COM, GV-Hub or GV-NET/IO Card V3.1) as illustrated below.



1. Start **GV-R/RK/DFR Config AP** and select the COM port that is connected to the reader.

Note: To see how to install the Config AP and how to identify the COM port of the reader, see *2.4 Installing GV-R/RK/DFR Config AP* and *2.5.1 Defining the ID Number and Setting the Reader to Slave* earlier in this installation guide

2. Click **Open COM**.



3. To enable external control of Beeper or LED, select **Beeper**, **Green LED** or **Red LED**.
4. Select **Master** from the Master / Slave drop-down list.
5. Select an ID number for the reader. Make sure the ID number on the Config AP matches the ID number set on the Extended Reader page of the GV-AS Controller Web interface.
6. Click **Setup**. The settings are sent to the reader. The serial number and the firmware version of the reader will be automatically detected.

If you want to set up multiple readers to be controlled by the controller, you need to connect each reader to the computer one reader at a time, and follow the above instructions to enable external control.

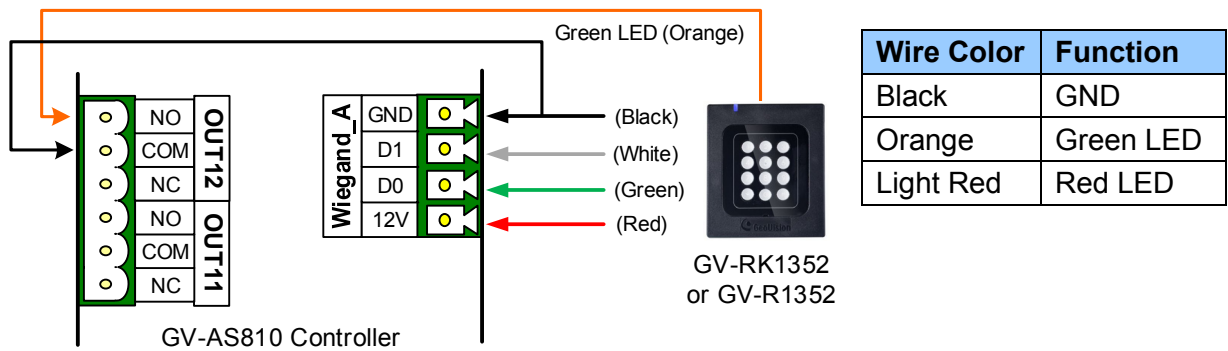
After the above settings, you need to connect the Beeper, Red LED and Green LED wires from the reader to the outputs of GV-AS Controller.

2.6.2 Wiring the Beeper and LED to GV-AS Controller

To wire the beeper and LED to GV-AS210 / 2110 / 2120 / 410 / 4110 / 810 / 8110, connect the control wires of the reader's Beeper, Red LED or Green LED to any of the outputs on GV-AS Controller.

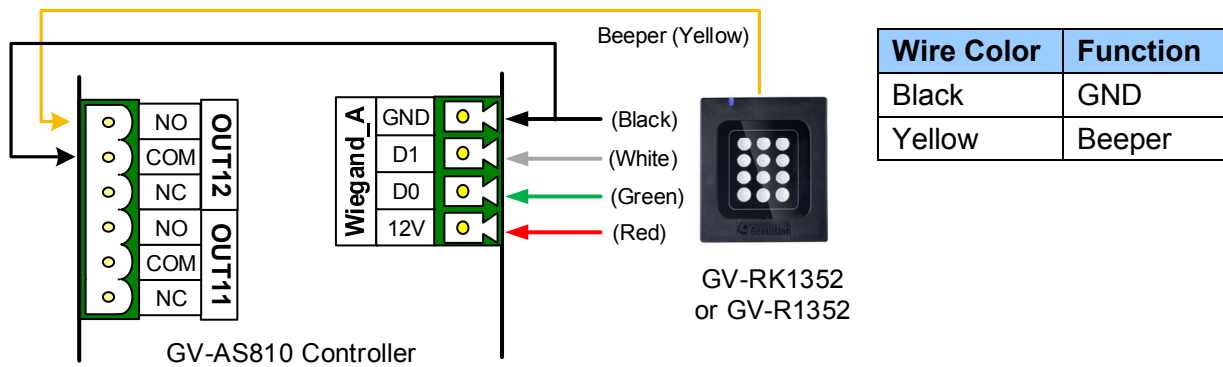
Wiring LED to GV-AS Controller

The diagram below shows the connection for wiring Green LED using GV-RK1352 and GV-AS810 as an example. For Red LED, use the light red wire instead.

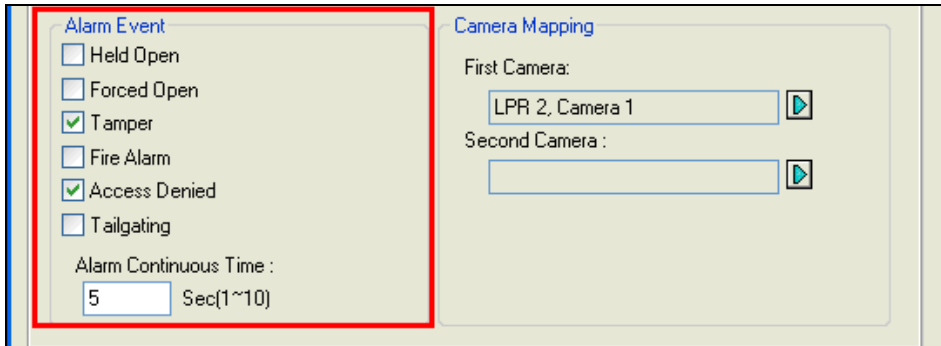


Wiring Beeper to GV-AS Controller

The diagram below shows the connection for wiring the beeper using GV-RK1352 and GV-AS810 as an example.



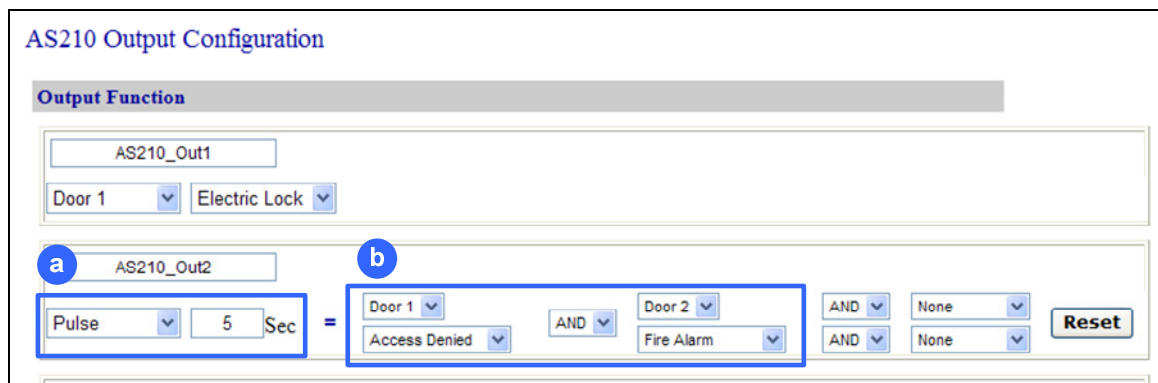
After wiring, you also need to go to GV-ASManager to select the alarm conditions that will set off the reader's beeper. In GV-ASManager, right-click the GV-AS Controller in the device list, click **Settings**, and click the **Door / Gate** tab to select the alarm conditions.



2.6.3 Configuring the Beeper and LED Settings for Each Door/Gate

After connecting the wires for beeper or LED, specify the conditions to trigger the beeper and LED on the GV-AS210 / 2110 / 2120 / 410 / 4110 / 810 / 8110 Web interface.

1. On the controller Web interface, click **Output Setting**. The page below appears.



2. Find the output wired to the beeper or LED and specify up to 2 alarm conditions to set off the beeper or LED.
 - a. **Output Type:** Select **Normal**, **Toggle** or **Pulse**. If you select Pulse, you can specify the number of seconds to trigger the beeper or LED.
 - b. **Output Conditions:** Select the door and the alarm conditions to trigger the beeper or LED. Up to 2 sets of output conditions can be set.
3. Click **Submit**.

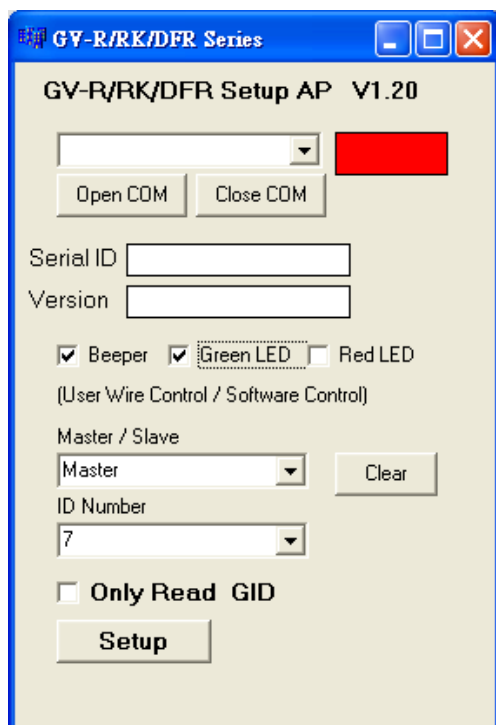
2.7 Setting UID or GID on GV-R/RK/DFR Config AP

By default, the readers read the UID (unique identifier) on ID cards or key fobs. Using GV-R/RK/DFR Config AP, you can set the GV-RK1352 / R1352 / DFR1352 to read GID (GeoVision ID) on GV-AS ID Cards / Key Fobs instead.

Note:

- For how to install the Config AP and how to identify the COM port of the reader, see [2.4 Installing GV-R/RK/DFR Config AP](#) and [2.5.1 Defining the ID Number and Setting the Reader to Slave](#).
 - GID ID format is only supported in GV-RK1352 / GV-R1352 / GV-DFR1352 (Rev. B) V1.2 or later.
 - If you are using third-party cards or key fobs, you must set the reader to read UID.
-

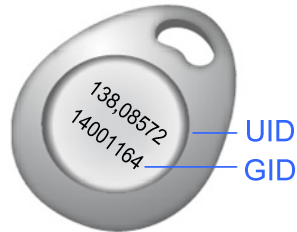
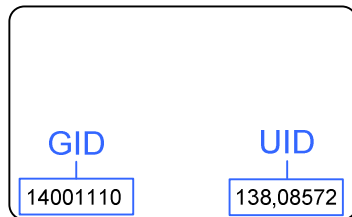
1. Run **GV-R/RK/DFR Config AP**.



2. Select the COM port that is connected to the reader and click **Open COM**. The red square next to the COM port box should change to blue to indicate the COM port is correct.
3. To set the reader to read GID, select **Only Read GID**.

4. Click **Setup** to apply the setting. The serial number and firmware version of the reader will be automatically detected.

To use GID, make sure there are two numbers on your GV-AS ID Cards / Key Fobs as shown below. If there is only one number on your GV-AS ID Cards / Key Fobs, GID is not supported and you must select Unique Identification (UID).



2.8 Firmware Upgrade

GeoVision will periodically release the updated firmware on the website. The new firmware can be simply loaded into the reader by using **Update Utility** included in the Software CD.

Important Notes before You Start

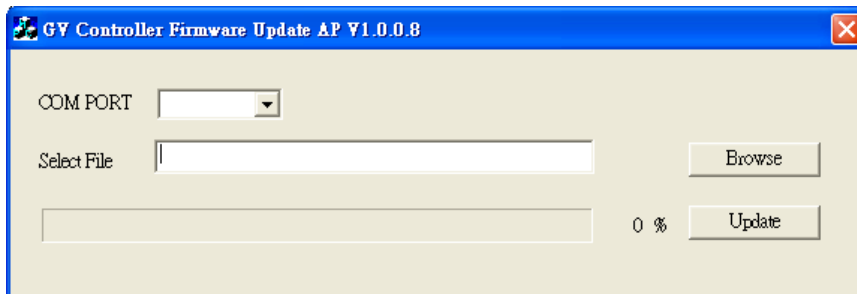
Before you start updating the firmware, please read these important notes:

1. While the firmware is being updated, the power supply must not be interrupted.
2. Do not turn the power off within 10 minutes after the firmware is updated.

WARNING: The interruption of power supply during updating causes not only update failures but also damages to the device. In this case, please contact your sales representative and send your device back to GeoVision for repair.

To upgrade firmware:

1. Insert the Software CD and select **Run Firmware Update Utility**. This dialog box appears.



2. Select the COM port of the reader.
3. Click the **Browse** button to locate the firmware file (.bin) saved at your local computer.
4. Click **Update**.
5. The LED indicator should flash purple during the process of firmware upgrading. When the process is complete, the reader will be sounded twice and the LED indicator will change to green.

Note: You can also download the firmware upgrade utility from the [link](#).

2.9 Specifications

	GV-RK1352	GV-R1352	GV-DFR1352 (Rev. B)
CPU	8-bit microprocessor		
Frequency	13.56 MHz for ISO14443A (Mifare DESFire, Mifare Plus and Mifare Class)		
Wiegand Interface	Wiegand 26 / 34 bit, distance 100 m (328.1ft), 24 AWG, 13V DC min., 85 °C min		
RS-485	9,600 bps, distance 600 m (1968.50 ft), 24 AWG, 13V DC min., 85 °C min		
Input Rating	7.5V DC~12V DC, 200mA		
LED	Red, Green and Blue LED		
Beeper	Buzzer		
Reader Color	Black		
Supported ID Formats	GID and UID		
Operating Temperature	-35 °C ~ 66°C / -31 °F ~ 150.8 °F		
Operating Humidity	10% ~ 90% (no condensation)		
Dimensions (W x H x D)	95 x 108 x 23 mm / 3.74 x 4.25 x 0.91 in	65.8 x 115.6 x 20.5 mm / 4.6 x 2.6 x 0.8 in	20.9 x 105.6 x 20.5 mm / 0.8 x 4.2 x 0.8 in
Weight	260 g / 0.57 lb	120 g / 0.26 lb	80 g / 0.17 lb
Ingress Protection	IP66		
Certification	CE, FCC, RoHS, UL 294, CUL		

For the number of readers supported by a variety of GeoVision controllers, see the [compatibility table](#).

Note: GID ID format is only supported in GV-RK1352 / GV-R1352 / GV-DFR1352 (Rev. B) V1.2 or later.

2.10 Accessory (GV-RK1352 and GV-R1352 Only)

Optional accessories can expand the capabilities and versatilities of your GV-RK1352 and GV-R1352. Consult our sales representative for more information.

GV-MountA900	<p>GV-MountA900 is a mounting plate that allows you to attach GV-RK1352 and GV-R1352 to a US single gang power box.</p> <ul style="list-style-type: none"> • Dimensions: 100 x 68 mm / 3.9 x 2.7 in • Weight: 55 g / 0.12 lb
---------------------	--

Connecting GV-MountA900

1. Screw GV-MountA900 to the US single gang power box through holes C.
2. Thread the cable through GV-MountA900 and then attach the reader.
 - GV-R1352: Secure through holes A
 - GV-RK1352: Secure through holes B



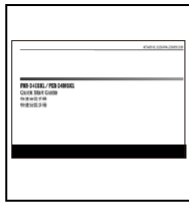
Chapter 3 GV-RKD1352

GV-RKD1352 is a card reader with keypad, designed to read PIN codes and access cards. Featured with Wiegand and RS-485 interfaces, GV-RKD1352 can be connected to any standard access control systems. GV-RKD1352 comes with IP65 rated ingress protection suitable for indoor and outdoor applications.

3.1 Packing List



Reader x 1



Quick Start Guide x 1

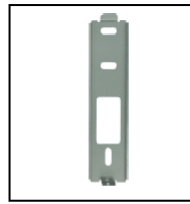


Plate x 1

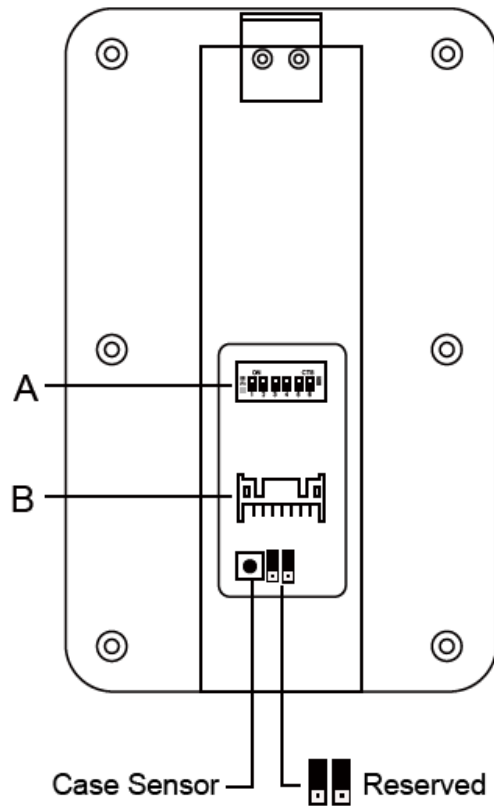


Hex Key wrench x 1
Screw x 3 Cable x 1

3.2 Compatible Products

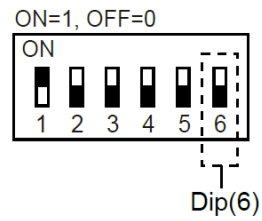
- **GV-ASManager:** V5.3.3 or later
- **GV-AS210 / 2110 / 2120, GV-AS810 / 8110 / 8111, GV-AS410 / 4110 / 4111:** V2.41 or later (only Weigand interface supported)
- **GV-AS1620:** V1.05 or later
- **GV-CS1320:** V3.10 or later

3.3 Physical Descriptions



A. To define the reader's ID for a daisy chain connection, set up the switches as listed below.

Node ID	Configuration
0	00000
1	10000
2	01000
3	11000
4	00100
5	10100
6	01100
7	11100
8	00010
9	10010
10	01010
11	11010
12	00110
13	10110
14	01110
15	11110



A

DESfire / GID (GeoVision Identifier) Support

By default, GV-RKD1352 supports Mifare cards. To only support DESFire cards or GID (GeoVision Identifier) formatted cards, turn **ON** for the switch No 6.

Note:

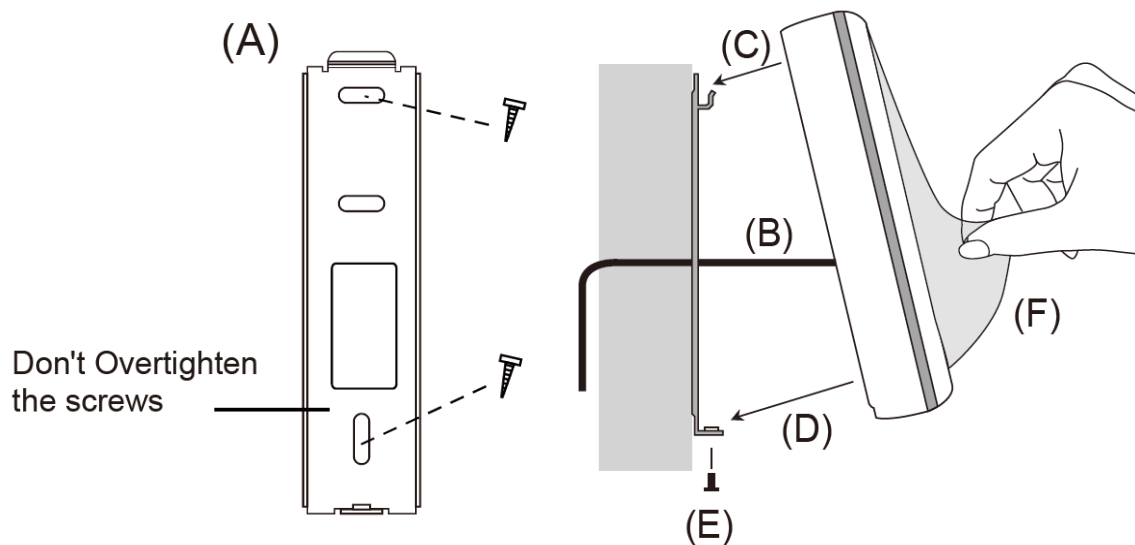
1. GV-DESFire cards contain two types of ID: UID and DES ID. When only DES ID is required, turn on the switch No. 6.
 2. Every time when the switch No. 6 setting is changed, the reader needs to be restarted to apply the setting.
-

B. Connect the reader to GV-AS Controller based on the following pin definitions:

	Pin	Wire Color	Wiegand	RS-485
B	1	Red	DC 12V	DC 12V
	2	Black	Ground	Ground
	3	Yellow	-	RS-485+
	4	Blue	-	RS-485-
	5	Gray	(Reserved)	-
	6	Pink	-	-
	7	Orange & White	Ground	-
	8	Orange	-	-
	9	Brown	Green LED Control	-
	10	Purple	Beep Control	-
	11	White	Case Sensor (To Controller GND)	-
	12	Green	Case Sensor (To Controller Temper Sensor)	-
	13	Red & White	Wiegand Data 0	-
	14	Gray & White	Wiegand Data 1	-

Note: The RS-485 interface supports either RS-485 or OSDP communication but not both at the same time.

3.4 Installation



- (A) Mount the backplate onto the wall or back box (US standard 120 type). Note DO NOT over tighten the backplate screws during installation to prevent distortion.
- (B) Connect the wires in accordance with the wiring notes below.
- (C) Make sure the backplate and the upper cover guide of the reader are aligned.
- (D) Install the upper cover of the reader to the backplate.
- (E) Use the hex key wrench to fasten the screw onto the bottom of the reader.
- (F) Tear off the protective film.

Note:

1. Use minimum 22 AWG double-shielded aluminum mylar foil twisted pair cable for the connection between the reader and the controller.
2. In order to reduce long distance noise, the isolated net of transmission cable should connect to both ends of device ground.
3. The distance between two readers should be over 30 cm to prevent radio frequency interference from each other.
4. Mounting the reader around metal could affect read range. Metal of any type around the reader should be avoided while mounting.
5. The distance between the reader and the controller should not exceed 30 meters (98 ft).
6. For optimum read range, use DC Linear power adaptor for the reader's power supply.
7. In order to ensure the reader's normal operation, input voltage should be $12V \pm 10\%$.
8. If the reader is installed in an open area or highly humid environment, it is recommended to protect the reader with an external shielding cover.
9. RS-485 communication baud rate is 9600.

3.5 Keypad

When accessing an entry using GV-RKD1352, you can enter the door's PIN code on the keypad or present the card and then enter the card's PIN code on the keypad to be granted access. The access mode is defined on GV-ASManager.

1. **0~9 Number Keys:** Press the number keys to enter the PIN code.
2. **# Key:** Press the # key to confirm the PIN code.
3. *** Key:** Press the * key to cancel the PIN code.

IMPORTANT: For Card and PIN Code mode, users need to enter the card's PIN code, plus # to confirm the code, and then present the card for access granted.

3.6 LED Status and Beeper

By default, the reader has the following LED status and beeper actions:

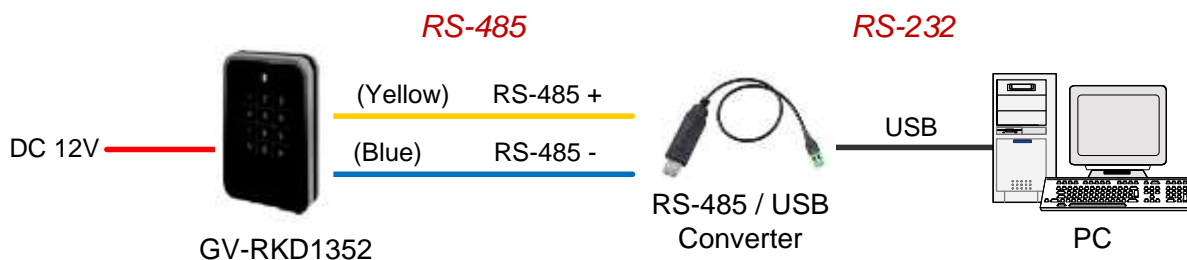
Condition	Wiegand	RS-485
Standby	Constant Red	No light
Access Denied	Beep once (No LED)	Flash Red momentarily + Beep three times
Access Granted	Beep once (No LED)	Flash Green momentarily + Beep twice

For Wiegand connection, the reader comes with external control wires for Green LED and Beeper. You can connect these control wires to GV-AS Controller to change the default settings of the LED and Beeper.

3.7 Firmware Upgrade

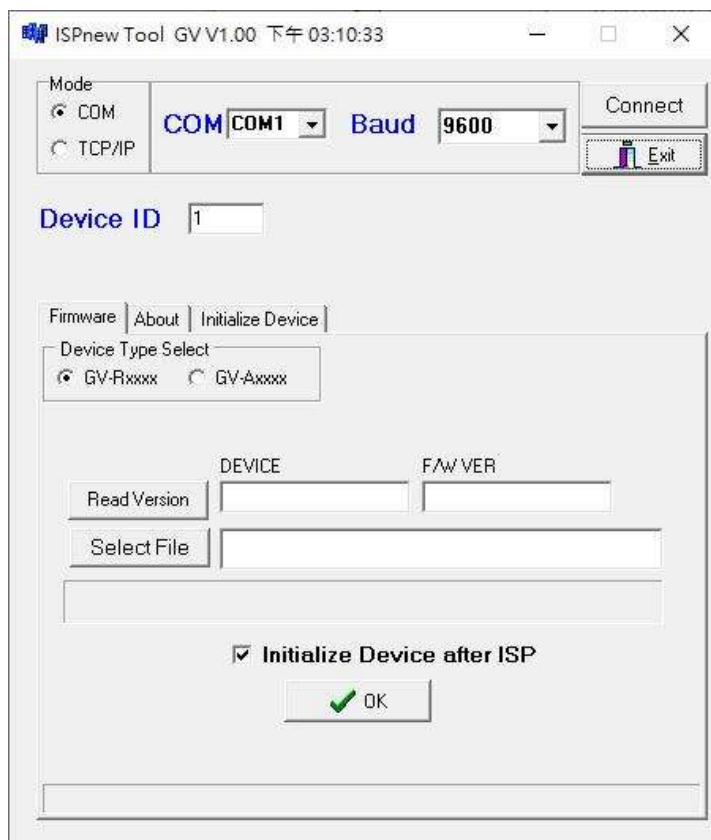
GeoVision will periodically release the updated firmware on the website. The new firmware can be simply loaded into the reader by using the tool provided.

First of all, prepare a RS-485 / USB converter, and connect GV-RKD1352 to a PC as illustrated below.



To upgrade firmware:

1. Download the **Firmware Upgrade Tool** from our [website](#) to the PC.
2. Run the Tool. This dialog box appears.



3. Select the **COM** port used by the reader in the PC, set the **Baud** rate to **9600**, and click **Connect**.

4. Make sure the **Device ID** is the same as the reader's current ID. If not, revise the ID.
5. Click **Read Version**. The reader's name and firmware version should be displayed.
6. Click **Select File** to locate the firmware file.
7. Click **Initialize Device after ISP**, and then **OK** to start firmware upgrade.
8. After firmware upgrade, the message "Are you sure you want to the device to initialize?" appears. Click **Yes**.
9. After initialized, the reader flashes green once with beeping five times, and then LED turns to red. Click **Exit** to close the tool.

Note:

1. For the **Device ID**, check switch settings at the rear panel of the reader. See [3.3 Physical Descriptions](#).
2. If firmware upgrade fails due to a loose wire connection and the reader flashes green constantly after reconnecting to power, do the following:
 - A. Rewire the reader properly.
 - B. Set the **Baud** rate to **19200** in the ISP New Tool.
 - C. Click **Read Version**. The FW version should display **V0.00**.
 - D. Select the firmware file.
 - E. Click **Initialize Device after ISP**, and then **OK** to start firmware upgrade.

After Step E, GV-RKD1352 has been updated but not initialized yet. To initialize the reader, follow the steps below:

- F. Set the **Baud** rate to **9600** in the ISP New Tool.
 - G. Click **Initialize Device after ISP**, and then **OK** to start initialization.
-

3.8 Specifications

For details, please see the [datasheet](#).

For the number of readers supported by a variety of GeoVision controllers, see the [compatibility table](#).