GeoVision inc
The Vision of Security

GV-AS1520 Controller

User's Manual

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

AS1520V206-A

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

[Warranty]

[Technical Support Policy]

Contents

Notice

1. The product pattern is certified by the FCC. Unauthorized modification of the frequency, power, or originally designed functions and characteristics of the RFID reader are prohibited.
2. This product has a water-resistant design. Unauthorized removal of the screws and case of the product will damage the water-resistant performance and void product warranty.
3. Cables are water-resistant. Do not damage the shield, as it will also damage water-resistant performance.
4. The reader should be positioned so that personnel in the area for prolonged periods may safely remain at least 20 cm (8 in) in an uncontrolled environment from the reader's surface.
5. Avoid the interference of other radio frequencies with the look-up table frequency-hopping spread spectrum (FHSS).
6. This is a Class A product. Class A equipment shall have the following warning in the instructions for use, to inform the user of the risk of operating this equipment in a residential environment.

   Warning – This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expenses.

Optional Devices

Optional devices can expand the capabilities and versatilities of your GV-AS1520 Controllers. Consult your sales representative for more information.

GV-CR420	GV-CR420 is a card reader with a built-in 4MP wide angle IP camera. The card reader recognizes identification cards and transmits live view through network connection.
GV-CR1320	GV-CR1320 is a card reader with a built-in 2MP wide angle IP camera. The card reader recognizes identification cards and transmits live view through network connection.
GV-DFR1352	GV-DFR1352 is a card reader that uses a 13.56 MHz frequency. The reader has both Wiegand and RS-485 outputs that can be connected to any standard access control panel.
GV-R1352	GV-R1352 is a card reader that uses a 13.56 MHz frequency. The reader has both Wiegand and RS-485 outputs that can be connected to any standard access control panel.
GV-RK1352	GV-RK1352 is a card reader with keypad that uses a 13.56 MHz frequency. The reader has both Wiegand and RS-485 outputs that can be connected to any standard access control panel.
GV-SR1251	GV-SR1252 is a card reader that uses a 125 kHz frequency. It has both Wiegand and RS-485 outputs that can be connected to any standard access control panel.
GV-GF Fingerprint Readers	The reader (GV-GF1921 / 1922) supports three operation modes: Fingerprint Only, Fingerprint + Card and Card Only. In Fingerprint Only mode, the fingerprints are enrolled through GV-ASManager. In Fingerprint + Card mode, the fingerprint templates are stored on the user card. In Card Only mode, the users only need to swipe the card to be granted access. Readers with optical and capacitance sensors are available.
GV-AS ID Card / Key Fob & GV-UHF Tag	GV-AS ID Card and GV-AS ID Key Fob are ideal for business and residential environment, where access control is important for security reasons. 125 KHz and 13.56 MHz cards and key fobs are available. GV-UHF Tag is ideal for parking lot management. 900 MHz UHF Tag is available.
Power Adapter	Contact our sales representatives for the countries and areas supported.

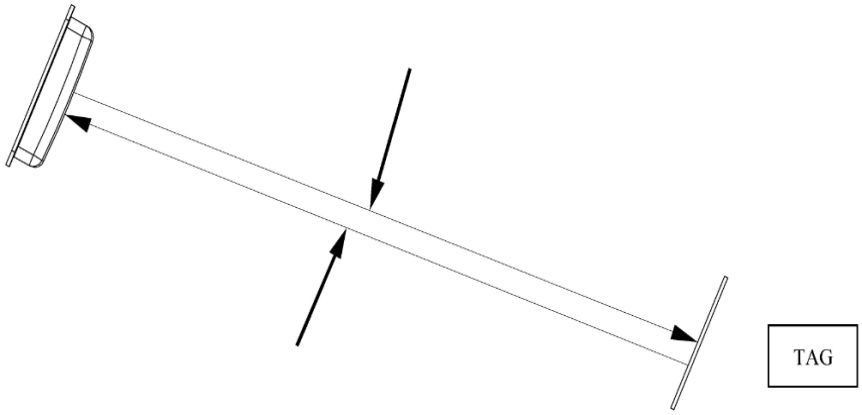
Installation Considerations

The reading range of 10 m (33 ft) is achieved when the RFID Reader and the RFID tag are installed at the same height, facing each other. The reading range is heavily dependent on the readability of the RFID tags being recognized. Therefore, the reading range may be affected by a variety of environmental and situational factors, which are exemplified by but no limited to the list below:

- The view angle and height of the RFID Reader installed, relative to:
  - The position of the RFID Tag being recognized
  - The position and curve of angle, if any, of the driving lane
- The stability of the power supply of the RFID Reader
- The quality and conditions of the RFID Tag being recognized
- Whether there is any obstruction, especially metal or other materials such as insulation film on the front windshield, between the RFID Reader and Tag
- Whether there is any electromagnetic interference near the installation site of the RFID Reader
- Whether there is any channel-interference among multiple RFID Readers installed close to each other.
  - When facing opposite directions, RFID Readers must be placed 20 cm (7.9 in) apart or more.
  - When facing the same direction, RFID Readers must be assigned to separate bands (available upon request when purchasing).

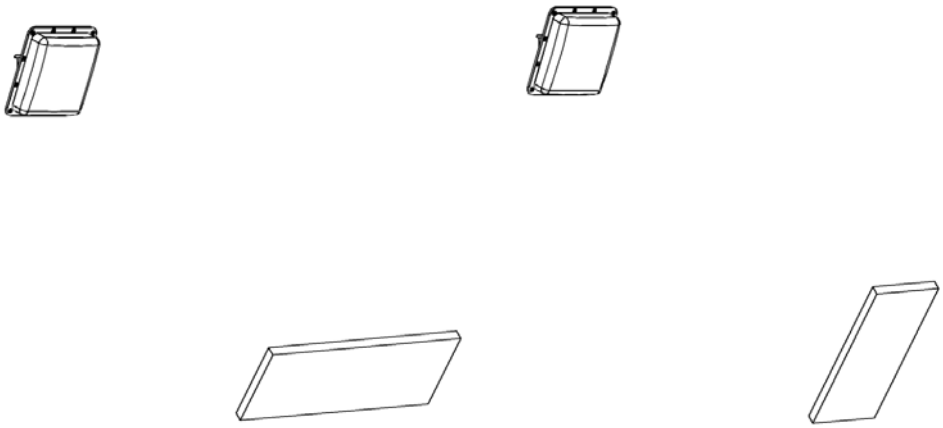
To further improve the reading range of your RFID installations, follow the steps below.

1. Install the RFID Reader with the antenna paralleled to the Tag for better reading results.



The Tag receives signals and returns them to the RFID Reader.

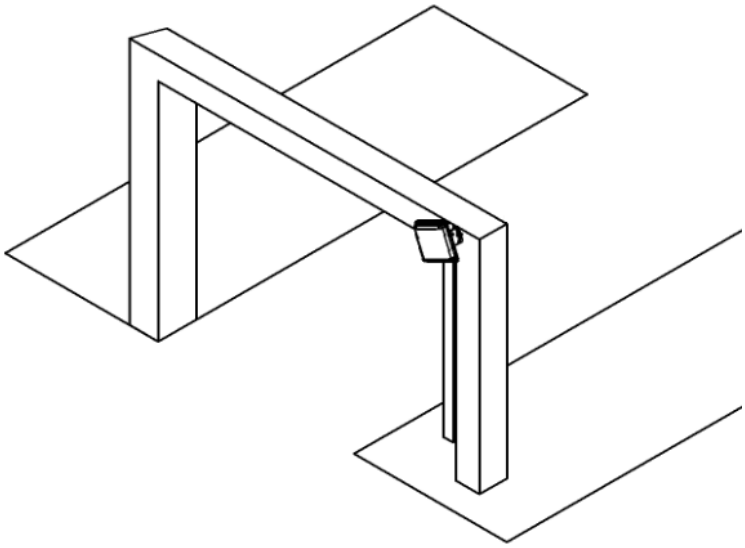
2. Install the RFID Reader and Tag as shown below.



Correct Misplaced

3. RFID Reader Installation Position

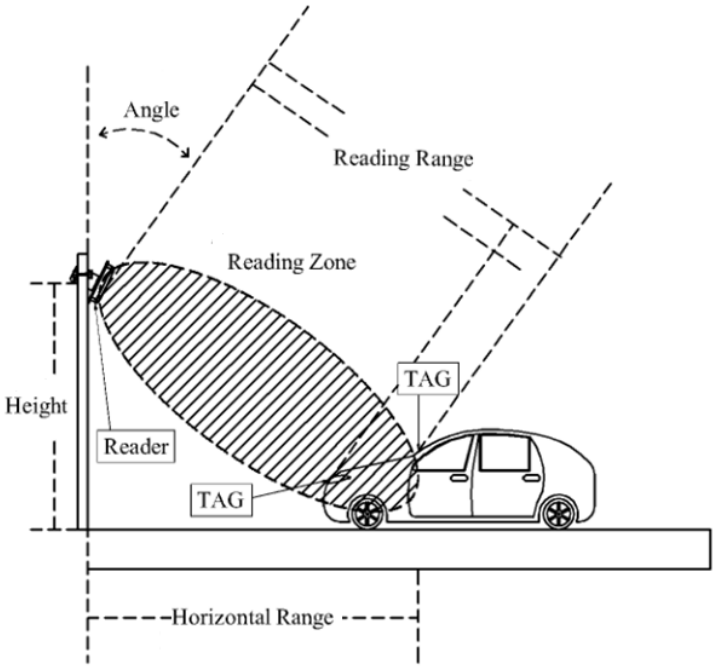
3.1 Do not install RFID Reader near metal or the metallic substance will affect the electromagnetic field type.



3.2 The recommended maximum height to set the RFID Reader is 1.8 - 2.2 m (5.9 - 7.2 ft). The height of the reader should not be lower than that of the RFID Tag being recognized.

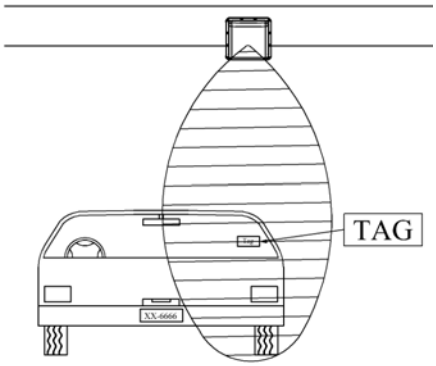
3.3 The recommended angle to set RFID Reader is 15-20 degrees. Adjust the angle according to the actual installation site.

3.4 Keep any barrier away from the reading zone between RFID the Reader and Tag.

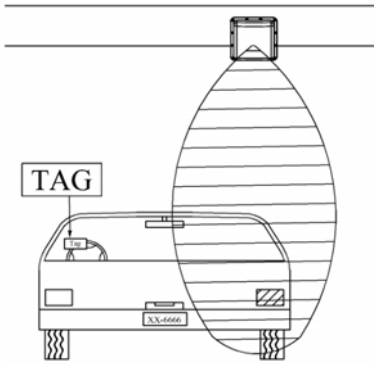


4. The RFID Reader must be installed at the same side of the Tag or at the nearest reading range to the Tag.

4.1 Upper Installation

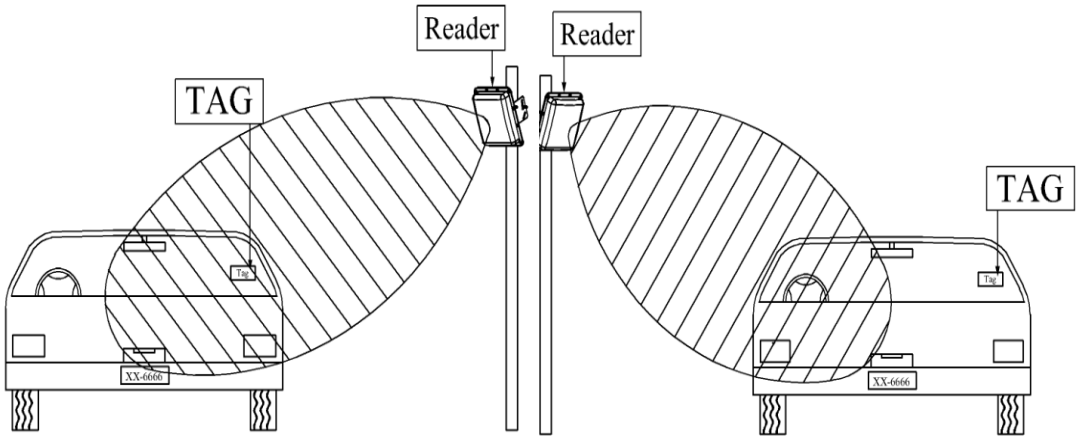


Proper



Improper

4.2 Side Installation



Proper Improper

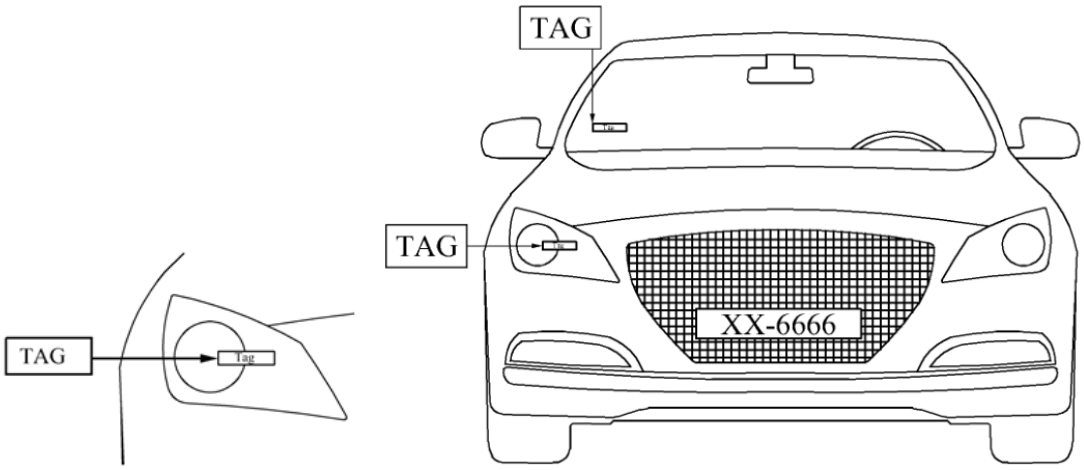
5. Recommended Tag Position

Vehicles

5.1 Place the Tag on the front windshield or headlight, at the nearest reading range to the reader.

5.2 When placing the Tag on the headlight, keep the Tag away from the metal body of the vehicle.

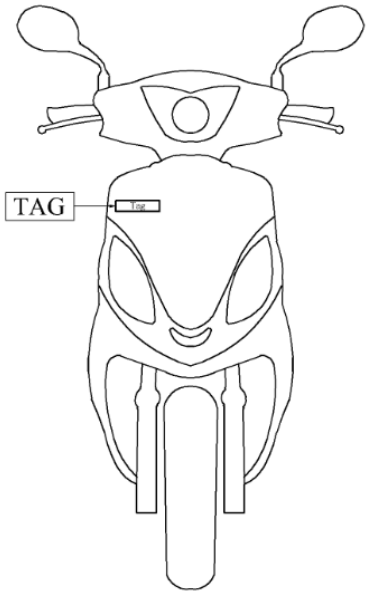
5.3 If the car windshield glass contains metallic line, it will affect the reading range. To avoid such situation, install the tag on the headlight.



Motorcycles

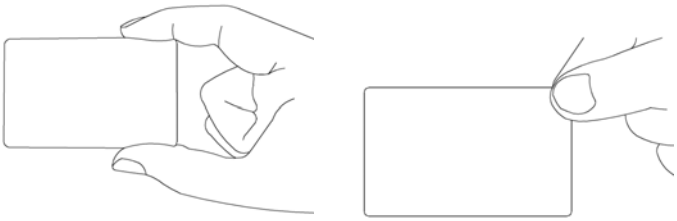
5.4 Install the Tag on the front shield and at the closest range to the RFID Reader.

5.5 If there is no front shield available, it is suggested to install the Tag on the plastic body of motorcycle at the closest range to the RFID Reader.

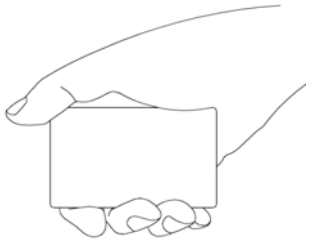


6. For card-type tags, hold the card as shown below to ensure reading results.

Correct



Misplaced



7. Notice

7.1 When the installation is complete, examine and adjust the environment parameters again for better reading results.

7.2 When two or more RFID Readers are installed together, co-channel interference might occur.

Note: To avoid channel interference, see the requirements for RFID Readers facing opposite directions or the same directions on page 12.

Chapter 1 Introduction

GV-AS1520 is a controller with a built-in Radio Frequency Identification (RFID) reader of ISO18000-6C (EPC GEN2) standard. Designed for parking lot management, GV-AS1520 can read RFID tags up to 10 m (33 ft) under optimal conditions.

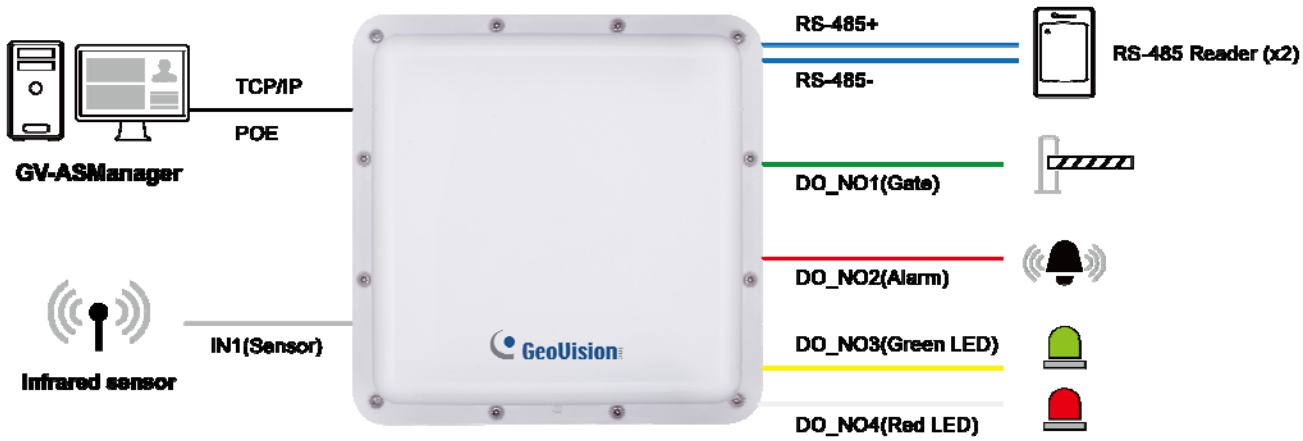


Figure 1-1

1.1 Main Features

- Built-in UHF Reader
- Built-in 1 digital input and 4 relay outputs
- 1 RS-485 interface supporting up to 2 readers
- 1 network interface for connection with GV-ASManager and TCP/IP reader
- 12V DC / PoE+ (IEEE 802.3at, provides up to 25.5 W)
- 12V DC power supply to external devices when in the PoE power mode
- Effective range of up to 10 m (33 ft) under optimal conditions
- 100,000 cards supported
- Electronic tag compliant with EPC Gen II (ISO18000-6C) standard

1.2 Packing List

- GV-AS1520
- L-Bracket
- Fixed-Clamp
- U-Clip
- Screw x 4
- Quick Guide
- Warranty Card

1.3 Firmware and Software Compatibility

The GeoVision software versions compatible with GV-AS1520 are listed below.

Software	**GV-AS1520 Firmware Version**					
GV-ASManager	**V2.00**	**V2.01**	**V2.02**	**V2.03**	**V2.04**	**V2.05**
	V5.0.1.0 – V5.0.2.0	V5.1.0.0	V5.1.1	V5.2.0	V5.3.0	V5.3.0
	V2.06					
	V5.3.0					

1.4 Wire Definitions

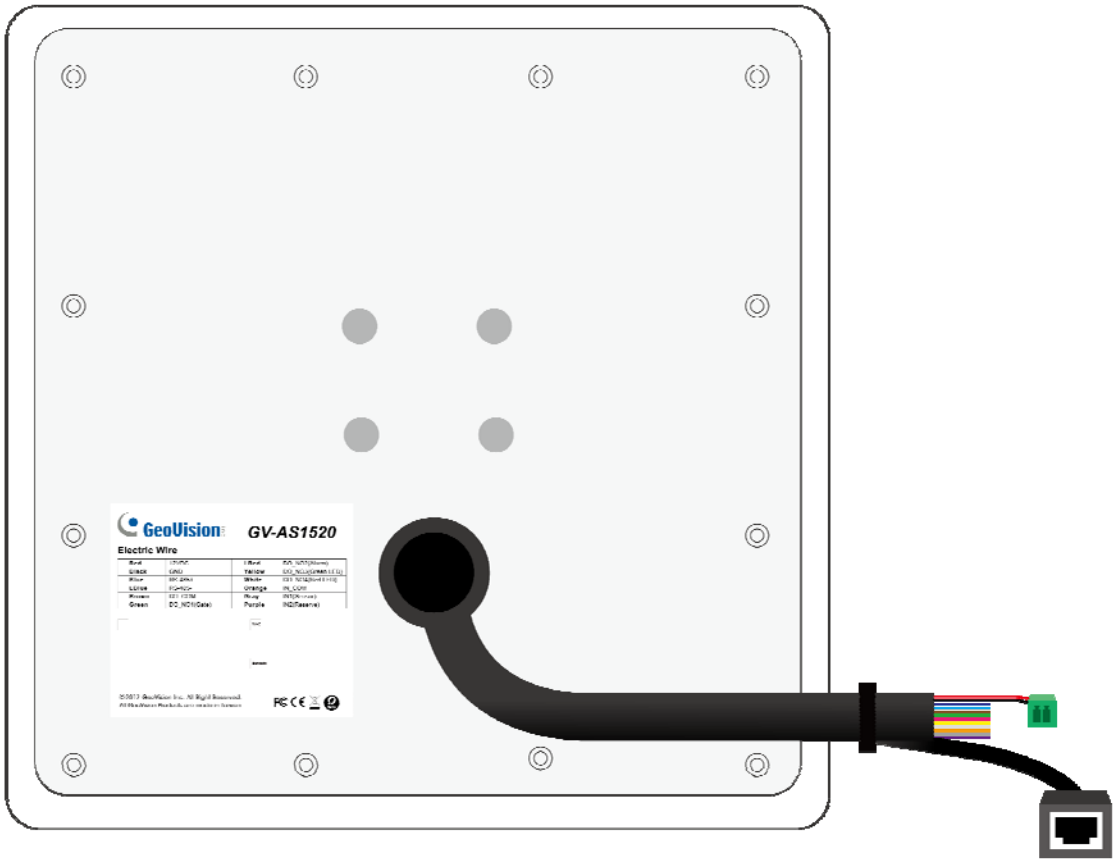


Figure 1-2

Wire	Definition
Red	12V DC
Black	GND
Blue	RS-485+; see *3.1 Connecting RS-485 Card Readers*.
Light Blue	RS-485–; see *3.1 Connecting RS-485 Card Readers*.
Brown	DO COM; see *3.3 Connecting Output Devices*.
Green	DO NO1 (Gate); see *3.3 Connecting Output Devices*.
Light Red	DO NO2 (Alarm); see *3.3 Connecting Output Devices*.
Yellow	DO NO3 (Green LED); see *3.3 Connecting Output Devices*.
White	DO NO4 (Red LED); see *3.3 Connecting Output Devices*.
Orange	IN COM
Gray	IN1 (Sensor); see *3.2 Connecting an Input Device*.
Purple	IN2 (Not Functional)

1.5 LED Status and Beeper

You can find the LED at the bottom of your GV-AS1520.

Condition	LED	Beeper
Boot completed	Green	Two long beeps
Ready	Green	N/A
The e-tag is detected but the access is denied	Displays red LED momentarily	Three short beeps
The e-tag is detected and the access is granted.	Displays red LED momentarily	One long beep

Chapter 2 Getting Started

2.1 Basic Setup for GV-AS1520

The flowchart below covers the basic steps required to start running GV-AS1520. For detailed instructions, refer to the section number listed in each step.

Connect card readers (Optional)
Connect AS1520 to up to two readers through a single RS-485 cable

3.1 Connecting RS-485 Card Readers

↓

Connect input devices
Connect AS1520 to input devices (Ex: an infrared sensor).

3.2 Connecting Input Devices

↓

Connect output devices
Connect AS1520 to output devices (Ex: a parking gate).

3.3 Connecting Output Devices

↓

Connect to PC
Connect AS1520 to a computer through network connection.

3.4 Connecting the PC

↓

Connect to power
Connect AS1520 to power using a power adapter or a POE adapter

3.5 Connecting the Power

↓

Installing the device
Install GV-AS1520 on a pole or a pillar

3.6 Installing GV-AS1520

GV-AS1520

2.2 Accessing the Web Interface of the GV-AS1520

After connecting the required wires and cables for GV-AS1520, access its Web interface to configure the controller settings. See the section number below for detailed instructions.

Set network configurations
Assign a static IP address or set up DDNS to map a dynamic IP address to a static domain name.
Chapter 4 Installing on a Network

- **Static IP address**
  4.2 Configuring the Static IP Address
- **Dynamic IP address**
  4.3 Configuring DDNS Connection

↓

Set card readers
Define the connected readers by selecting the corresponding doors / gates.
5.3.1 Extended Reader

↓

Set function settings
Specify the function and the authentication mode for each door / gate.
5.2.1 Function Setting

↓

Set parameter settings
Set the door operation for different situations and enable alarms for each door / gate.
5.2.2 Parameter Settings

↓

Set input settings
Name the input devices connected and set the input type and input function.
5.2.4 Input Settings

Chapter 3 Installation

3.1 Connecting RS-485 Card Readers

You can establish RS-485 connection with up to **2 readers** through a single RS-485 cable.

When connecting a second reader to GV-AS1520, you will need to set up a separate power source to power the second reader.

The table shows the wire assignments of RS-485 connection on GV-AS1520.

Wire color	Definition
Blue	RS-485+
Light Blue	RS-485-

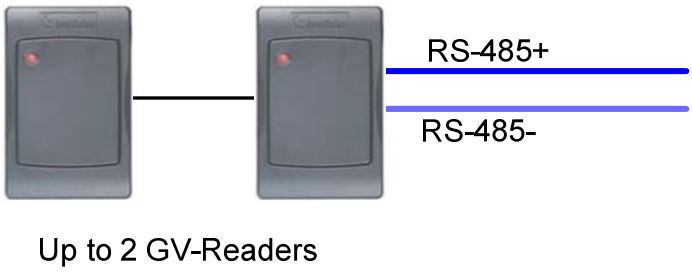


Figure 3-1

Note: GV-AS1520 only works with the following GeoVision readers: GV-CR420 / GV-SR1251 / GV-Reader1352 V2 / GV-R1352 / GV-RK1352 / GV-DFR1352.

3.2 Connecting an Input Device

GV-AS1520 supports 1 type of input: Sensor input, e.g. infrared sensor.

The input is **dry contact** and can be disabled and configured as normally open (NO) or normally closed (NC) through the GV-AS1520 Web interface. The default value is **Disable**. To change the input status, see *4.2.4 Input Configuration*.

The tables below show the wire assignment of the input connector on GV-AS1520.

Wire color	Definition
Gray	IN1 (Sensor)
Orange	IN COM

3.3 Connecting Output Devices

GV-AS1520 supports 3 types of outputs:

1. Alarm outputs, e.g. siren
2. Door outputs, e.g. gate
3. Signal outputs, e.g. green LED and red LED

The table below shows the wire assignments of output connectors on GV-AS1520.

Wire color	Definition	Wire color	Definition
Brown	DO COM	Yellow	DO NO3 (Green LED)
Green	DO NO1 (Gate)	White	DO NO4 (Red LED)
Light Red	DO NO2 (Alarm)		

The table below shows the output functions of GV-AS1520.

Output Function	Description
DO NO1 (Gate)	Output is triggered when the correct card is presented to open the gate.
DO NO2 (Alarm)	Output is triggered when the correct card is presented to enter the gate.
DO NO3 (Green LED)	Output is triggered when the correct card is presented to enter the gate.
DO NO4 (Red LED)	Output is triggered when the incorrect card is presented to enter the gate.

3.4 Connecting the PC

Connecting GV-AS1520 to a computer allows you to access its Web interface and connect it to GV-ASManager if the computer is installed with GV-ASManager. The computer running GV-ASManager software can be used to monitor the access information and alarm messages from GV-AS1520.

The figure below illustrates the network connection between GV-AS1520 and the computer.

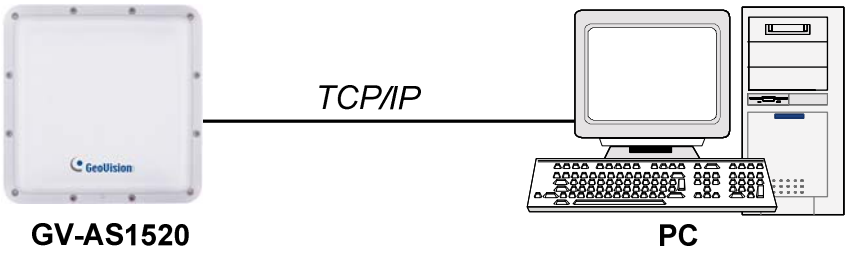


Figure 3-2

Note:

1. GV-AS1520 is only compatible with GV-ASManager V5.0.1.0 or later.
2. Once connected to GV-ASManager, GV-AS1520 can operate standalone.

3.5 Connecting the Power

You can choose to supply power using a power adapter or using a Power over Ethernet (PoE) adapter.

- When using a Power Adaptor, connect the 12V DC and GND wires to a 12V DC power adapter and then connect the power adapter to a power source.

The table below shows the wire assignments of the power connectors on GV-AS1520.

Wire color	Definition
Red	12V DC
Black	GND

- When using PoE adapter, power will be provided to the device through the Ethernet cable.

IMPORTANT: Having both the power adapter and PoE adapter connected at the same time can cause possible damage to GV-AS1520.

Note: Power should only be applied to the unit when all connections are completed and tested.

3.6 Installing GV-AS1520

You can install the reader on a pole or a pillar. Two types of pole mounts are recommended, as indicated below.

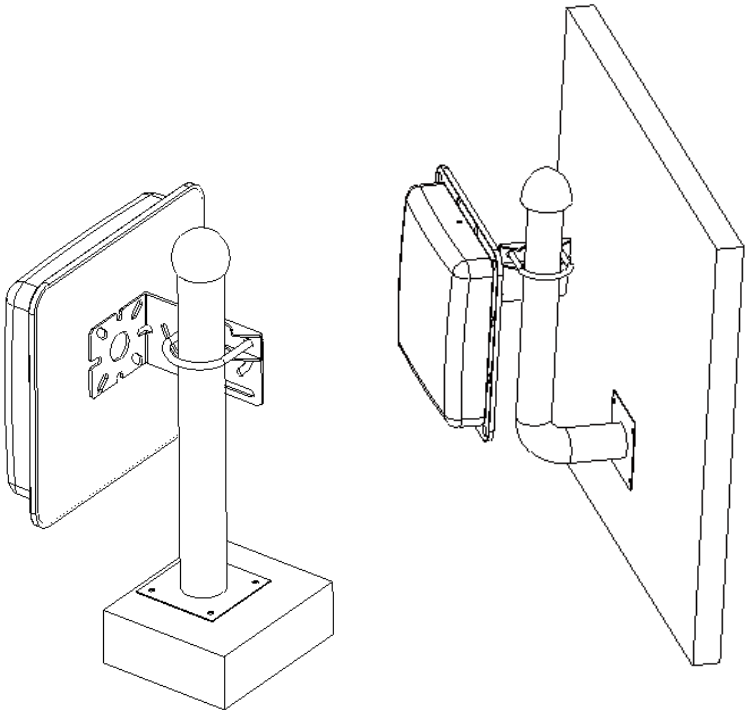


Figure 3-3

Note: Make sure the diameter of the pole is within 53 mm (0.17 ft).

1. Secure the L-bracket with four screws (supplied) on the rear side of the UHF RFID Reader.

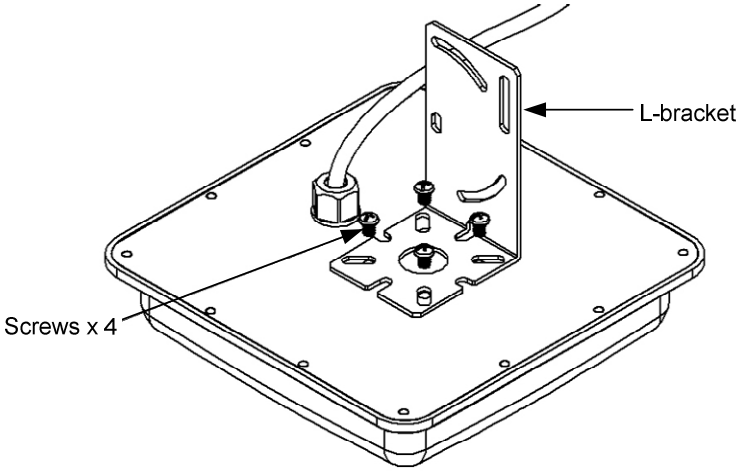


Figure 3-4

2. Secure the reader on a pillar or a pole using fixed-clamp and U-clip.

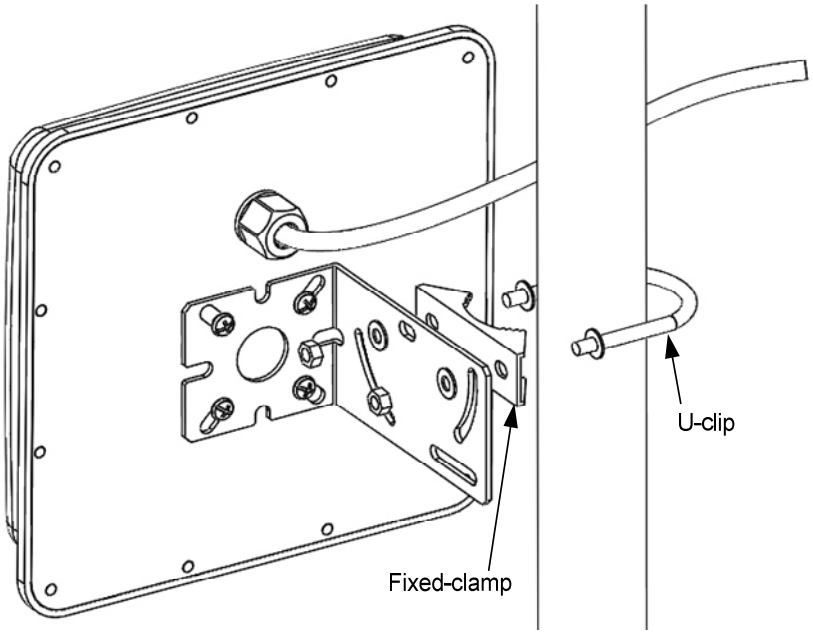


Figure 3-5

3. Adjust the angle of the U-clip on L-bracket and secure the hexagon screw nuts.

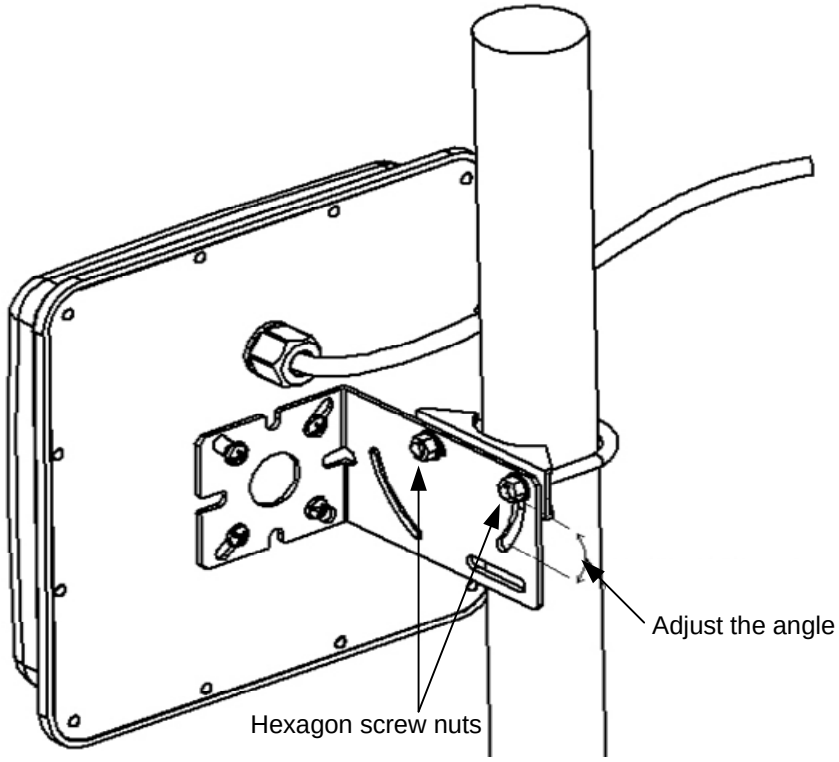


Figure 3-6

4. Here is an overview of the pole mount.

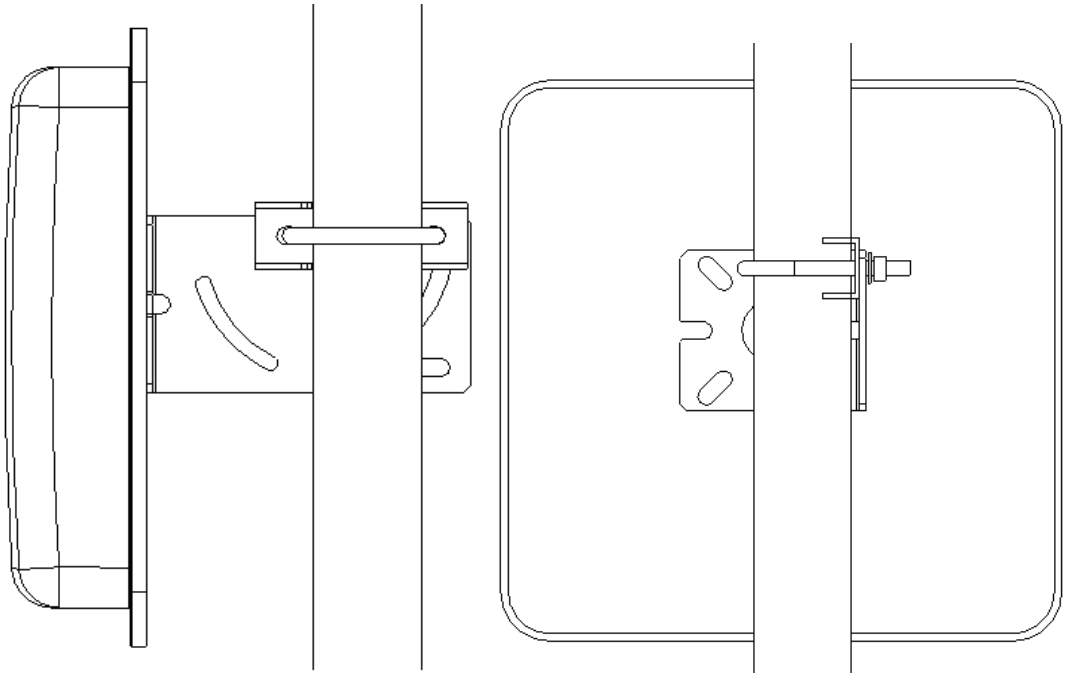


Figure 3-7

Chapter 4 Installing on a Network

You can install GV-AS1520 on a network and set up general settings and the input device through its Web interface. Through the network connection, you can also connect GV-AS1520 to GV-ASManager for more comprehensive management.

There are three ways to set up GV-AS1520 on the network.

1. By default, when GV-AS1520 is connected to a network with a DHCP server, a dynamic IP address will be assigned to GV-AS1520. See *4.1 Checking the Dynamic IP Address* to look up this IP address.

2. When the DHCP server on your network is unavailable or disabled, GV-AS1520 is accessible by its default static IP address **192.168.0.100**. See *4.2 Configuring the Static IP Address*.

3. You may also use a DDNS (Dynamic Domain Name System) server to access GV-AS1520. For details on domain name service, see *4.3 Configuring DDNS Connection*.

4.1 Checking the Dynamic IP Address

Follow the steps below to look up the IP address and access the Web interface.

1. Download and install the GV-IP Device Utility program from GeoVision website.

Note: The PC installed with GV-IP Device Utility must be under the same LAN with the GV-AS1520 you wish to configure.

2. On the GV-IP Utility window, click the button to search for the IP devices connected in the same LAN.
3. Click the **Name** or **Mac Address** column to sort.
4. Find GV-AS1520 with its MAC address, click on its IP address and select **Web Page**.

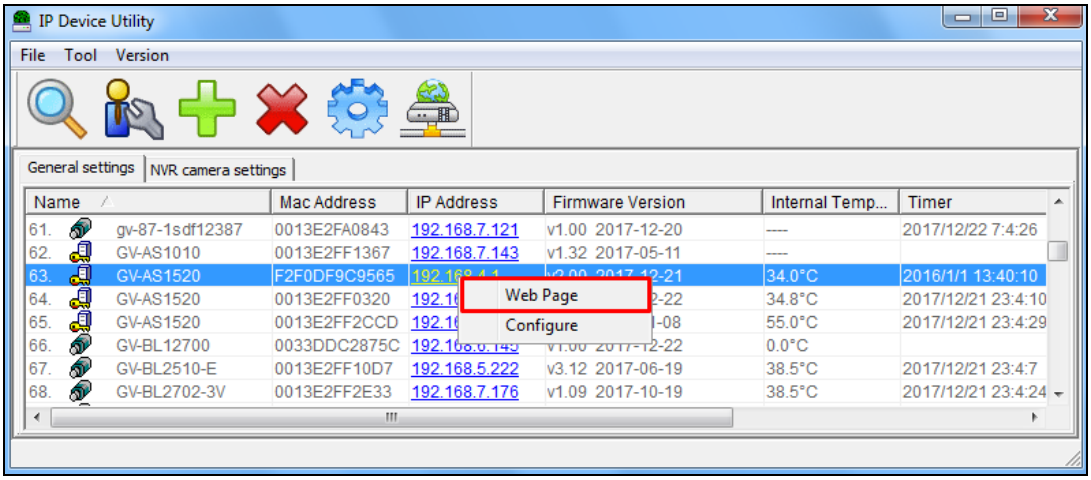


Figure 4-1

5. When login dialog box appears, type the default ID and password **admin** and click **OK** to log in.

4.2 Configuring the Static IP Address

By default, GV-AS1520 uses a DHCP connection. However, you can follow the instructions to configure the static IP address.

1. Open an Internet browser, and type the default IP address https://192.168.0.100 or the dynamic IP address. The login dialog box appears.
2. Type default value **admin** for both Username and Password, and click **OK**. This page appears.

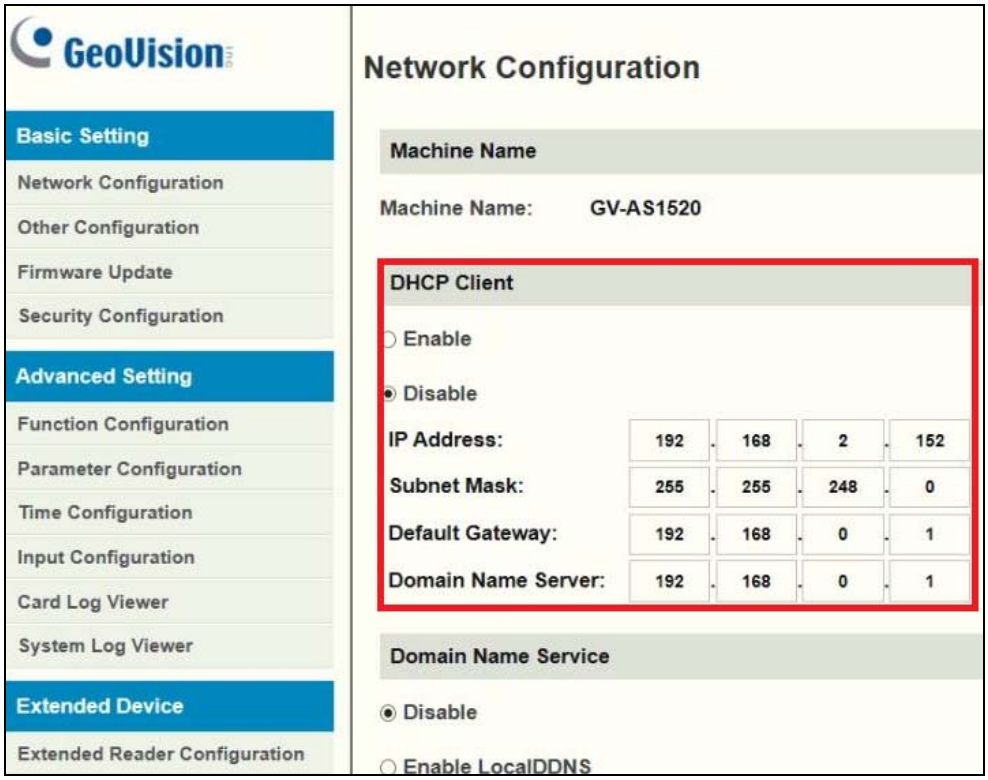


Figure 4-2

3. In the **DHCP Client** section, click **Disable**. Type the static IP address information, including IP Address, Subnet Mask, Default Gateway and Domain Name Server.
4. Click **Submit**. When the setting is complete, the Status field will indicate *Register Success*. Then GV-AS1520 can be accessed with this fixed IP address.

4.3 Configuring DDNS Connection

If your network environment is using the dynamic IP address from a DHCP server, you can use one of the following DDNS servers to map a dynamic IP address to a static domain name or device.

- For LAN connection, GV-localDDNS Server is provided.
- For Internet connection, two DDNS servers are supported: GeoVision DDNS Server and Dynamic Network Services Inc. (DynDNS)

Note:

1. Dynamic DNS uploads IP addresses over the Internet through ports 80 and 81. If your GV-AS1520 is connected behind a router or firewall, make sure ports 80 and 81 are enabled. Dynamic DNS will only upload global IP addresses. If your GV-AS1520 is using virtual IP, NAT port mapping should be done first.
2. The DDNS service is provided purely as a favor to you. We hope it simplifies the process of trying to connect an IP video device to the network. GeoVision does not and cannot warrant that the DDNS service will be uninterrupted or error free. Please read Terms of Service carefully before using the service. Besides GeoVision, you can also obtain the free DDNS service from these providers: DynDNS.org and No-IP.com.

4.3.1 Connection over LAN

GeoVision's **GV-LocalDDNS Server** can map the changing IP address of your GV-AS1520 to a device name, allowing you to access the controller using the device name.

The Local DDNS Server can be installed in either GV-ASManager or a separate computer. The wiring of the LocalDDNS application is illustrated as below.

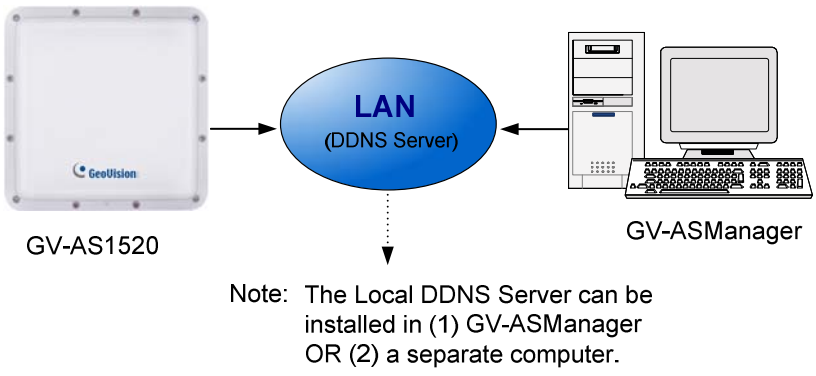


Figure 4-3

Installing LocalDDNS Server

To install the LocalDDNS Server in a computer, download **GV-Local DDNS Service** from http://www.geovision.com.tw/download/product/ under the Supplemental Utilities drop-down list of GV-AS1520. Follow the on-screen instructions to install the application. After installation, the program will be minimized to the system tray.

Configuring Controller on LAN

After running the LocalDDNS Server, configure the controller on LAN:

1. Open an Internet browser, and type the default IP address **https://192.168.0.100**. The login dialog box appears.
2. In the User Name and Password fields, type default value **admin** and **admin** respectively. Click **OK**. The Network Configuration page appears.
3. Click **Enable** under DHCP Client, and select **Enable Local DDNS**.
4. In the Server IP fields, type the IP address of the LocalDDNS Server.

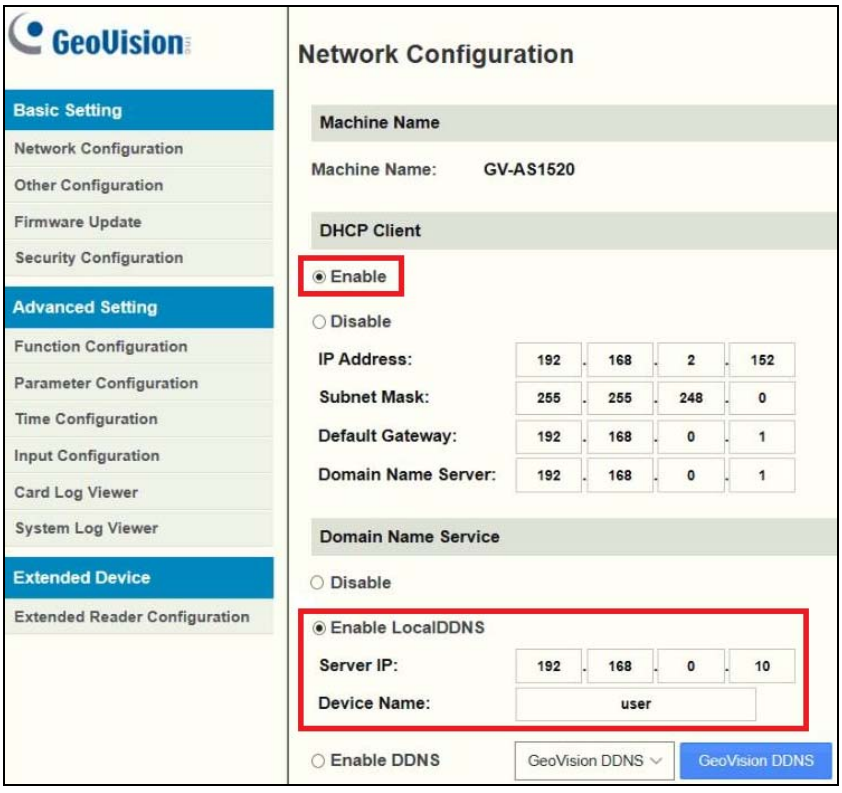


Figure 4-4

5. Click **Submit** to send the information to the LocalDDNS Server. When the setting is complete, the Status field will indicate: *Register Success*. Then your GV-AS1520 can be accessed with the device name from the GV-ASManager.

Note:

1. The default value of Device Name is **user**. If more than one controller is connected to the GV-ASManager, assign each controller a different device name.
2. To access the **Device Name** on GV-ASManager, open the Controller Setup dialog box, and select **LocalDDNS** in the Network drop-down list.

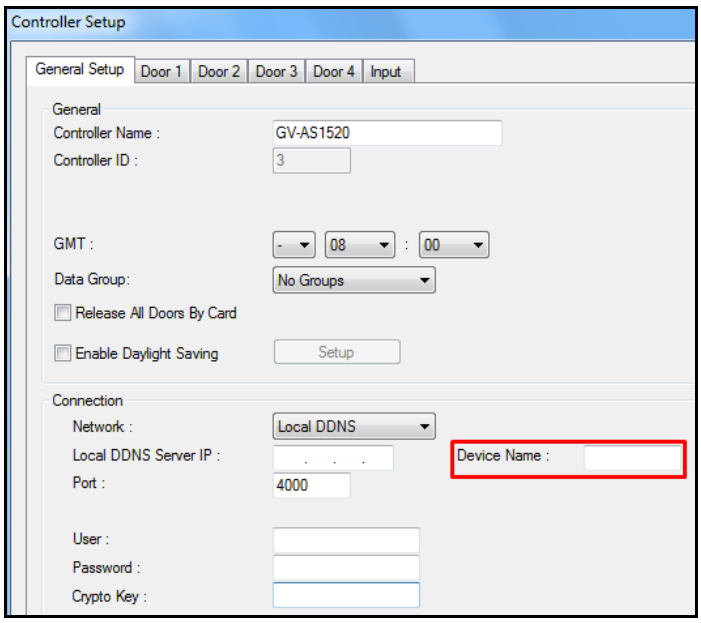


Figure 4-5

4.3.2 Connection over Internet

DDNS (Dynamic Domain Name System) provides another way of accessing GV-AS1520 when using a dynamic IP. DDNS assigns a domain name to the controller, so the GV-ASManager can always access the controller by using the domain name.

To enable the DDNS function, you should first apply for a domain name from the **GeoVision DDNS Server**, the DDNS service provider's website. To register at the GeoVision DDNS Server, see the following instructions.

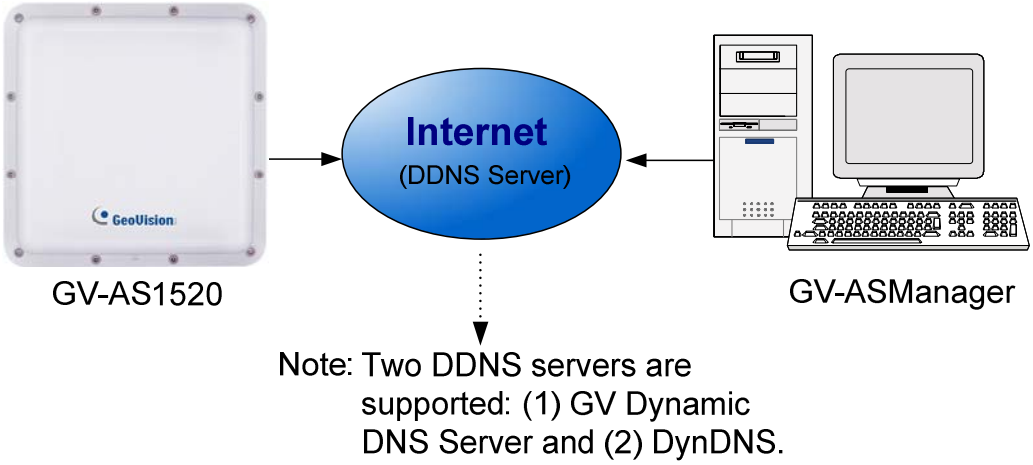


Figure 4-6

Registering a DDNS Domain Name

To obtain a domain name from the GeoVision DDNS Server:

1. Click the **GeoVision DDNS** button on the Network Configuration page (Figure 3-5). Or open an Internet browser, and type the Web address **http://ns.gvdip.com/register.aspx**. This page (Figure 4-8) appears.

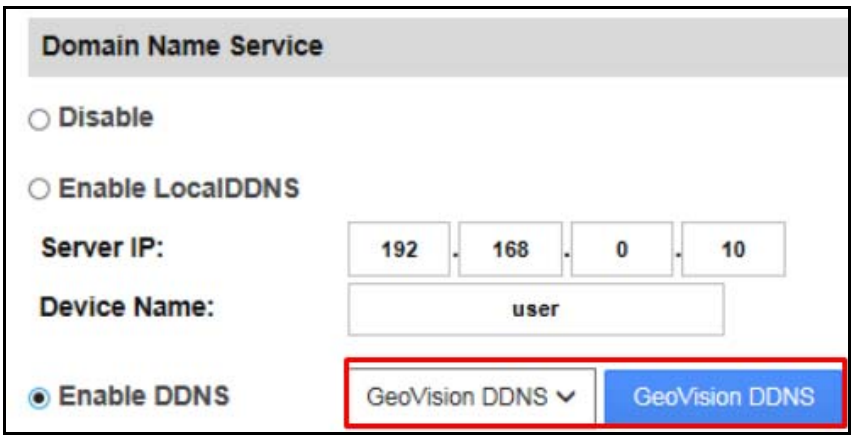


Figure 4-7

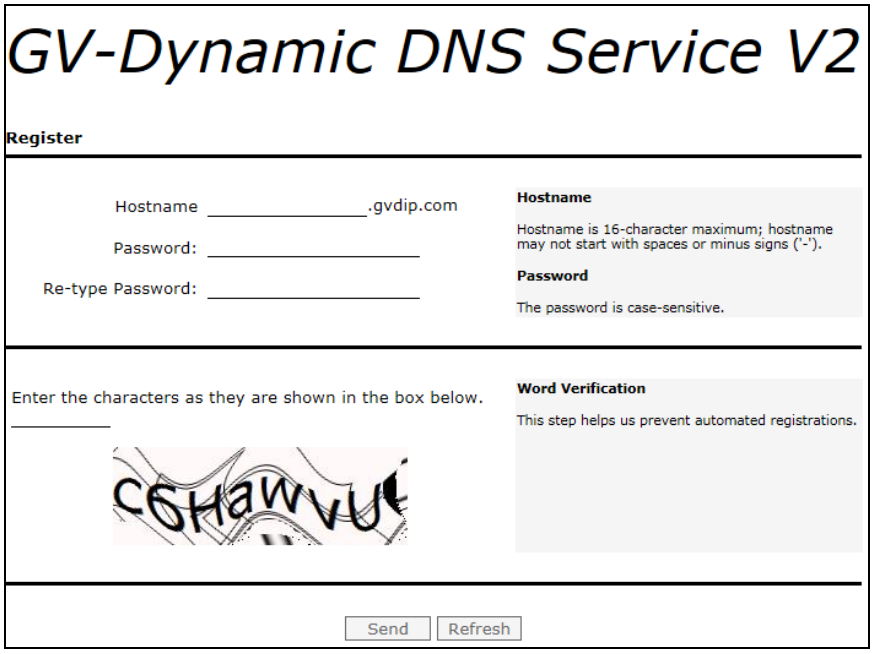


Figure 4-8

2. In the Hostname field, type a name. The hostname can be up to 16 characters with the choices of “a ~ z”, “0 ~9”, and “-”. Note that space or “-” cannot be used as the first character.
3. In the **Password** field, type a password. Passwords are case-sensitive and must be at least 6 characters. Type the password again in the Re-type Password field for confirmation.
4. In the Word Verification section, type the characters or numbers shown in the box. For example, type *c6HawvU* in the required field. Word Verification is not case-sensitive.
5. Click the **Send** button. When the registration is complete, this page will appear. The **Hostname** is the domain name, consisting of the registered username and “gvdip.com”, e.g. somerset02.gvdip.com.

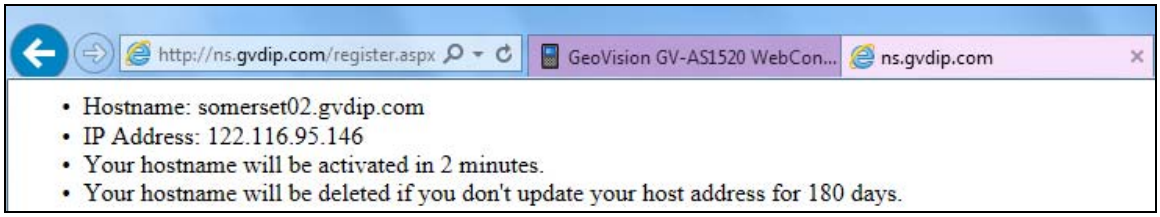


Figure 4-9

Note: The registered username will be invalid when it is not used for three months.

Configuring the GV-AS1520 Controller on Internet

After acquiring a domain name from the DDNS Server, you need to configure the registered domain name on GV-AS1520 in order to access the unit by the domain name on Internet.

1. Open an Internet browser, and type the GV-AS1520's IP address**.** The login dialog box appears.
2. In the User Name and Password fields, type default value **admin** and **admin** respectively. Click **OK**. The Network Configuration page (Figure 4-10) appears.
3. Click **Enable** under DHCP Client, and select **Enable DDNS**.
4. Type **Host Name**, **User Name** and **Password** that are registered on the DDNS Server. If you select **GeoVision DDNS**, the system will automatically bring up the Host Name.

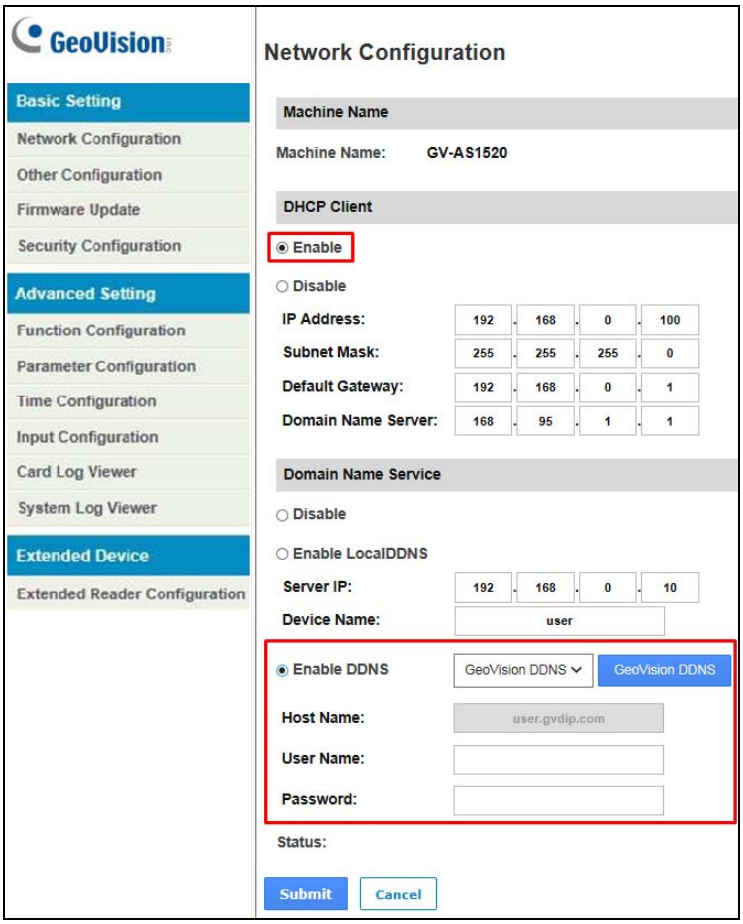


Figure 4-10

5. Click **Submit**. When the setting is complete, the Status field will indicate: *Register Success*. Then GV-AS1520 can be accessed with the domain name.

Chapter 5 The Web Interface

After installing the GV-AS1520 on the network, you can configure the controller settings on the Web interface. The left menu of the Web interface is divided into three sections: **Basic Setting**, **Advanced Setting** and **Extended Device**.

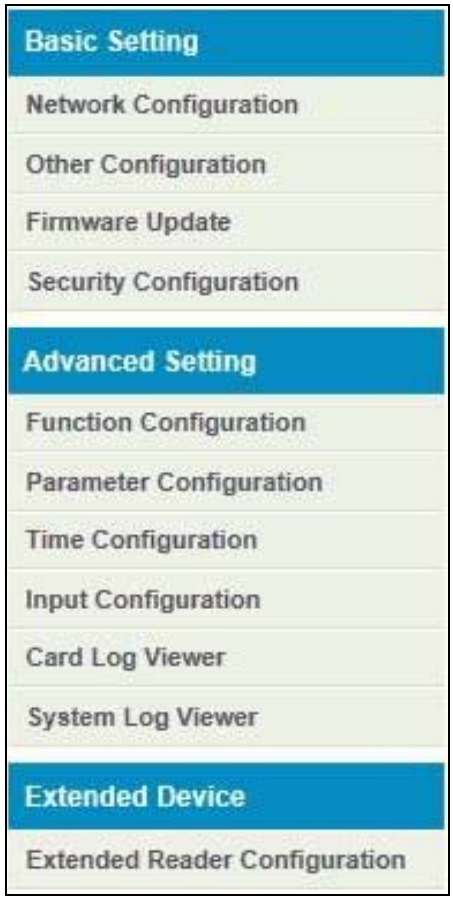


Figure 5-1

5.1 Basic Settings

The Basic Settings section covers general system settings, firmware update and user account settings. For details on Network Setting, refer to *Chapter 4 Installing on a Network*.

5.1.1 System Setup

In the left menu, click **Other Configuration**. This page appears.

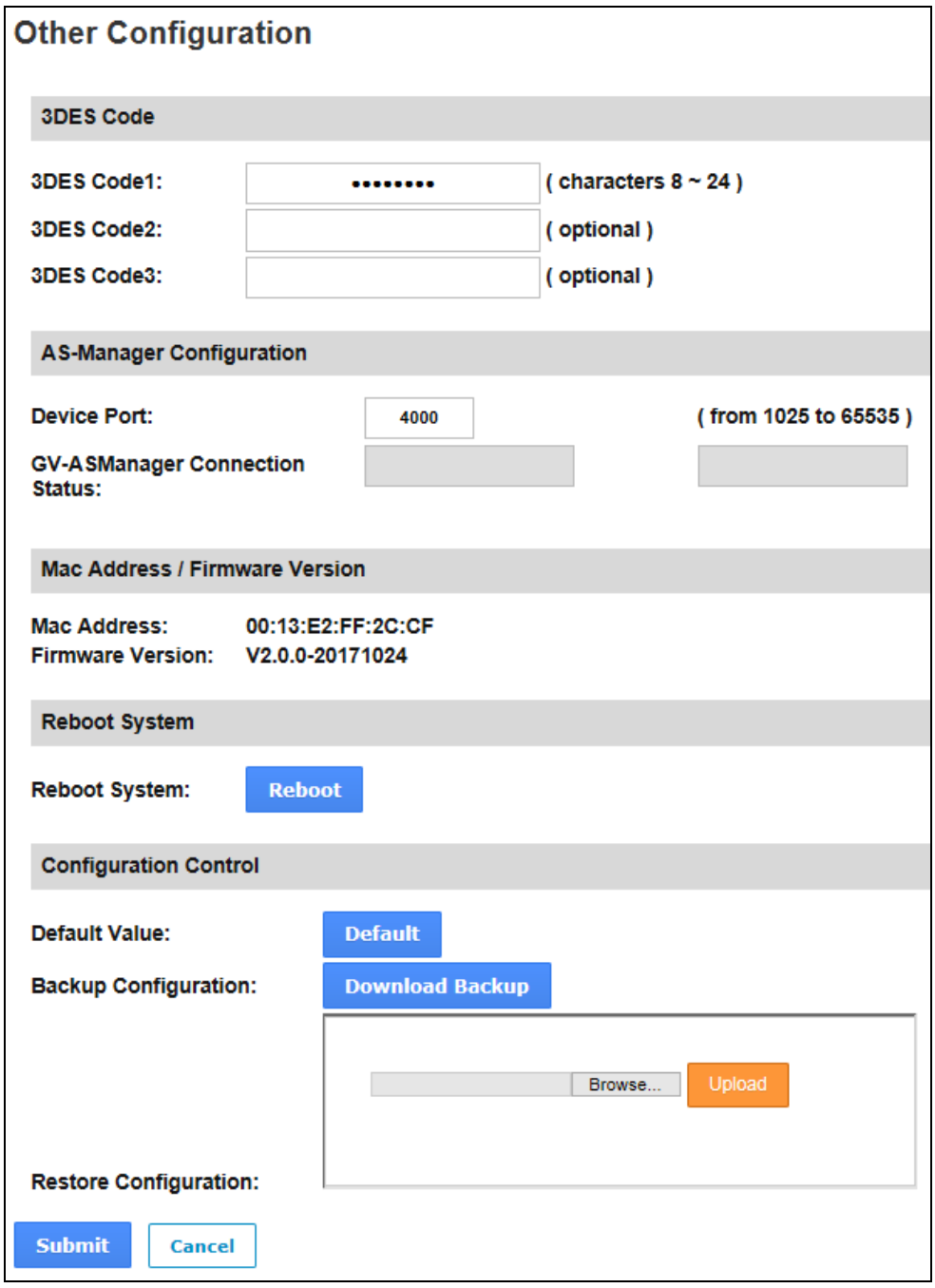


Figure 5-1

- **3DES Code 1-3:** Stands for Triple DES (Data Encryption Standard). Type up to three different keys for data encryption. The default 3DES Code1 is **12345678**.
- **Device Port:** Keeps the default value **4000**. Or modify it to match that of GV-ASManager.
- **GV-ASManager Connection Status**: If GV-AS1520 is successfully connected to GV-ASManager, the system will automatically bring up the IP address of GV-ASManager.
- **Mac Address:** Indicates the MAC address of the network medium.
- **Firmware Version:** Indicates the current firmware version of the controller.
- **Reboot System:** Performs a warm boot of the controller. This operation will keep the current configuration.
- **Default Value:** Resets all configuration parameters to their factory settings. This may take 5 seconds to complete.
- **Backup Configuration:** To backup controller settings, click the **Download Backup** button. A .bin file will be exported. You can then import the file to other controllers to avoid setting each controller individually. Note that network settings such as IP address and hardware ID will NOT be included in the backed up file.
- **Restore Configuration:** To import controller settings, click **Browse** to select the .bin file previously exported, and click the **Upload** button.

5.1.2 Upgrading Firmware

Follow the steps below to update the firmware of the controller.

1. In the left menu, click **Firmware Update**. This page appears.

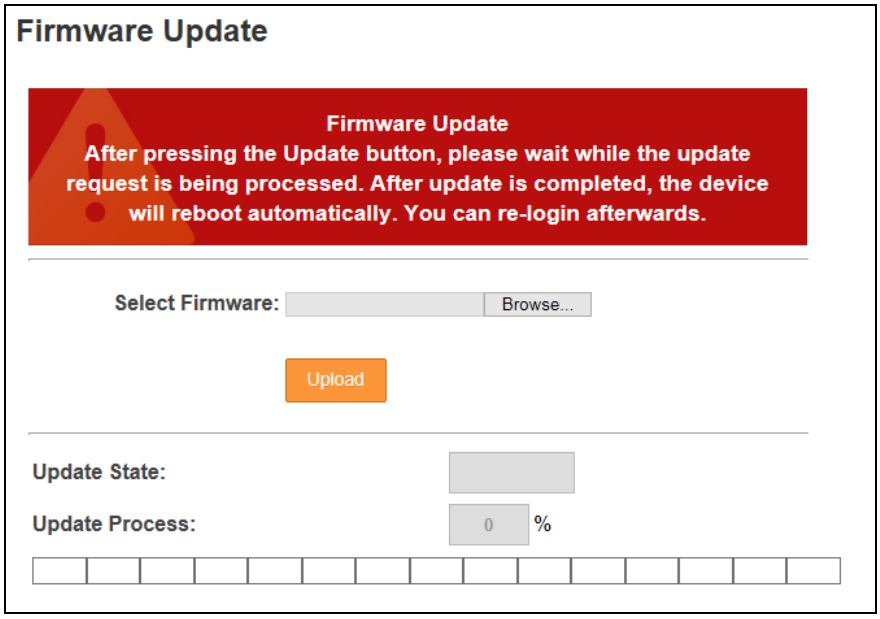


Figure 5-3

2. Click the **Browse…** button to open the firmware file (*.bin)
3. Click the **Upload** button. This update procedure may take 60 seconds to complete.
4. When the Update is complete, a dialog box appears and asks you to reboot the system.

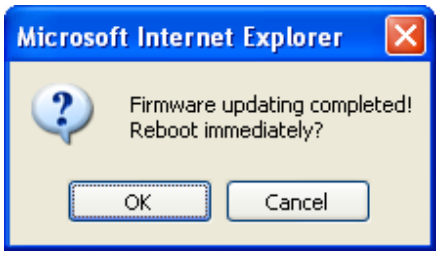


Figure 5-4

5. Click **OK**. The controller starts the Reboot operation.

Note:

1. Make sure the controller remains powered on during the firmware upgrade.
2. It is required to reboot controller after firmware update. Without rebooting, the firmware update is not complete.

5.1.3 Changing Login ID and Password

To change the login ID and password, in the left menu, click **Security Configuration**. The password is case sensitive and is limited to alphabets and numbers.

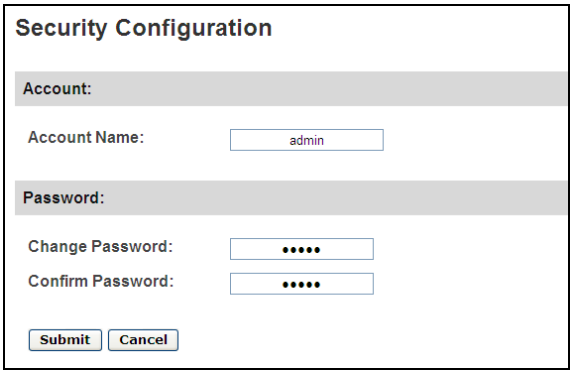


Figure 5-5

5.2 Advanced Settings

Under Advanced Settings, you can configure the door settings, turn on Alarms, set the device time, edit the input function and view logs.

Changes in some of the Advanced Settings pages will affect the options available on other pages. Below is a diagram drawing the relationships between each Advanced Settings page.

The Relationship Diagram between each Advanced Setting Page

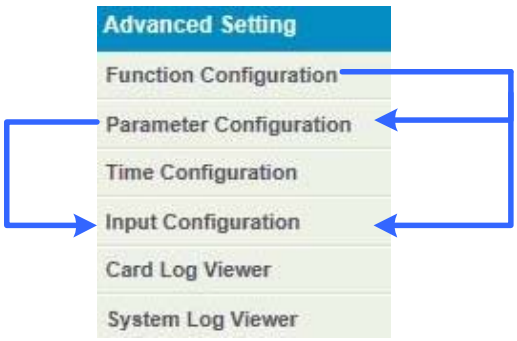


Figure 5-6

5.2.1 Function Configuration

In the left menu, click **Function Configuration**. This page appears.

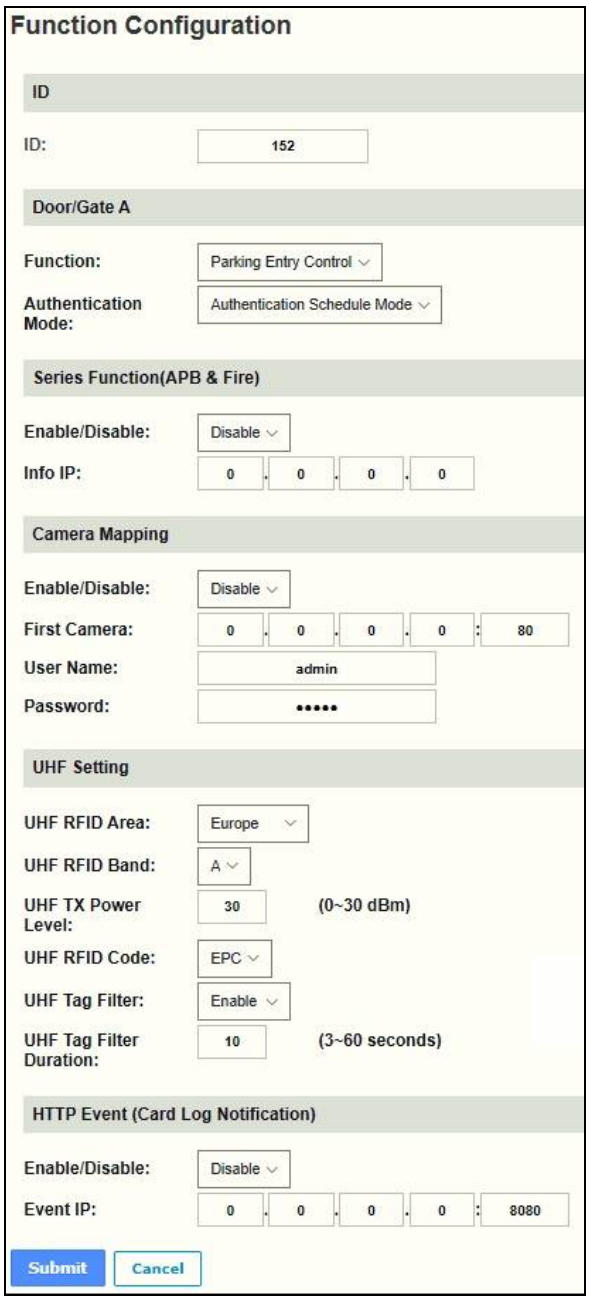


Figure 5-7

[ID]

Enter the ID number for the controller. This ID is used by GV-ASManager to differentiate among multiple units of controllers. ID number can only be between 1 and 1000.

[Door/Gate #]

Select the function type and authentication mode for the use of the Doors/Gates.

- **Function:** Select the function for GV-AS1520 connected to the Door/Gate.
  - **Parking Entry Control:** The GV-AS1520 is installed at the entry door/gate of the parking lot for access control.
  - **Parking Exit Control:** The GV-AS1520 is installed at the exit door/gate of the parking lot for access control.
- **Authentication Mode:** Select the authentication mode for the Doors/Gates.
  - **Local Unlock Mode:** Remains open. The held-open state cannot be cleared through GV-ASManager.
  - **Local Lock Mode:** Remains locked. The locked state cannot be cleared through GV-ASManager.
  - **Fixed Card Mode:** Grants access after the card is presented or a passcode is entered, and ignores the authentication schedule of GV-ASManager.
  - **Fixed Card/Common Mode:** Grants access after the card is presented or after the door's/gate's password is entered. Ignores the authentication schedule of GV-ASManager.
  - **Authentication Schedule Mode:** Follows the authentication schedule set on GV-ASManager.

[Series Function (APB & Fire)]

This option lets you set the Anti-Passback function and fire sensor function across multiple parking gate controllers. The Anti-Passback means that a card used on an entry door/gate cannot access the same entry door/gate again unless it has been used on a corresponding exit door/gate. For details on setup, see *Chapter 6 Anti-Passback* on *GV-ASManager User's Manual*.

For all zone fire sensor function, the fire sensors on all associated controllers will be triggered when the fire sensor on one door/gate is triggered.

Note: GV-AS1520 does not support Fire Sensor and Alarm. Through this setting, you can only see the Fire Alarm icon on the controller list of GV-ASManager when the fire event occurs.

- **Enable/Disable:** Enables or disables the Anti-Passback function and fire sensor function.
- **Info IP:** Enter the IP address of the next corresponding controller.

[Camera Mapping]

This option lets you assign a camera to capture snapshots upon an e-tag being detected by GV-AS1520 or swiping a valid card on the connected reader. The captured snapshots will be saved to the flash drive of GV-AS1520 and then transfer to Access Log of GV-ASManager whenever GV-ASManager resumes connection after it has been disconnected.

- **Enable/Disable:** Enables or disables the camera mapping function.
- **First Camera:** Type the IP address of the assigned camera to take snapshots.

Type the **User Name** and **Password** of the camera to complete the mapping process.

[UHF Setting]

- **UHF RFID Area:** Indicates the region of the RFID reader is assigned.
- **UHF RFID Band:** Indicates the band of the RFID reader is assigned. When multiple RFID readers are installed together facing the same direction, separating frequency bands to avoid channel interference is required.

  Band separation available upon request when purchasing.
- **UHF TX Power Level:** Set the signal strength transmitted by the RFID Reader to read e-tags. The higher the power level, the larger the reading range.
- **UHF RFID Code**: Select **EPC** or **TID** to read the codes stored on the e-tags. If EPC is selected, only the EPC codes from GeoVision's approved e-tags can be read.
- **UHF Tag Filter**: Select **Disable** to allow the same e-tag in the sensing region to repeatedly send log notification. Or, keep the default value **Enable** to prevent the first three e-tags from being repeatedly detected.
- **UHF Tag Filter Duration**: Specify the elapsed time after which one of the previous three e-tags is out of the sensing region. When the specified time is over, GV-AS1520 will start detecting and responding e-tags accordingly, such as opening the gate or denying the access.

[HTTP Event (Card Log Notification)]

Select **Enable** to send access and event logs of GV-AS1520 to the configured **event IP** address and **Port** number.

Click **Submit** button to save the changes, or click **Cancel** button to return the changes to its previous state.

5.2.2 Parameter Configuration

In the left menu, click **Parameter Configuration**. This page appears.

IMPORTANT: Once connected to GV-AS1520, GV-ASManager will load its parameters to the controller. That means some of the Parameter Settings you have configured here may be overwritten by GV-ASManager later.

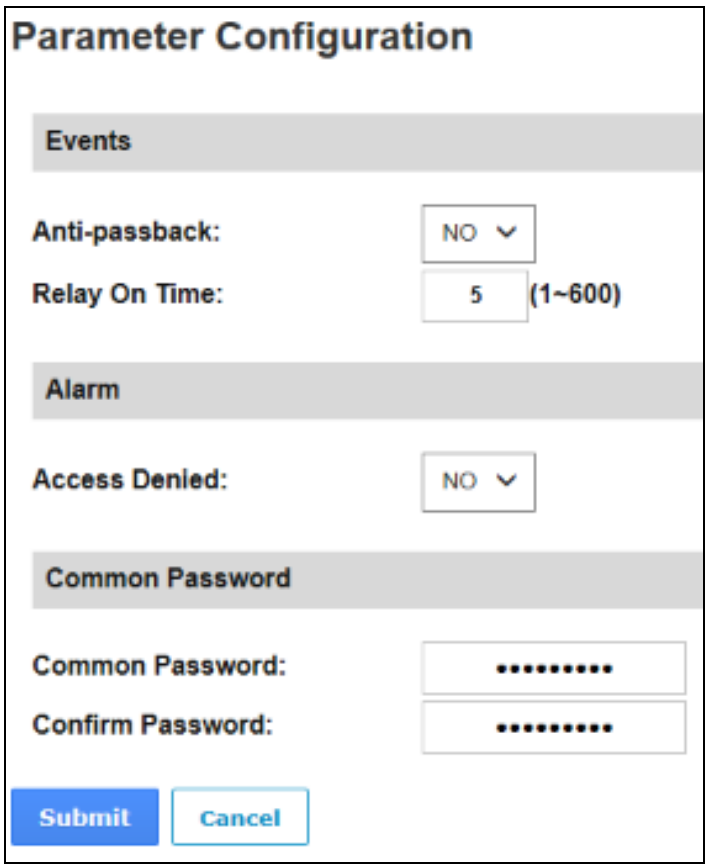


Figure 5-8

[Events]

Set the parameters for the events.

Option	Description
Anti-Passback	Enable or disable the Anti-Passback function.
Relay On Time	Sets the time (1 to 600 sec.) that a gate remains open after which the gate will automatically be closed.

[Alarm]

Select **Yes** or **No** to enable or disable the alarm function. The default settings are set to **NO**.

Option	Description
Access Denied	The access denied alarm on GV-ASManager. It activates whenever entry is denied due to using the wrong card or entering the wrong password.
Note: You can only see the icon of Access Denied on the controller list of GV-ASManager when the event occurs.	

[Common Password]

When **Fixed Card/Common Mode** is selected as **Authentication Mode** in the **Function Configuration** page (Figure 5-7), you can gain access by using a card or entering this Common Password (door's password).

Click **Submit** button to save the changes, or click **Cancel** button to return the changes to its previous state.

5.2.3 Time Configuration

In the left menu, click **Time Configuration** to set up system time, local time and daylight saving time period.

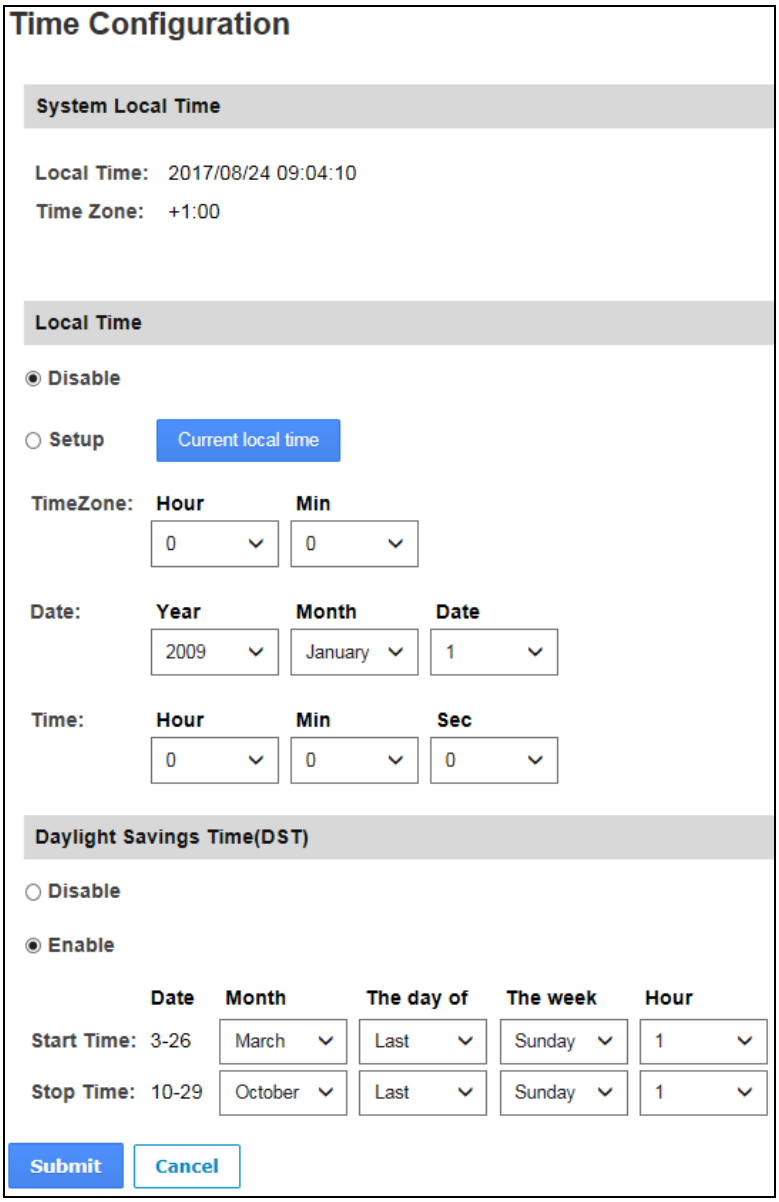


Figure 5-9

[System Local Time]

- **Local Time:** Displays the current date and time of the controller.
- **Time Zone:** Displays the current time zone of the controller.

[Local Time]

- **Disable:** Disable the manual configuration of time and date.

- **Setup:** Enable the manual configuration of **Time Zone**, **Date** and **Time** for the controller. You can click the **Current local time** button to set synchronize the controller's date and time with the PC's current date and time.

[Daylight Savings Time (DST)]

- **Disable:** Disable the manual configuration of DST.
- **Time Zone:** Enable the manual configuration of DST by setting the **Start Time** and **Stop Time** for the DST period.

Click **Submit** button to save the changes, or click **Cancel** button to return the changes to its previous state.

5.2.4 Input Configuration

In the left menu, click **Input Configuration** to define the input device connected to the GV-AS1520. You set the input to NO (normally open), NC (normally close) or disable.

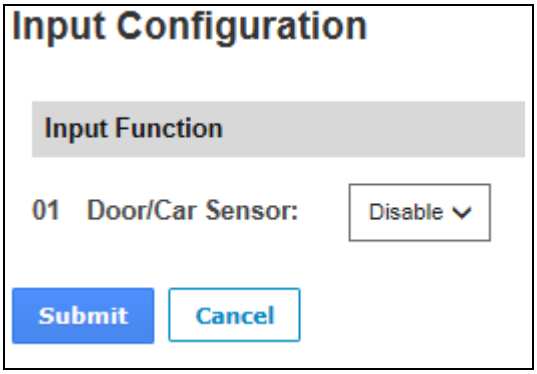
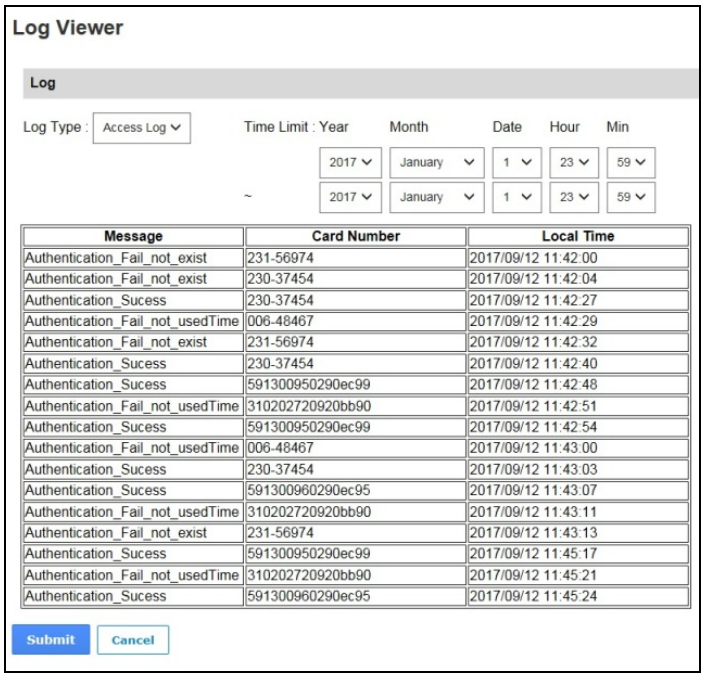


Figure 5-10

Input Function	Description
Door/Car Sensor N/O	When **N/O** is selected, the e-tag cannot be detected. The e-tag is detected only upon input trigger.
Door/Car Sensor N/C	When **N/C** is selected, the e-tag can be detected. The e-tag is not detected whenever the input sensor is triggered.
Door/Car Sensor Disable	When **Disable** is selected, the e-tag is detected regardless of the status of the input sensor.

5.2.5 Card Log Viewer

In the left menu, click **Card Log Viewer** to select a log type and specify a time period to access the log information. The log entries are only created when GV-AS1520 is disconnected from GV-ASManager. Only up to 100 log entries of Event Log / Access Log can be retrieved at a time.



Message	Card Number	Local Time
Authentication_Fail_not_exist	231-56974	2017/09/12 11:42:00
Authentication_Fail_not_exist	230-37454	2017/09/12 11:42:04
Authentication_Sucess	230-37454	2017/09/12 11:42:27
Authentication_Fail_not_usedTime	006-48467	2017/09/12 11:42:29
Authentication_Fail_not_exist	231-56974	2017/09/12 11:42:32
Authentication_Sucess	230-37454	2017/09/12 11:42:40
Authentication_Sucess	591300950290ec99	2017/09/12 11:42:48
Authentication_Fail_not_usedTime	310202720920bb90	2017/09/12 11:42:51
Authentication_Sucess	591300950290ec99	2017/09/12 11:42:54
Authentication_Fail_not_usedTime	006-48467	2017/09/12 11:43:00
Authentication_Sucess	230-37454	2017/09/12 11:43:03
Authentication_Sucess	591300960290ec95	2017/09/12 11:43:07
Authentication_Fail_not_usedTime	310202720920bb90	2017/09/12 11:43:11
Authentication_Fail_not_exist	231-56974	2017/09/12 11:43:13
Authentication_Sucess	591300950290ec99	2017/09/12 11:45:17
Authentication_Fail_not_usedTime	310202720920bb90	2017/09/12 11:45:21
Authentication_Sucess	591300960290ec95	2017/09/12 11:45:24

Figure 5-11

5.2.6 System Log Viewer

In the left menu, click **System Log Viewer** to view the current system status and dump data that can be used by service personnel for analyzing problems.

5.3 Extended Device

You can define the GV-Readers and GV-GF Fingerprint Readers connected to GV-AS1520 through RS-485 or network connection.

5.3.1 Extended Reader

In the left menu, click **Extended Reader Configuration**. This page appears.

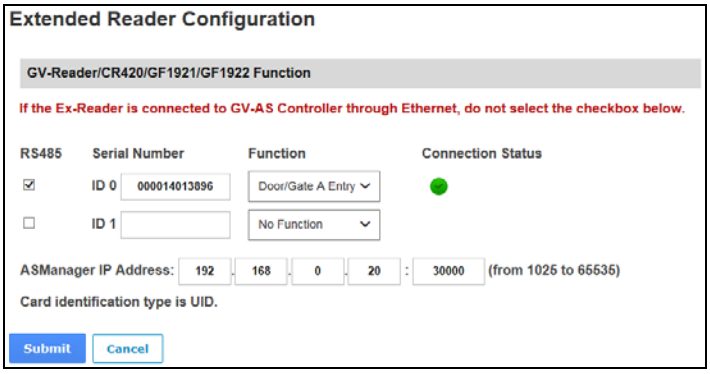


Figure 5-12

[GV-Reader / CR420 / GF1921 / 1922 / CR1320 Function] Define the readers connected to the controller, and then use the **Function** drop-down list to select the door/gate associated with the reader.

- **GV-RK1352 / R1352 / DFR1352:** Select the **RS-485** checkbox and type the **Serial Number** of the reader.
- **Reader 1352 V2:** Select the **RS-485** checkbox and leave the serial number field blank. Note that the ID number located next to the serial number field need to match the reader's ID number defined by the dip switches on the reader.
- **GV-GF1921 / GF1922 / CR1320:** Type the **MAC address** of the fingerprint or camera reader and do not select the RS-485 checkbox.
- **GV-CR420:** Select the **RS-485** checkbox only if the GV-CR420 is connected to the controller through RS-485 connection. If the reader is using network connection, do not check the RS485 box. Type the **MAC address** of GV-CR420 if you using the latest GV-CR420 firmware.

[ASManager Server IP Address] To allow GV-ASManager to receive data from the GV-AS1520, type the IP address and port of the GV-ASManager's Server.

Click **Submit**. If the reader is detected, the **Connection Status** field will be green.

Chapter 6 Troubleshooting

Q1: GV-ASManager cannot connect to GV-AS1520 over the Internet.

There are several causes for this problem such as IP address conflict, incorrect connection settings and network failure. Follow the steps below to assign the fixed IP to the GV-ASManager and GV-AS1520 respectively. This procedure can determine if the problem is caused by the faulty devices and incorrect network settings.

1. Disconnect the hub or switch, which connects the GV-ASManager and GV-AS1520, from the network.
2. Give the GV-ASManager a fixed IP address that is NOT used by another device, e.g. 192.168.0.154.

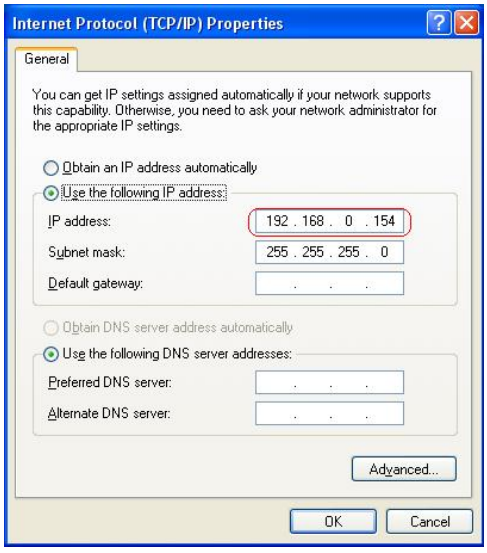


Figure 6-1

3. Reset GV-AS1520 to factory defaults. For details, see *5.1.1 System Setup*.

4. Open the browser and type the controller default address: http://192.168.0.100

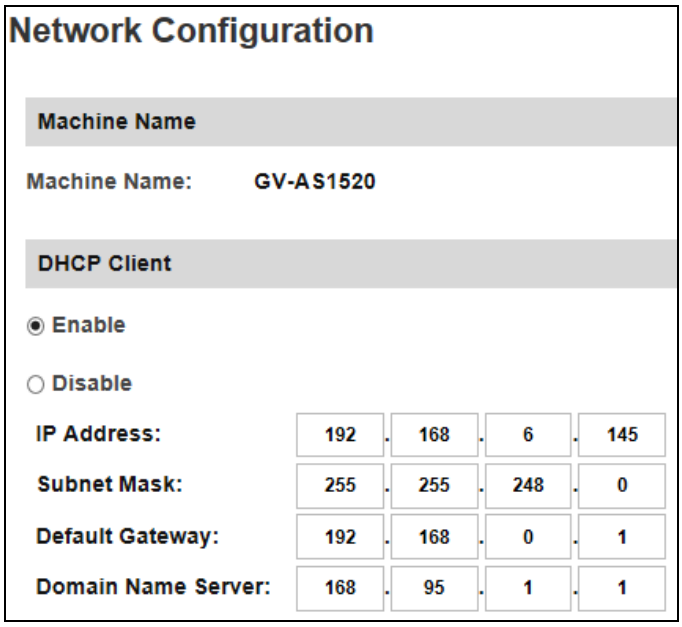


Figure 6-2

5. In the IP address field, give the controller an IP address that is NOT used by another device, e.g. 192.168.0.XXX.
6. On the GV-ASManager, type the following settings:

   Controller ID: 1

   Network: TCP/IP

   IP: 192.168.0.XXX

   Port: 4000

   User: admin

   Password: admin

   Crypto key: 12345678

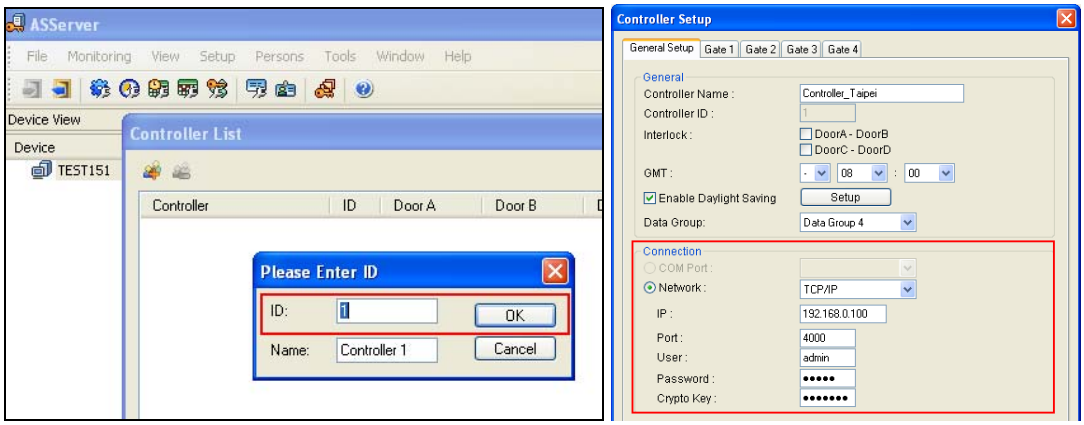


Figure 6-3

7. The connection between the GV-ASManager and controller should be established, and the connection icon should appear. If disconnection happens after you connect the hub or switch to the network, then it should be other network problems. Please contact your network administrator.

Q2: The connection established between the GV-ASManager and GV-AS1520 is interrupted.

This may be due to IP address conflict. Follow these steps to troubleshoot the problem:

1. Disconnect the hub or switch, which connects to the GV-ASManager and the controller, from the network.
2. Run Windows **Command Prompt**. Take Classic Windows Start Menu for example, click **Start**, select **Accessories** and click **Command Prompt**.
3. Type **arp –d** and press **Enter**.

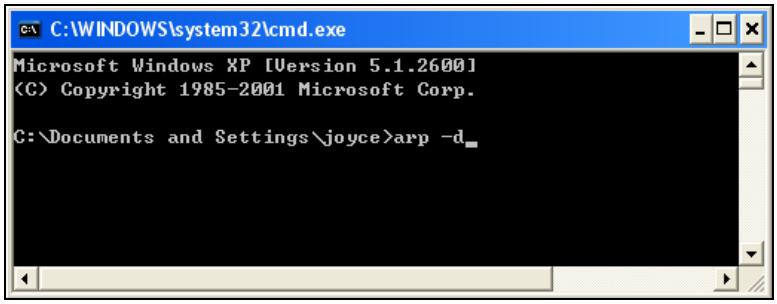


Figure 6-4

4. Give the GV-ASManager a fixed IP address that is NOT used by another device. See Figure 6-1.
5. Open the browser and enter the assigned IP address of the controller. The Network Configuration page appears. See Figure 6-2.
6. In the IP address field, give the GV-AS1520 an IP address that is NOT used by another device, e.g. 192.168.0.XXX.
7. On the GV-ASManager, enter the following settings. See Figure 6-3.

   Controller ID: 1

   Network: TCP/IP

   IP: 192.168.0.XXX

   Port: 4000

   User: admin

Password: admin

Crypto key: 12345678

8. The connection between the GV-ASManager and GV-AS1520 should be established, and the connection icon should appear. If disconnection happens after you connect the hub or switch to the network, then it should be other network problems. Please contact your network administrator.

Q3: GV-ASManager cannot receive card messages but the reader accepts the card when the connection between the GV-ASManager and GV-AS1520 is well established.

It may be due to memory failure in the GV-AS1520. Reset the controller module to factory settings. For details, see *6.1.1 System* Setup.

Q4: After I add a card by presenting to the reader, the message "*Access Denied Invalid Card*" still appears.

It may be the card format is not compatible with the GV-AS1520. Make sure the card format is 64 bits. Otherwise, send us the related information of your card format so that we can customize the format for you.

Q5: The GV-ASManager cannot receive card messages from the GV-Reader connected to the GV-AS1520 through RS-485 interface.

1. Make sure the GV-Reader is correctly wiring to the controller. See *4.1 Connecting RS-485 Card Readers* for details.
2. Make sure the correct GV-Reader ID is set on the controller. See *4.3.1 Extended Reader* for details.

Q6: How can I find more help?

Visit our website at http://www.geovision.com.tw

Write to us at support@geovision.com.tw