ATEN®
Simply Better Connections™

Installation Guide

GN0116 Guardian Over the NET™

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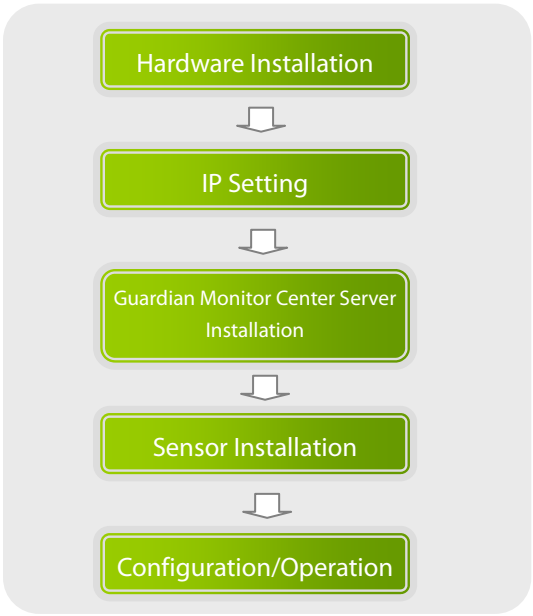
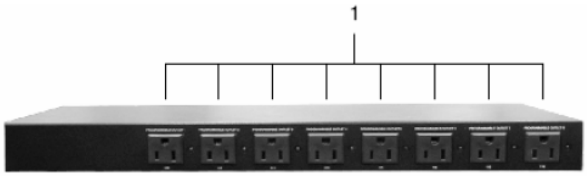
Installation Process



Product Front View

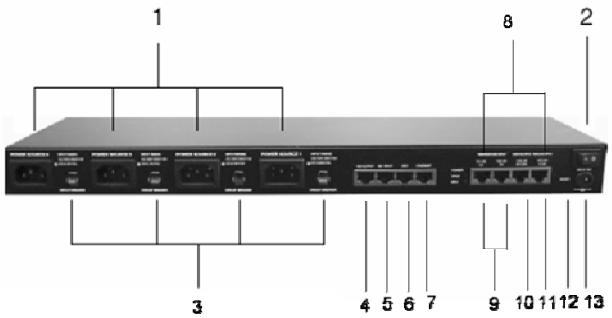


(Front View)

1. Programmable AC Power Outlets

Product Rear View

1. AC Power Source Inlet
2. Power Switch
3. Circuit Breaker Switches
4. 485 Output: In a daisy chained installation this is the chain out port of the parent station.
5. 485 Input: In a daisy chained installation this is the chain in port of the child station.
6. 232C: Used for a serial connection (either from a modem or a direct terminal connection from a local console) for monitoring, software updating, etc.
7. Ethernet: Used for browser connections to the GN0116 from remote systems.
8. Ports101, 102; 103,104; 105,106; and 107,108 are digital output ports. The output voltage is 12VDC; 50mA. They can operate buzzers, warning lights and other similar devices. They can also be connected to an extension unit and used as programmable power outlets.
9. Ports 1, 2 and 3, 4 are resistance type analog input ports. The input resistance ranges from 2~205KΩ. The ports have 1024 levels of resolution. With appropriate drivers, they can be connected to thermistor or other resistance-output sensors (such as CDS sensors).
10. Ports 201,202 are digital input ports (dry contact). They can be connected to On/Off-type output sensors (such as intrusion, access control, smoke, and leakage sensors).
11. Ports 31, 32 are voltage-type analog input ports. The input voltage ranges from 0~5VDC. The ports have 1024 levels of resolution. With appropriate drivers, they can be connected to sensors with 0~5 VDC output voltage, such as AC/DC voltage sensors, current sensors and humidity sensors.
12. Reset Switch
13. Power Input



Hardware - Basic Installation

> Power Connection

1. Connect one end of the bundled Power Adapter to the AC power source and the other end to the AC power source inlet on the rear panel.

2. Turn on the GN0116's power switch.

The GN0116 supports two types of network connections – over the Ethernet or through RS-232. RS-232 can be connected to a modem to support a Dial-up connection. It can also be connected directly to the computer COM Port so commands can be issued through the RS-232 Port or for setting the Logic Configuration and Proxy function.

> Ethernet Connection

If the Ethernet connection is used, connect the network cable into the RJ-45 port to connect the GN0116 to the network.

> RS-232 Connection

If you choose to use the RS-232 connection, connect the RJ-45 connector on the bundled RS-232-to-RJ-45 cable to the port marked as 232C on the panel and the RS-232 to the corresponding device (Computer COM port or the MODEM port); as the demonstrator is using a notebook computer, an additional ATEN UC232A was used to convert the RS-232 signal to USB so it can be passed to the notebook computer through the USB interface.

Note: You may choose between an Ethernet or RS-232 connection. If you choose the Ethernet connection then there is no need to connect the RS-232 port.

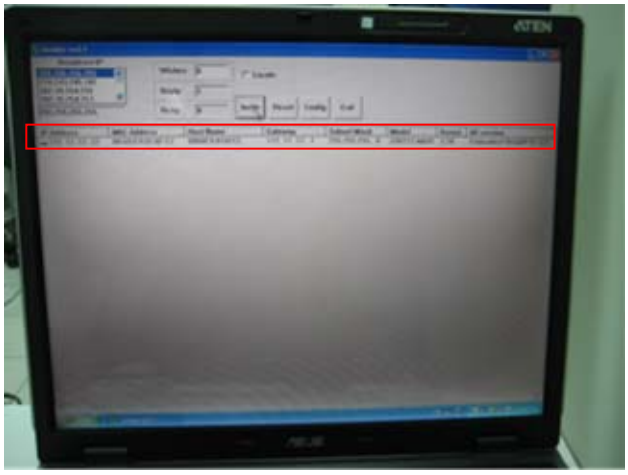
IP Setting

Once the basic hardware installation is complete, an IP address must be acquired/set for the GN0116 to allow access.

Insert the bundled software CD and install the GN0116 software on the computer.

Once installation is complete, find the Altusen\GN0116V1.6\FIrmwares\Monitor directory and run the Monitor program.

The program will automatically scan all devices on the Local Area Network (LAN) and list their IP addresses.



Software Installation

The ATEN GN0116 offers three types of interface. Choose the type suitable for your environment to use for configuration and administration.

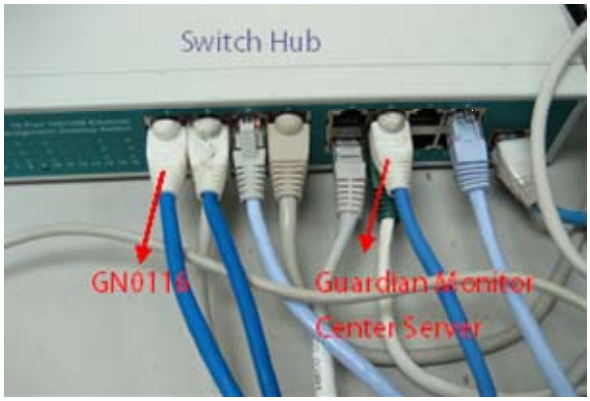
- Embedded Browser – Log in directly using the IP address found by the Monitor program.
- ssConsole – Bundled software that offers a specially designed user interface.
- External Guardian Monitor Center Server – Installed on a server in the same network segment. The administrator can manage the device through a browser.

*Please see the User Manual for a description of each user interface

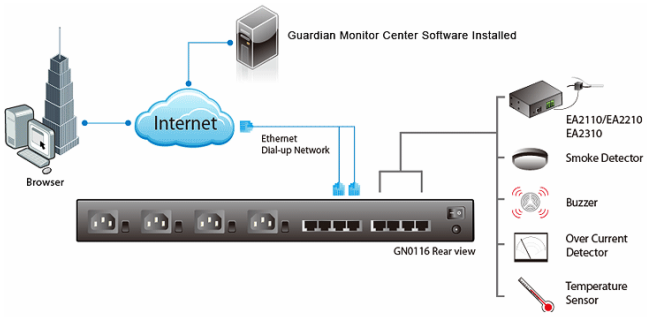
> Guardian Monitor Center (GMC)

The demonstrator chose the Guardian Monitor Center (GMC) software for this demonstration as it has more features and a more user-friendly interface (available as free download from the ATEN website).

As the GMC uses a client-based structure, you need a computer to act as the server for this software and the computer must be on the same LAN segment as the GN0116.



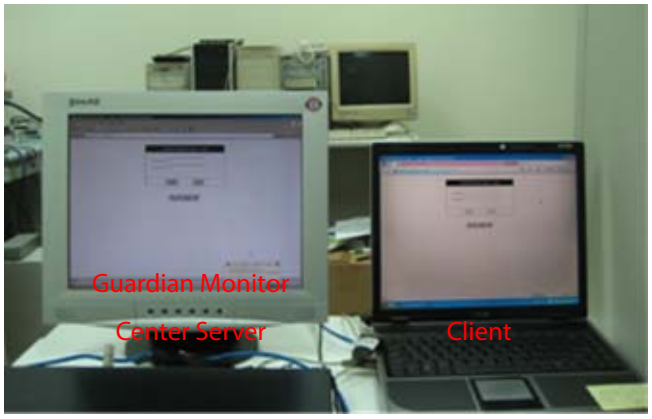
Guardian Monitor Center network diagram:



After downloading and installing the Guardian Monitor Center on the computer*, use the IP address of the "installation computer" to open the browser interface for GMC.

Once the demonstrator installs the software, s/he can use the monitor connected to the server computer (with GMC installed) and the client on the notebook to open the browser as shown below.

*Please see the User Manual for the actual software installation procedures



After logging in and completing the device configuration process (the GMC software will find all GN0116 devices on the same network segment), the notebook client can be used to view the status of all GN0116 ports.

Sensors Installation

As mentioned in the Front View/ Rear View introduction, the GN0116 mainly uses the four RJ-45 ports on the rear panel to connect to sensors or other devices. Up to eight Digital Output (ports 101 ~ 108), two Digital Inputs (ports 201 & 202) and six Analog Inputs (including 4 resistor-types (ports 1 - 4) and two voltage-types (31 & 32)) can be connected.

Note: The resistor-type and voltage-type ports must be connected correctly or it will damage your system.

>Temperature Sensors

The GN0116 includes two sets of temperature sensors. Each set contains two sensors.

The included temperature sensors are of the Analog Input type so they can be connected to ports 1 & 2 and 3 & 4.

>Smoke Detector / Beeper / Reed Switch

Apart from the bundled sensors, with the appropriate cabling the GN0116 can also support a wide variety of sensors available on the market.

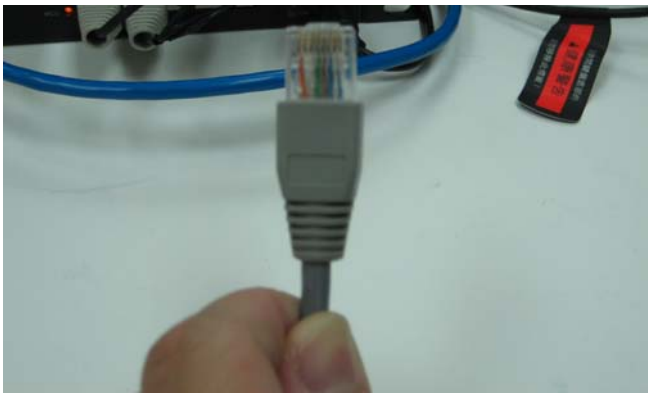
For this demonstration, three sensor/alert devices were chosen: Smoke Detector, Beeper and Reed Switch.

Smoke Detector

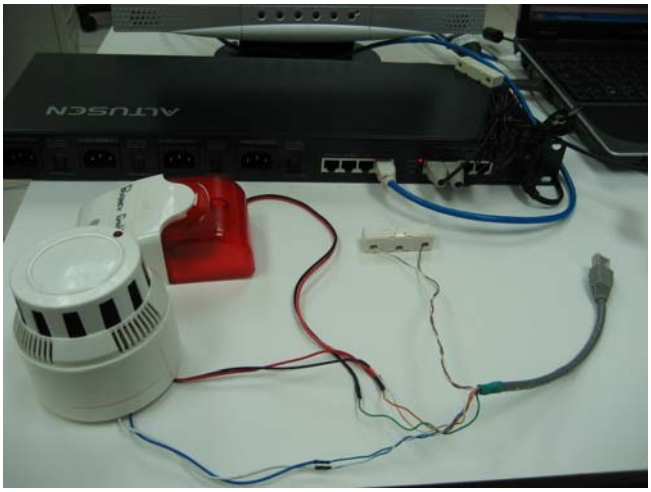
Beeper

Reed Switch

As the sensors are connected to the GN01167 via a RJ-45 port, a UTP cable with the RJ-45 connector is needed to connect the sensors.



To make the connection, strip the UTP wiring then connect each wire to their respective sensor. Please see the attached wire/PIN reference table for details.



Once the three sensor/alarm devices have been connected to the UTP cable, insert the RJ-45 connector to the 201/202 Digital Input ports.

> Voltage Detector / Current Detector / Humidity Sensor

Apart from the bundled sensors and devices sold on the market, ATEN also offers three types of easy-to-install sensors as options.

Here the demonstrator will demonstrate how to install the EA2110 current detector and voltage detection using the EA2310.

EA2110/EA2210/EA2310 Sensor Boxes

Sensors are provided with a standard GN0116 package, otherwise, ATEN offers the following models:

EA2110

1 x AC Current Sensor and 1 x Humidity Sensor

EA2210

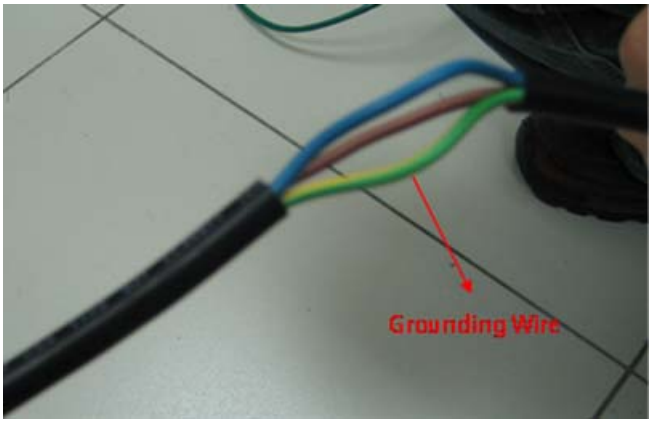
2 x AC Current Sensors

EA2310

1 x AC Current Sensor and 1 x AC Voltage Sensor

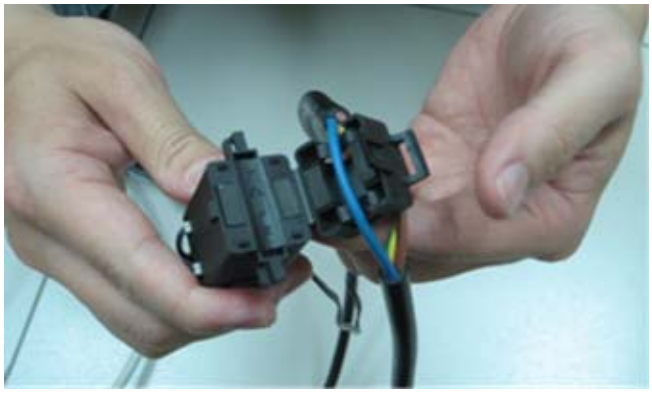
EA2110 - Current Detector

The EA2110 package includes one set of AC Current Sensor + Cable. You can connect the clip-on sensor device on one end of the cable to the power wire in the power distribution box, or strip the AC power cable and then clip it to any wire other than the grounding one.



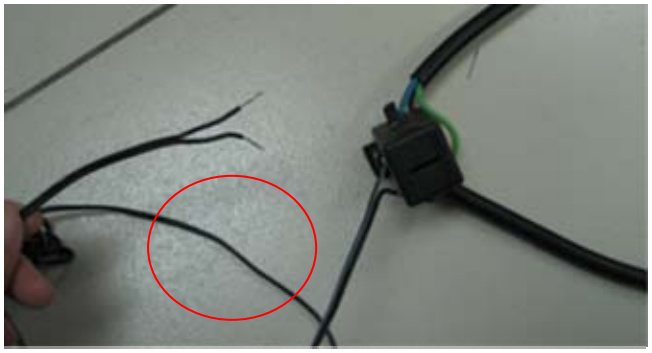
Stripping the clip-on sensor device.

Place the power wire on the clip-on sensor device.



Close the clip-on device to grip the wire.

Connect the other end of the cable to the Terminal Block slot on the EA2110.



Lock it into place.

Once the sensor has been secured, use an UTP cable to connect the EA2210's RJ-45 port to the GN0116.

Use the Port 31/32 voltage-type Analog Input Port when connecting to the GN0116.

Note: Connecting to the wrong port may damage your system.

Once the EA2110 has been installed, the clip-on sensor can not only measure the current but the EA2110 humidity sensor can also be used to detect humidity.

Humidity Sensor

EA2310 – Voltage Detector

The ATEN EA2310 Sensor Box is mainly used for voltage detection. It provides one inlet and one outlet port so installation is very simple.

Connect the power cable of the device to the monitor (e.g. Server) to the power outlet on the EA2310.

Use the bundled power cable to connect the Inlet Port to the AC power source.

Once the power source and device are both connected, use a UTP cable to connect the RJ-45 port on the EA2310 to the GN0116.

Use the Port 31/32 voltage-type Analog Input Port when connecting to the GN0116.

Note: Connecting to the wrong port may damage your system.

Configuration & Operation

Once the Sensors have been installed, the pre-configured Guardian Monitor Server can be connected through any client computer to make changes.

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