



Atop Technologies, Inc.

Industrial Serial Gateway  
Industrial Modbus Gateway  
Industrial Modbus Concentrator  
Industrial Protocol Gateway

SE5901B/MB5901B/PG5901B Series

## Hardware Installation Guide

Version V1.0

Updated in November, 2016



Tel: 886-3-5508137  
Fax: 886-3-5508131  
www.atop.com.tw

P/N: 89900500G

## Package Check List

Inside the package you will find the following items:

- Industrial 3G/4G Serial Gateway x 1 or  
Industrial 3G/4G Modbus Gateway x 1 or  
Industrial 3G/4G Modbus Concentrator x 1 or  
Industrial 3G/4G Protocol Gateway x 1
- 3-Pin 5.08mm Lockable Terminal Block  
(Already mounted to the device) x 1
- 2x7 Pin 3.5mm Lockable Terminal Block (IO version only) x 1
- DIN-Rail Kit (Already mounted to the device) x 1
- Installation Guide with Warranty Card x 1

⚠ Never install or work on electrical or cabling during periods of lightning activity.  
Never connect or disconnect power when hazardous gases are present.

⚠ Warning: Hot Surface Do Not Touch.

🏠 This equipment should be installed indoor and not connect directly with equipment installed outdoor.

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:

Any changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

### NOTE:

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.

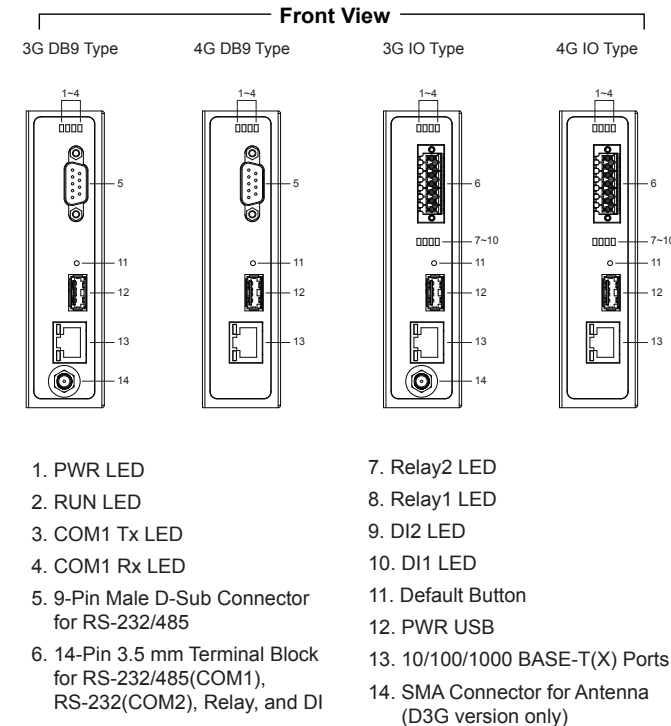
However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more 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.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm (8inches) during normal operation.

## Product Layout



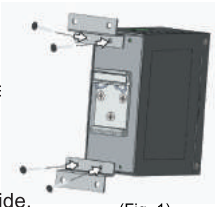
### TOP View      Bottom View

- 
1. Grounding Screw  
2. SMA Connector for Antenna (4G version only)  
3. Frame Ground  
4. Terminal for Power  
5. USB2  
6. PWR Reset  
7. SMA Connector for Antenna (4G version only)

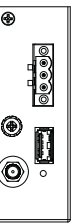
## Installation Overview

The device's appearance is as in the figure below.

1. If you have purchased the wall mount kit, proceed to place the screws on the back of the device shown in (Fig. 1).
2. Although internal grounding has been done inside, in order to ensure overall maximum performance and protect your device it is still strongly advised to ground the device properly; hazardous ESD can come into contact with it and damage your equipment. On the power terminal block, there is a terminal for Frame Ground, you can choose whether to connect it to the grounding or you may opt to connect to the grounding screw next to the terminal block (the one chosen should be connected at all times) (Fig. 2).

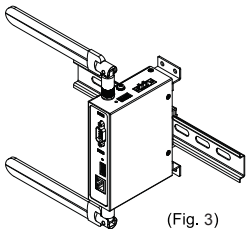


(Fig. 1)



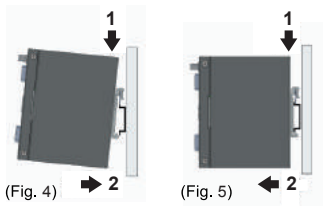
(Fig. 2)

3. Proceed then to fix the antennas to the female RP-SMA connectors deemed to (Fig. 3). You can then choose whether to plug in the I/O ports at this point or do it later depending on the actual location of the device or level of comfort for performing such operation.



(Fig. 3)

4. Once the plate has been firmly put in place, proceed to mount the whole device as shown in (Fig. 4). Proceed to (Fig. 5) if you want to remove the device from DIN-Rail.

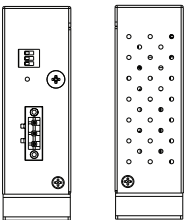


(Fig. 4)

(Fig. 5)

5. Next we can then proceed to connect the device to the LAN (switch or PC, depending on the case), take care on using the RJ-45 connector; after this we can then proceed to the device's settings.

- The openings to the sides are for the device's heat dissipation please never obstruct or cover them with any objects or try to insert them through it.



- The device's factory IP by default is 10.0.50.100 you can access the device by its Web UI once it is connected to a physical network (or using Serial Manager, for more information on Serial Manager, please refer to its manual, Chapter 3). Please be aware that the PC needed for this procedure needs to be in the same subnet, or you may refer yourself to the device User's Manual on Sec. 3.1.

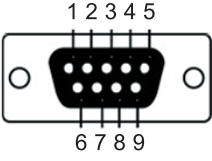
Field Maintenance and Service

If the device requires servicing of any kind, you may need to disconnect and remove it from its mounting. The initial installation should be done in a way that makes this as convenient as possible.

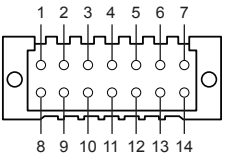
- Voltage/Power lines should be properly insulated as well as other cables. Be careful when handling them so as to not trip over.
- Do not under any circumstance insert foreign objects of any kind into the heat dissipation holes located in the different faces of the device. This may not only harm the internal layout but might cause harm to you as well.
- Do not under any circumstance open the device for any reason. Please contact your dealer for any repair needed or follow the instructions on section of your User’s manual.

Pin Assignments

9-Pin Male D-Sub Connector for RS-232/485

|                                                                                  | Pin | RS-232 | RS-485 |
|----------------------------------------------------------------------------------|-----|--------|--------|
|  | 1   | DCD    | —      |
|                                                                                  | 2   | RxD    | —      |
|                                                                                  | 3   | TxD    | Data+  |
|                                                                                  | 4   | DTR    | —      |
|                                                                                  | 5   | SG     | SG     |
|                                                                                  | 6   | DSR    | —      |
|                                                                                  | 7   | RTS    | Data-  |
|                                                                                  | 8   | CTS    | —      |
|                                                                                  | 9   | RI     | —      |

2 x 7-pin Male Terminal Block for RS-232/485(COM 1), RS-232(COM 2) Relay and DI

|                                                                                   | Pin | Assignment | Pin | Assignment |
|-----------------------------------------------------------------------------------|-----|------------|-----|------------|
|  | 1   | DI1        | 8   | Rx1        |
|                                                                                   | 2   | DI2        | 9   | CTS        |
|                                                                                   | 3   | RY1c       | 10  | Tx1/D+     |
|                                                                                   | 4   | RY1+       | 11  | RTS/D-     |
|                                                                                   | 5   | RY2c       | 12  | SG         |
|                                                                                   | 6   | RY2+       | 13  | Rx2        |
|                                                                                   | 7   | SG         | 14  | Tx2        |

Relay Output with current carrying capacity of 1A@30 VDC (Normal open)

Pin Assignments and Connections

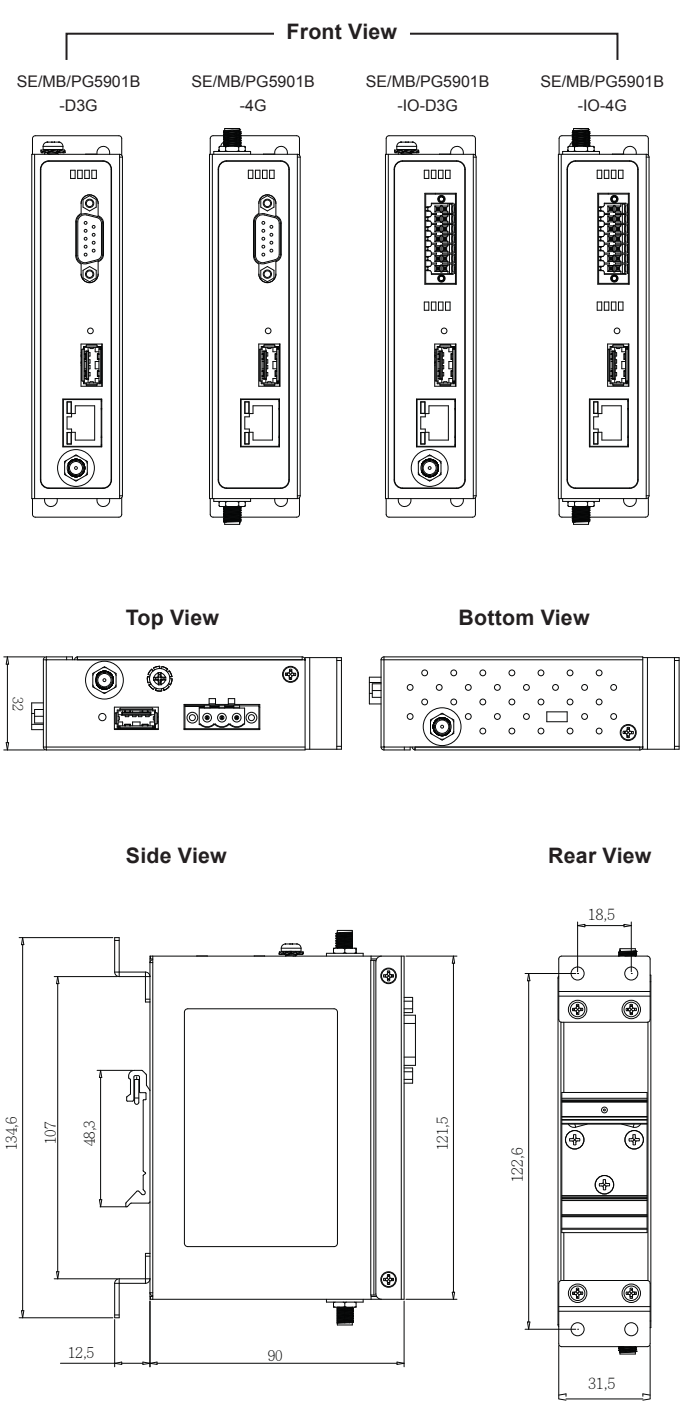
10/100/1000BASE-T(X) Ethernet Pinout

|                 |                                                                                     |        |        |        |        |        |        |        |
|-----------------|-------------------------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|
| RJ-45           |  |        |        |        |        |        |        |        |
| 10/100Base-T(X) |                                                                                     |        |        |        |        |        |        |        |
| Pin             | 1                                                                                   | 2      | 3      | 4      | 5      | 6      | 7      | 8      |
| Signal          | Tx+                                                                                 | Tx -   | Rx+    |        |        | Rx -   |        |        |
| 1000Base-T(X)   |                                                                                     |        |        |        |        |        |        |        |
| Pin             | 1                                                                                   | 2      | 3      | 4      | 5      | 6      | 7      | 8      |
| Signal          | BI_DA+                                                                              | BI_DA- | BI_DB+ | BI_DC+ | BI_DC- | BI_DB- | BI_DD+ | BI_DD- |

LED Indicators

| Name   | LED            | Status          | Description                         |
|--------|----------------|-----------------|-------------------------------------|
| COM-TX | Green          | Blinking        | COM port is transmitting data       |
|        |                | Off             | COM port is not transmitting data   |
| COM-RX | Green          | Blinking        | COM port is receiving data          |
|        |                | Off             | COM port is not receiving data      |
|        |                | On              | Ethernet is transmitting at 1Gbps   |
| LAN    | Orange (Speed) | Blinking slowly | Ethernet is transmitting at 100Mbps |
|        |                | Off             | Ethernet is transmitting at 10Mbps  |
|        | Green (Data)   | Blinking        | Ethernet data is transmitting       |
|        |                | Off             | Ethernet no data transmit           |
| Power  | Green          | On              | Power is being supplied             |
|        |                | Off             | Power is not supplied               |
| RUN    | Green          | Blinking        | AP Firmware is running normally     |
|        |                | On/Off          | System is not ready or halt         |

Unit Dimensions and Layout (unit=mm)



Warranty Policy

Warranty Conditions

Products supplied by Atop Technologies are covered in this warranty for sub-standard performance or defective workmanship. The warranty is not, however, extended to goods damaged in the following circumstances:

- (a) Excessive forces or impacts
- (b) War or an Act of God: wind storm, fire, flood, electric shock, earthquake
- (c) Use of unqualified power supply, connectors, or unauthorized parts/kits
- (d) Replacement with unauthorized parts

RMA and Shipping Costs Reimbursement

Customers shall always obtain an authorized "RMA" number from Atop before shipping the goods to be repaired to Atop. When in normal use, a sold product shall be replaced with a new one within 3 months after purchase. The shipping cost from the customer to Atop will be reimbursed by Atop.

After 3 months and still within the warranty period, it is up to Atop whether to replace the unit with a new one; normally, as long as a product is under warranty, all parts and labor are free of charge to the customers.

After the warranty period, the customer shall cover the cost for parts and labor. Three months after purchase, the shipping cost from the customer to Atop will not be reimbursed, but the shipping cost from Atop to the customer will be paid by Atop.

Limited Liability

Atop shall not be held responsible for any consequential losses from using Atop's product.

Warranty Period

| Product Categories      | Warranty | Product Categories      | Warranty |
|-------------------------|----------|-------------------------|----------|
| Ethernet Switches       | 5 Years  | DIN-Rail Power Supplies | 3 years  |
| Wireless                |          | Power Adaptors          | 1 years  |
| Serial Device Servers   |          |                         |          |
| Modbus Gateways         |          | Antennas                |          |
| Protocol Gateways       |          | Other Accessories       |          |
| Media Converters        |          |                         |          |
| Embedded Device Servers |          |                         |          |

The warranty certification will not be effective until an authorized stamp issued by Atop's overseas agents.

Purchase Date:                    /                    /                    (yyyy/mm/dd)

Serial Number                   

Atop Customer Services and Supports

- Please contact your local dealers or Atop Technical Support Center at the following numbers.  
+ 886-3-550-8137 (Atop Taiwan)  
+ 86-21-6495-6232 (Atop China)
- Please report the defected problems via Atop's Web site or E-mail account  
Web Site : www.atop.com.tw, e-mail : service@atop.com.tw  
Web Site : www.atop.com.cn, e-mail : service@atop.com.cn
- Company Addr: 2F, No. 146, Sec. 1, Tung-Hsing Rd., Jubei, Hsinchu 30261, Taiwan, R.O.C.  
Manufacturer Addr: 1st FL 30 R&D RD II,SCIENCE-BASED INDUSTRIAL PARK,HSINCHU 300 TAIWAN, R.O.C

— Any changes to this material will be announced on Atop website. —