



**Atop Technologies, Inc.**

**Industrial Serial Device Server  
Industrial Modbus Gateway  
Industrial Modbus Concentrator  
Industrial Protocol Gateway**

SE5904D/MB5904D/PG5904D Series

## Hardware Installation Guide

Version 1.1

Updated in March 2016



Tel: 886-3-5508137  
Fax: 886-3-5508131  
www.atop.com.tw  
P/N:89900489G

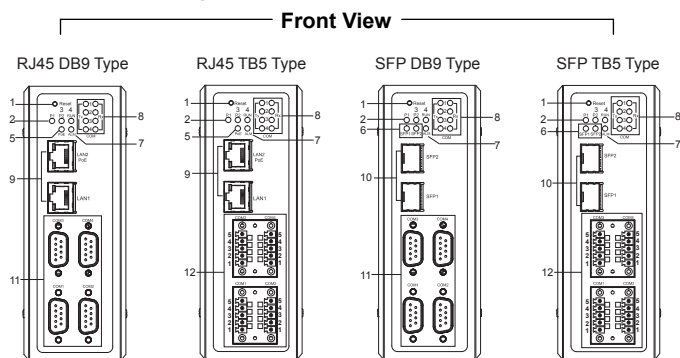
## Package Check List

Inside the package you will find the following items:

- Industrial Serial Device Server x 1 or  
Industrial Modbus Gateway x 1 or  
Industrial Modbus Concentrator x 1 or  
Industrial Protocol Gateway x 1
- 7-Pin 5.08mm Lockable Terminal Block (Already mounted to the device) x 1
- 5-Pin 3.81mm Lockable Terminal Block x 4 (For TB Models)
- DIN-Rail Kit (Already mounted to the device) x 1
- Protective caps for all SFP and PoE ports (Depend on purchased model)
- Installation Guide with Warranty Card x 1

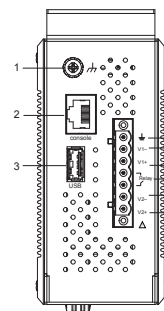
- Never install or work on electrical or cabling during periods of lightning activity. Never connect or disconnect power when hazardous gases are present.
- Warning: Hot Surface Do Not Touch.
- Caution: CLASS 1 LASER PRODUCT. Do not stare into the laser!
- This equipment should be installed indoor and not connect directly with equipment installed outdoor and use in ordinary industrial location.

## Product Layout



- 1. Reset Button
- 2. PWR1 LED
- 3. PWR2 LED
- 4. RUN LED
- 5. PoE LED
- 6. SFP Ports LED
- 7. Alarm LED
- 8.COM Ports LED
- 9. 10/100 BASE-T(X) Ports or 10/100/1000 BASE-T(X) Ports and/or 10/100/1000 BASE-T(X) PoE Port
- 10. 100/1000 BASE-X SFP Slots
- 11. 9-Pin Male D-Sub Connector for RS-232/422/485
- 12. 5-Pin 3.81mm Terminal Block for RS-232/422/485

### Top View

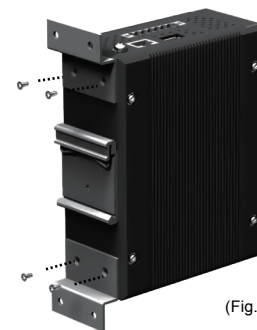


- 1. Grounding Screw
- 2. Console
- 3. Type A USB for storage or Wifi
- 4. Frame Ground
- 5. Terminal for Power1
- 6. Relay Output with current carrying capacity of 1A@30 VDC (Normal Open)
- 7. Terminal for Power2

## Installation Overview

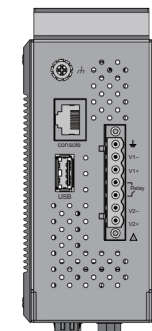
The device's appearance is as in the figure below.

1. If you have purchased the wall mount kit, proceed to place the screws on the back of the device as shown in (Fig. 1)



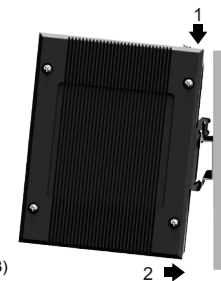
(Fig. 1)

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. 2)

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. **Remember to plug in the protective caps for the unused SFP and PoE ports.**



(Fig. 3)

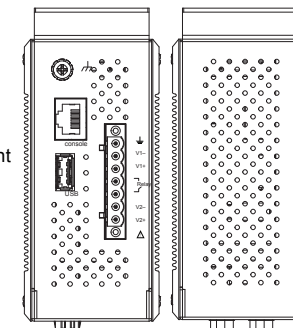
4. Once the plate has been firmly put in place, proceed to mount the whole device as shown in (Fig. 3) Proceed to (Fig. 4) if you want to remove the device from DIN-Rail.



(Fig. 4)

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 opening 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.
- This factory IP by default is 10.0.50.100 you can access the device by its WebUI once it is connected to a physical network (or using Management Utility, for more information on Management Utility, please refer to its manual). 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.



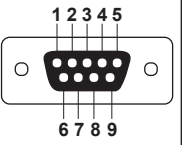
## LED Indicators

Name	Color	Status	Message	
P1	Green	On	Power is being supplied through this power input	
P2		Off	Power is not supplied through this power input	
RUN	Green	Blinking	AP firmware is running normally	
		On/Off	System is not ready or halt	
ALM	Red	On	Alarm is triggered by user defined events	
		Off	Alarm is not triggered by user defined events	
PoE	Green	On	Power is being supplied to a Powered Device(PD)	
		Off	Power is not supplied to a PD	
SFP	Green	On	SFP port is connected	
		Blinking	Data is transmitting on this port	
		Off	SFP port is disconnected	
LAN (10/100 Mbps models)	Amber	Blinking	Data is transmitting at 10Mbps	
		Green	Blinking	Data is transmitting at 100Mbps
			Off	Ethernet is disconnected
LAN (10/100/1000Mbps models)	Amber	On	Ethernet is connected at 10/100Mbps	
		Blinking	Data is transmitting at 10/100Mbps	
		Off	Ethernet is disconnected	
	Green	On	Ethernet is connected at 1000Mbps	
		Blinking	Data is transmitting at 1000Mbps	
		Off	Ethernet is disconnected	
COM	Green	Blinking	COM port is transmitting data	
		Off	COM port is not transmitting data	

# Pin Assignments and Connections

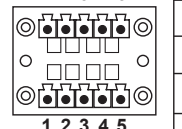
9-Pin Male D-sub Connector for RS-232/422/485

Pin	RS-232	RS-422	RS-485
1	DCD	-	-
2	RxD	TxD+	Data+
3	TxD	RxD+	-
4	DTR	-	-
5	SG	SG	SG
6	DSR	-	-
7	RTS	RxD-	-
8	CTS	TxD-	Data-
9	RI	-	-



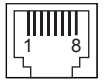
5-Pin Terminal Block for RS-232/422/485

Pin	RS-232	RS-422 / 4-W RS-485	2-W RS-485
1	RxD	TxD+	Data+
2	CTS	TxD-	Data-
3	TxD	RxD+	-
4	RTS	RxD-	-
5	SG	SG	SG

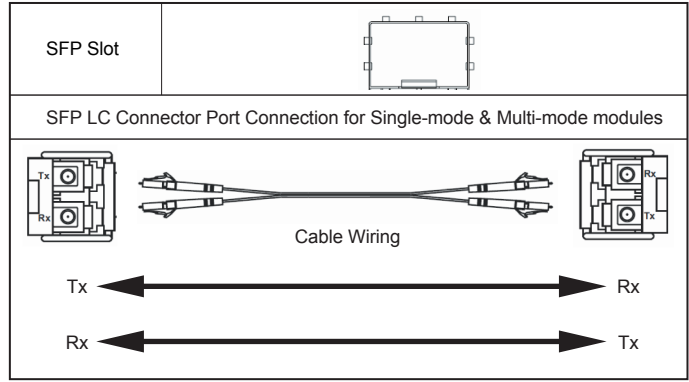


10/100/1000 BASE-T(X) Ethernet, PoE and RS-232

RJ-45								
10/100BASE-T(X)								
Pin	1	2	3	4	5	6	7	8
Signal	Tx+	Tx-	Rx+			Rx-		
1000BASE-T								
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-
PoE								
Pin	1	2	3	4	5	6	7	8
DC	V+	V+	V-	V+	V+	V-	V-	V-
RS-232 Console								
Pin	1	2	3	4	5	6	7	8
Signal			Tx	GND	GND	Rx		



100/1000 Base-X Fiber Optics SFP Slot



**Caution**  
The SFP slot should be used in conjunction with a MSA compliant optical transceiver.

## Power Requirements

- Power input: 12-48VDC, 0.65A max. (No PoE)
  - Relay output: Relay Output with current carrying capacity of 1A@30 VDC, (Normal Open)
  - PoE PD: 48VDC, 8W max.
- All circuit shall be connected to SELV circuit.**

## 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 the 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.

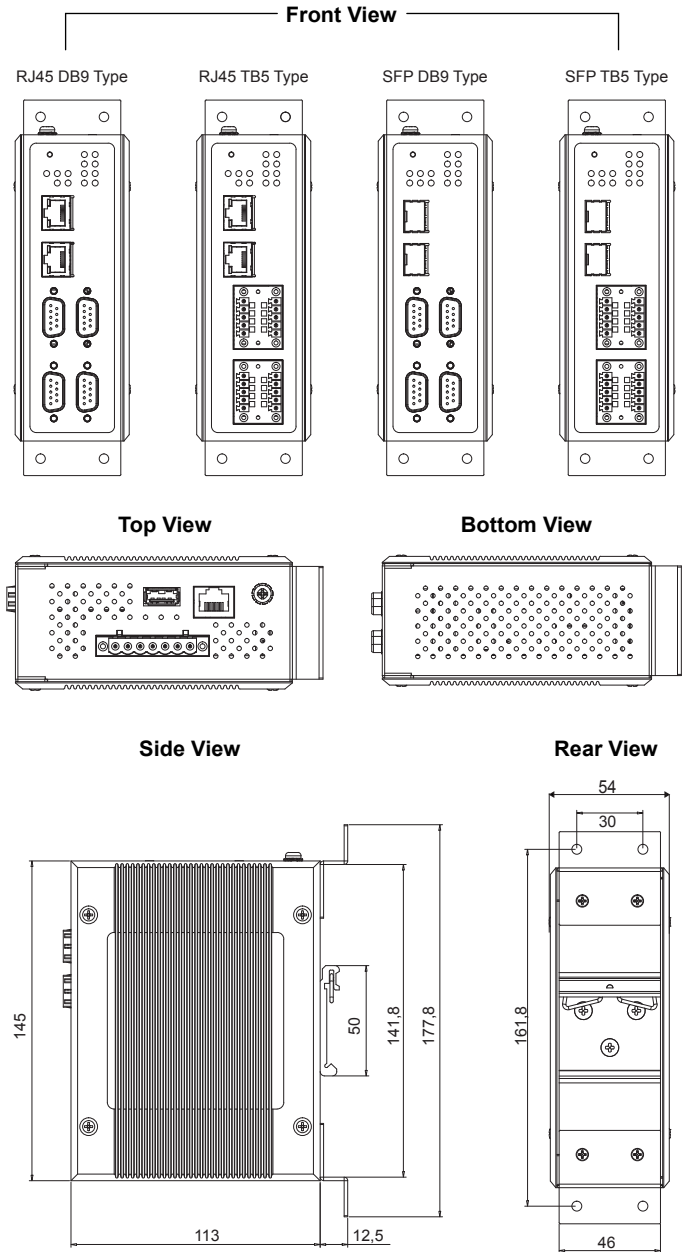
## Attention

- It is recommend to use at least 20 AWG cable and the cable needs to be resistant to at least 105°C on the power connector.
- Torque applied to the Terminal block's screw should be 4.5 in. lb (0.51 Nm)
- The device needs to be installed inside a Type 1 housing.
- The device needs to be installed in an area of pollution degree 2 or less.
- Clean the device with soft cloth with dry or water
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may not be impaired.

# Environmental Limits

- Operating Temperature: -40 to 85°C (-40 to 185°F)
- Storage Temperature: -40 to 85°C (-40 to 185°F)
- Ambient Relative Humidity: 5 to 95%, 55°C (non-condensing)
- Altitude: up to 2,000 m

## Mechanical Dimensions (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:

- Excessive forces or impacts
- War or an Act of God: wind storm, fire, flood, electric shock, earthquake
- Use of unqualified power supply, connectors, or unauthorized parts/kits
- 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 Year
Serial Device Servers		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: 1F, No.30 R&D Rd. II, Science-Based Industrial Park, Hsinchu 30076, Taiwan, R.O.C

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