



## FEATURE HIGHLIGHTS

- Industrial EMC protection, wide temperature operation, -40°C~85°C
- 2-port 10/100Mbps Fast Ethernet, 1-port USB 2.0 high speed OTG
- Bi-Directional Modbus TCP/RTU/ASCII conversion from Serial to Ethernet and Vice-versa
- Advanced features include embedded IEEE802.1D-2004 RSTP Redundancy, SNMP v1/v2c/v3, Virtual ID remapping, VirtualCOM mode, exception handling and many others
- IPsec or OpenVPN with high throughput, data-rate up to 37.9Mbps\*
- Rugged metal case with wall or DIN-Rail mount
- Configuration via Web Browser / Serial-Telnet Console / Windows Utility
- Optional 802.3af PoE models can be powered through the Ethernet cable

## PRODUCT DESCRIPTION

### Diverse Hardware Infrastructure

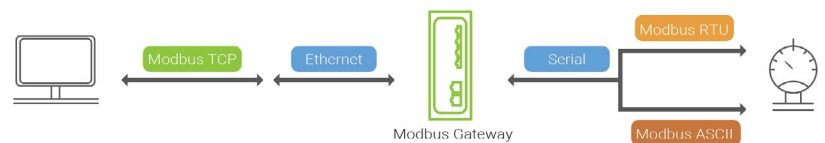
Modbus Gateway supports the four most commonly used communication standards, RS-232/485/422, and Ethernet. The ease-of-use configuration utility provided with Modbus Gateway can quickly select the hardware interface, and easily switch to the existing communication infrastructure. Industrial EMC protection and wide temperature operation capability make MB5901 ready for every mission. And if cabling is an issue, the PoE-powered version can allow MB5901 to be powered through PoE.

### Embedded Security and advanced features

Relax. MB5901 Modbus Gateway supports OpenVPN and IPsec VPN encryption, allowing you to safely use the device over the internet without worrying about malicious attacks, data sniffing or unintentional remote control of your Modbus slaves. On your LAN, RSTP protocol will provide an additional layer of security in case of link losses.

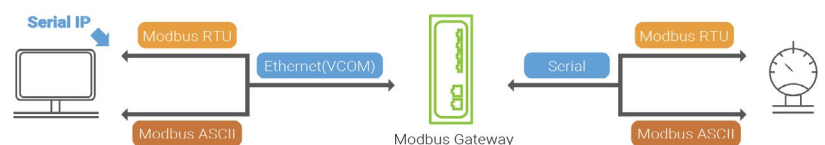
### Switching between Modbus Protocols

Modbus Gateway supports the standard Modbus protocol and is capable of converting any Modbus protocols between Modbus TCP, Modbus RTU, and Modbus ASCII for all supported hardware interfaces.



### Modbus ID Routing

Modbus Gateway supports various types of hardware communication interfaces, Modbus protocol conversion, and Modbus ID routing. Therefore the Modbus Gateway can integrate your existing and complex Modbus hardware configuration into a simple network that can be easily managed.



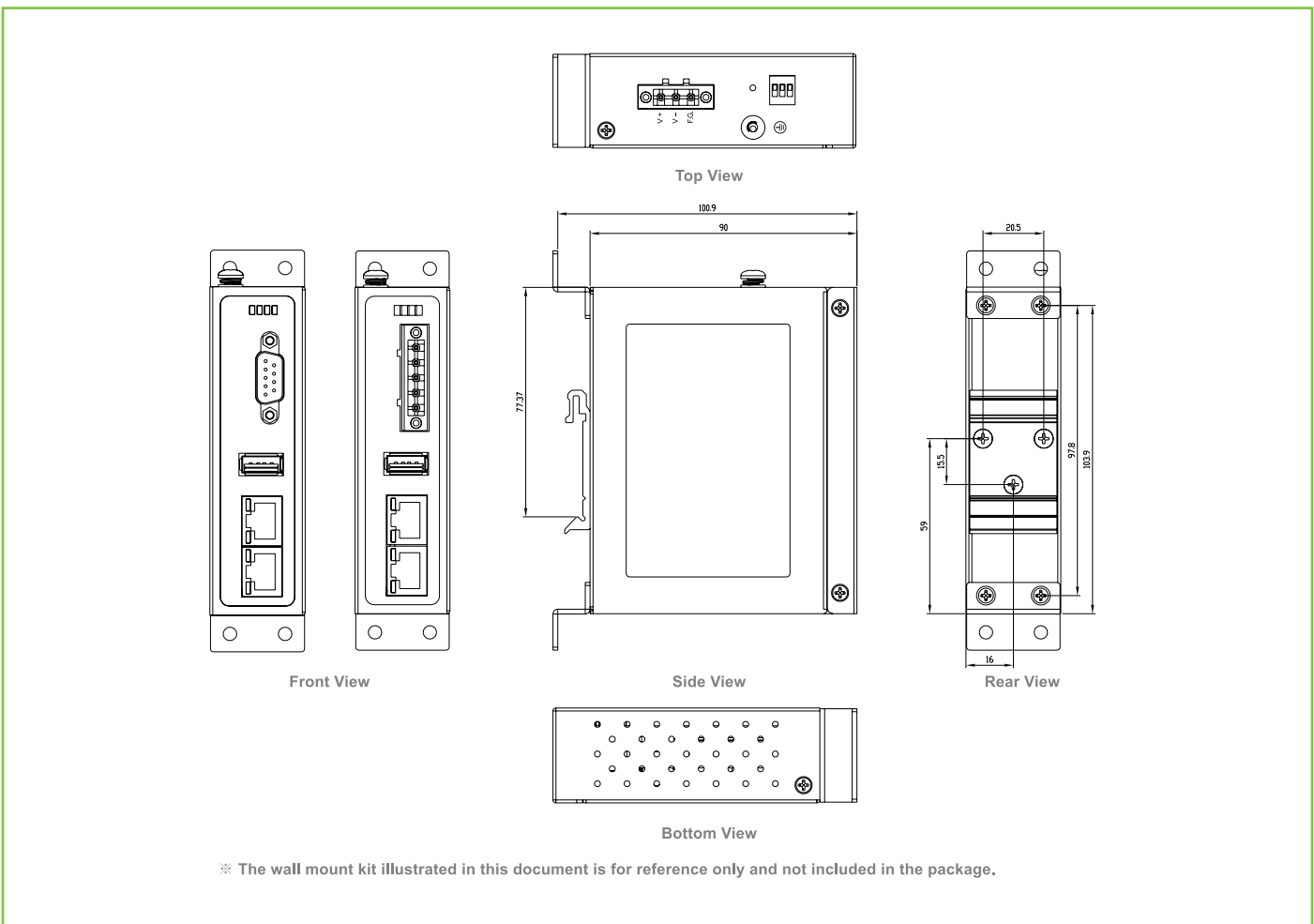
## SPECIFICATIONS

Technical Specifications	
Model Name	MB5901
Network interface	
Standards supported	IEEE 802.3 10BaseT IEEE 802.3u 100BaseT(X) IEEE 802.3 af (PoE, on -PoE version only)
Connector ports	RJ45 x 2
Serial Interface	
Connector	D-Sub9 RS-232/422/485 software selectable (DB models) 5.08mm 5-Pin Terminal block RS-232/422/485 sw selectable (TB models)
Ports	1
Baud Rate	1,200 ~ 921,600 bps software selectable
Data Bits	5, 6, 7, 8 software selectable
Stop Bits	1, 2 software selectable
Flow Control	None, Xon/Xoff, RTS/CTS
USB	
Speed Connector	USB 2.0 USB A Type
Power	
Input Voltage Input Current (@ 9VDC) Power Consumption	9 - 48VDC (non-PoE Models); or through Ethernet Cable (PoE versions) 0.65 A Approximately 6 W (Max)
Connector	3-Pin 5.08mm Lockable Terminal Block
Reverse Polarity Protection	Yes
Physical Characteristics	
Housing Dimension (W x H x D) Weight Installation Reset Button	IP30 SPCC housing 32 x 110 x 90 mm (1.26 x 4.33 x 3.54 in) 400 g DIN-Rail, Wall mount (optional kit) Yes
Environmental Limits	
Operating Temperature Storage Temperature Ambient Relative Humidity	-40°C~85°C (-40°F~185°F) -40°C~85°C (-40°F~185°F) 5%~95%, 55°C (Non-condensing)
Software	
Protocols	IPv4, ICMP, TCP, UDP, DHCP Client, SNMPv1,v2c,v3, HTTP, HTTPS, Telnet, SMTP/TLS, PPTP, RFC2217, 802.1D-2004 RSTP, Security through OpenVPN Client/Server or IPsec VPN (peer-to-peer or peer-to-side) with up to 37.9Mbps VPN throughput
Configuration	Atop Management Utility, Web UI, Telnet
VirtualCOM	Windows/Linux redirection software

### Modbus Features

Supported Modes	Ethernet: Modbus TCP Server/Client(or VCOM); Serial: Modbus RTU/ASCII (master/slave)
Maximum number of clients/slaves	Modbus TCP: Maximum 16 clients; Maximum 32 slave connections

## DIMENSIONS & LAYOUT



## REGULATORY APPROVALS

### Regulatory Approvals

Safety	EN60950-1:2006; EN62368-1
EMC	FCC Part 15, Subpart B, Class A EN 55032, EN 55024, EN 61000-3-2, EN 61000-3-3, EN 61000-6-2, EN 61000-6-4,

Test	Item		Value	Level
IEC 61000-4-2	ESD	Contact Discharge	±8kV	4
		Air Discharge	±15kV	4
IEC 61000-4-3	RS	Radiated (enclosure)	10 V/m	3
IEC 61000-4-4	EFT	DC Power Port	±2.0KV	3
		Signal Port	±2.0KV	3
IEC 61000-4-5	Surge	DC Power Port	Line-to Line±1.0KV	3
		DC Power Port	Line-to Earth±2.0KV	3
		Signal Port	Line-to Earth±2.0KV	3
IEC 61000-4-6	CS	Conducted (enclosure)	10 V rms	3
IEC 61000-4-8	PFMF	Enclosure	10 A/m	3
IEC 61000-4-11	DIP	Power Port	-	A
Shock Drop (Freefall) Vibration		IEC 60068-2-27 IEC 60068-2-32 IEC 60068-2-64		
RoHS II		Yes		
MTBF		21.16 years (MIL-HDBK-217F-based prediction)		
Warranty		5 years		

## ORDERING INFORMATION

### Ordering information

Model name	Part Number	Description	Ethernet	Serial
MB5901-DB	1P1MB5901DB001G	1-port RS-232/422/485 Industrial Modbus Gateway, DB9	2	1 (DB9)
MB5901-TB	1P1MB5901TB001G	1-port RS-232/422/485 Industrial Modbus Gateway, TB5	2	1 (TB)
MB5901-PoE-DB	Contact Headquarter	1-port RS-232/422/485 Ind. Modbus Gw, DB9,PoE Pwr	2	1 (DB9)
MB5901-PoE-TB	Contact Headquarter	1-port RS-232/422/485 Ind. Modbus Gw, TB5,PoE Pwr	2	1 (TB)

### Optional Accessories

Model name	Part Number	Description
UN315-1212 (US-Y)	50500151120003G	Y-Type power adaptor, 100~240VAC input, 1.25A @ 12VDC output, US plug, LV6; includes a 3-pin Terminal block
UNE315-1212 (EU-Y)	50500151120013G	Y-Type power adaptor, 100~240VAC input, 1.25A @ 12VDC output, EU plug, LV6; includes a 3-pin Terminal block
ADP-DB9(F)-TB5	59906231G	Female DB9 to Female 3.81 TB5 Converter
WMK-315-Black	70100000000050G	Black Aluminum Wall Mount Kit