Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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FEATURE HIGHLIGHTS

- Industrial EMC protection, wide temperature operation, -40°C~85°C
- 2 Fast-Ethernet ports or 100/1000 SFP slots
- 4 Software-selectable RS-232/RS-485/RS-422 serial ports, up to 921kbps
- Bi-Directional Modbus TCP/RTU/ASCII conversion from Serial to Ethernet and viceversa, VirtualCOM support, advanced Modbus Options available
- Isolated Redundant 12~48 VDC Power Inputs or powered (PoE models) through through the Ethernet cable (802.3af)
- Embedded security with IPsec VPN
- Configuration via Web Browser/ Serial Console/ Telnet Console/ Utility
- Rugged metal case with wall or DIN-Rail mount

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 MB5904D ready for every mission. And if cabling is an issue, the PoE-powered version can allow MB5904D to be powered through PoE.
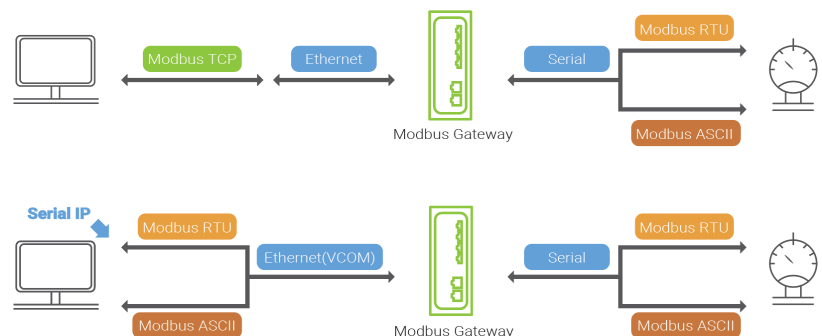
Advanced embedded security
MB5904D embeds IPsec VPN Encryption, that allows you to tunnel your data securely throught the internet and prevent unauthorized control of your Serial Devices by malicious people.

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. All of this, in bi-directional mode: Ethernet and Serial ends can selected to be either master or slave

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.
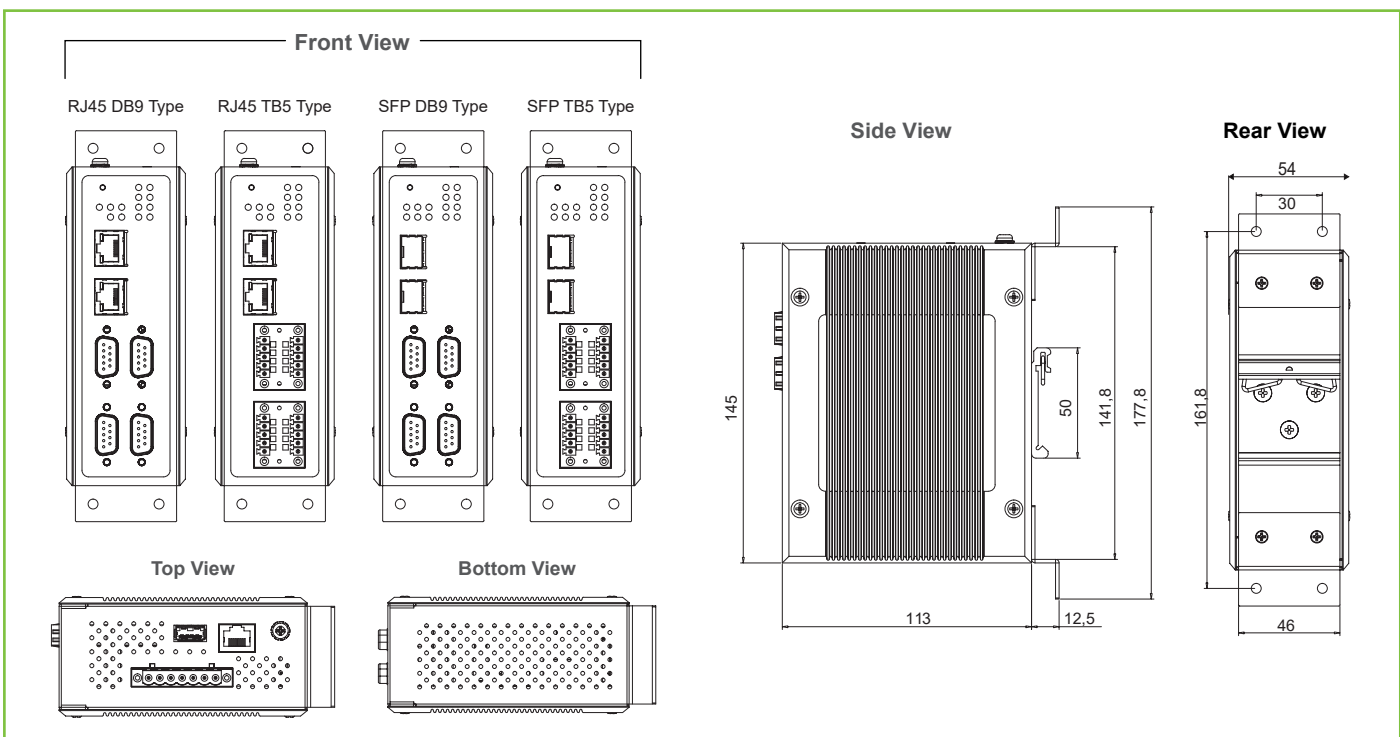
SPECIFICATIONS

Technical Specifications	
Model Name	MB5904D
Network interface	
Supported Standards	IEEE 802.3 10BaseT IEEE 802.3u 100BaseT(X) IEEE 802.3u for 100Base-X IEEE 802.3z for 1000Base-X (SFP version only)
Power over Ethernet	IEEE 802.3af for Power over Ethernet (PD) - PoE version only
LAN Mode	Dual Subnets or Network Redundancy
Connector ports	2x 10/100BASE-T(X) RJ-45 or 2x 100/1000 Base-X SFP Slots (SFP version)
Serial Interface	
Connector	4x D-Sub9 RS-232/422/485 software selectable (DB models) or 4x 5.08mm 5-Pin Terminal block RS-232/422/485 sw selectable (TB models)
Baud Rate	1,200 ~ 921,600 bps software selectable
Data Bits	7, 8 software selectable
Stop Bits	1, 2 software selectable
Flow Control	None, Xon/Xoff, RTS/CTS
Isolation	3 kV (Sis versions only)
USB interface	
Universal Serial Bus	1x USB A Type connector (USB 2.0)
Power	
Input Voltage Input Current (@ 12VDC) Power Consumption Power Redundancy Reverse Polarity Protection	Dual 12 - 48VDC (non-PoE Models); or through Ethernet Cable (PoE versions) 0.65 A Approximately 6 W (Max) Yes Yes
Connector	7-Pin 5.08mm Lockable Terminal Block
Relay Output	1A @ 30 VDC (normal open)
Physical Characteristics	
Housing Dimension (W x H x D) Weight Installation Reset Button	IP30 SPCC housing 55 x 145 x 113 mm 1000 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)
Sofware	
Protocols	IPv4, ICMP, TCP, UDP, DHCP Client, SNMPv1,v2c,v3, HTTP, HTTPS, Telnet, RFC2217, Security through IPsec host-to-host or host-to-side VPN 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

Front View

RJ45 DB9 Type   RJ45 TB5 Type   SFP DB9 Type   SFP TB5 Type

Top View   **Bottom View**

Side View

145   50   141,8   177,8   113   12,5

Rear View

54   30   161,8   46

REGULATORY APPROVALS

Regulatory Approvals				
Safety	UL61010-2-201			
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 Air Discharge	±8kV ±15kV	4 4
IEC 61000-4-3	RS	Radiated (enclosure)	10 V/m	3

IEC 61000-4-4	EFT	AC Power Port Signal Port	±2.0KV ±2.0KV	3 4
IEC 61000-4-5	Surge	AC Power Port AC Power Port Signal Port	Line-to Line±1.0KV Line-to Earth±2.0KV Line-to Earth±2.0KV	3 3 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	-	-
Shock Drop (Freefall) Vibration		IEC 60068-2-27 IEC 60068-2-32 IEC 60068-2-64		
RoHS II		Yes		
MTBF		TBD		
Warranty		5 years		

ORDERING INFORMATION

Ordering information

Model name	Part Number	Description	Ethernet	Serial
MB5904D-4P-DB	1P1MB5904D0004G	Ind. 4-Port Modbus Gateway, 10/100BASET(X), DB9	2 (RJ45)	4 (DB9)
MB5904D-4P-TB	1P1MB5904D0005G	Ind. 4-Port Modbus Gateway, 10/100BASET(X), TB5	2 (RJ45)	4 (TB)
MB5904D-4P-Sis	1P1MB5904D0006G	Ind. 4-Port Modbus Gw,10/100BASET(X),3kV Isolated	2 (RJ45)	4 (TB)
MB5904D-4P-PoE-DB	1P1MB5904D0001G	Ind. 4-Port Modbus Gw,10/100BASET(X)with PoE, DB9	2 (RJ45)	4 (DB9)
MB5904D-4P-PoE-TB	1P1MB5904D0002G	Ind. 4-Port Modbus Gw, 10/100BASET(X)with PoE, TB5	2 (RJ45)	4 (TB)
MB5904D-4P-PoE-Sis	1P1MB5904D0003G	Ind. 4-Port Modbus Gw, RJ45, PoE, 3kV Isolated	2 (RJ45)	4 (TB)
MB5904D-4P-G-DB-SFP	1P1MB5904DG001G	Ind. 4-Port Modbus Gw, 100/1000BASEX SFP Slot, DB9	2 (SFP)	4 (DB9)
MB5904D-4P-G-TB-SFP	1P1MB5904DG002G	Ind. 4-Port Modbus Gw, 100/1000BASEX SFP Slot, TB5	2 (SFP)	4 (TB)
MB5904D-4P-G-Sis-SFP	1P1MB5904DG003G	Ind. 4-Port Modbus Gw,100/1000 SFP Slot,3kV Isolated	2 (SFP)	4 (TB)

Optional Accessories

Model name	Part Number	Description
SDR-75-24	50500752240001G	75W/3.2A DIN-Rail 24VDC power supply with 88~264VAC / 124~370VDC input
CBL-RJ45(8P)-DB9(F)-90-C	50891971G	8-pin RJ45-DB9 debug cable, 90cm
GDC-120	59906861G	120mm copper woven grounding cable
ADP-DB9(F)-TB5	59906231G	Female DB9 to Female 3.81mm TB5 Converter
WMK-450-Black	70100000000052G	Aluminum wall mount kit
LM28-C3S-TI-N	50708031G	SFP Transceiver, 1250Mbps, 850nmVCSEL, Multi-mode, 550m, 3.3V, -20~85°C
LM38-C3S-TI-N	50709411G	SFP Transceiver, 1250Mbps, 1310nmFP, Multi-mode, 2km, 3.3V, -40~85°C
LS38-C3S-TI-N	50709391G	SFP Transceiver, 1250Mbps, 1310nmFP, Single-mode, 10km, 3.3V, -40~85°C
LS38-C3L-TI-N	50709441G	SFP Transceiver, 1250Mbps, 1310nmDFB, Single-mode, 30km, 3.3V, -40~85°C