

Industrial Modbus Ethernet to Serial Gateway

Fiber Model BB-MESR921-MT

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FEATURES

- Bridge Modbus TCP Ethernet and RS-232/422/485 networks
- Modbus TCP, ASCII, RTU (up to 16 masters & 32 slaves)
- Data rate: up to 230.4 kbps
- -40 to +80 °C wide operating temperature range
- DIN rail mount, IP30 case
- 10-48 VDC input required (power supply not included, sold separately)
- Easy to use configuration software
- UL Class 1/Division 2

Model BB-MESR91-MT Modbus Gateway bridges devices on Modbus serial networks (RS-232, RS-422 or RS-485) with those on Modbus TCP networks, allowing seamless integration. Serial ports (DB9M or TB) can be accessed over a LAN or WAN using Direct IP Mode connections. MM-ST fiber or copper Ethernet ports.

Supporting up to 16 masters and 32 slaves, the gateway features auto-detecting 10/100 copper and fiber optic options. Easy-to-use software is designed for Windows 2000, 2003 Server, XP, Vista, 2008 Server, 7, 8, 10. Serial data rates up to 230 kbps ensure maximum network flexibility.

BB-MESR91-MT Modbus Gateway is built for use in industrial environments, featuring a slim IP30 DIN rail mount case. It operates from a range of DC power supply voltages and has a pluggable terminal block connector. An external power supply is required (not included, sold separately).

The unit has an additional Ethernet port that functions much like an Ethernet switch, allowing pass-through connectivity for other Ethernet devices. This port can also be used to “daisy chain” multiple gateways. Includes easy-to-use configuration software.

ORDERING INFORMATION

MODEL NUMBER	SERIAL PORTS	SERIAL CONNECTOR+	ETHERNET PORTS	ETHERNET CONNECTOR
BB-MESR921-MT	1	DB9 or Terminal Block	Multi-mode Fiber, Copper	(1) ST, (1) RJ45

+ All serial ports are software configurable for RS-232, RS-422, or RS-485.

Copper port options available. Contact B+B SmartWorx.

ACCESSORIES – sold separately

BB-MDR-20-24 - 24VDC, 1.0 A output power, DIN rail mount power supply

BB-MDR-40-24 - 24VDC, 1.7 A output power, DIN rail mount power supply

BB-DRPM25 - 35mm DIN Rail to Panel Mount Bracket, 25mm wide

BB-TBKT1 - Replacement Terminal Block - 2-position, 5.08mm, 8A, 30

BB-TBKT2 - Replacement Terminal Block - 5-position, 5.08mm, 8A, 30

All product specifications are subject to change without notice.
BB-MESR921-MT_Fiber_0420ds

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SPECIFICATIONS

SERIAL TECHNOLOGY	
RS-232	TD, RD, RTS, CTS, DTR, DSR, DTD, GND
RS-485 2-Wire	Data A(-), Data B(+), GND
RS-422/485 4-Wire	TDA(-), TDB(+), RDA(-), RDB(+), GND
Serial Connector	DB9M or Removable Terminal Blocks, 12 to 28 AWG
Data Rate	Up to 230.4 Kbps
FIBER OPTIC TECHNOLOGY	
Type / Wavelength	Multi-mode / 1310 nm
Output Power	(-) 19 to (-) 14 dBm
Receive Sensitivity	~ (-) 32 dBm
Cable	62.5 / 125 µm
Connector	ST
Range	2 km (1.2 mi)
POWER	
Source	External, required (not included, sold separately)
Input Voltage	10 to 48 VDC (58 VDC, maximum)
Connector	Removable Terminal Block (12 to 28 AWG)
Power Consumption	6.0 Watts
MECHANICAL	
LED Indicators	Serial Port, Ethernet Link, Ready
Switches	Reset Button
Dimensions	14.86 x 10.11 x 2.96 cm (5.85 x 3.98 x 1.16 in)
Enclosure	35mm DIN mount, Plastic, IP30
Weight	201.4g (0.45 lb)
eDrawing	Available on website

ENVIRONMENTAL	
Operating Temperature	-40 to +80° C (-40 to +176 °F)
Operating Humidity	0 to 95% non-condensing
MEANTIME BETWEEN FAILURES (MTBF)	
MTBF	102593 hours
MTBF Calculation Method	217F Parts Count Reliability Prediction
NETWORK	
Serial Memory	8 KB per port
Network Memory	4 KB
IP Port Addresses	5300 – Heartbeat and Configuration. Setting in TCP Mode (paired mode). 8899 – MESR921-MT Update.
LAN	10/100 Mbps auto-detecting
Ethernet	IEEE 802.3 auto-detecting & auto MDI/MDX 10/100
PROTOCOLS	
TCP, IPv4, ARP, HTTP 1.0, ICMP/PING, DHCP/BOOTP	
IP Mode	Static, DHCP
TCP	User definable
OTHER	
Mode	Modbus RTU Master / Slave Modbus ASCII Master / Slave
Search	Serial direct COM and Ethernet. Auto search or specific IP.
Diagnostics	Display PC IP, ping, save test config. (text readable)
Firmware Upgrade	via Vlinx Manager
ETHERNET PASS-THROUGH PORT (BB-MESR92X)	
Standards	IEEE 802.3, 802.3u, 802.3x
Processing Type	Store & Forward with 802.3x full-duplex, non-blocking flow control
Flow Control	IEEE 802.3x flow control, back pressure flow control
MAC Address Table	2K
CONFIGURATION SOFTWARE	
Vlinx Manager - Windows O/S	2000, XP, 2003 Server, Vista, 2008 Server, 7, 8, 10 (32/64 bit)
REGULATORY/APPROVALS / DIRECTIVES/ STANDARDS	
Compliance	FCC, CE
UL	UL Listed UL Class 1 Division 2 Groups A, B, C, D (HAZLOC)
CE - Directives	2014/30/EU - Electromagnetic Compatibility (EMC) 2011/65/EU amended by (EU) 2015/863 - Reduction of Hazardous Substances (RoHS) 2012/19/EU - Waste Electrical and Electronic Equipment (WEEE)
CE - Standards	EN 55032 Class B - Electromagnetic Compatibility of Multimedia Equipment - Emission Requirements EN 55024 - Information Technology Equipment - Immunity Characteristics - Limits and Methods of Measurement (ITE)