



FEATURE HIGHLIGHTS

- Designed for 802.11 b/g/n networks, FCC (USA), ETSI (Europe) certified
- 1 x 100BaseT(X) RJ45 port, and 1 or 2 sw-selectable RS-232/485/422 ports, either D-Sub 9 or Terminal Block connector
- Bi-Directional Modbus TCP/RTU/ASCII conversion from Serial to Ethernet or Wireless and Vice-versa
- Advanced features include Virtual ID remapping, VirtualCOM mode, exception handling and many others
- Supports WiFi-Direct for Simple Peer Pairing
- Web server / Utility configuration

PRODUCT DESCRIPTION

Diverse Hardware, Integrated Wireless, Serial and Ethernet

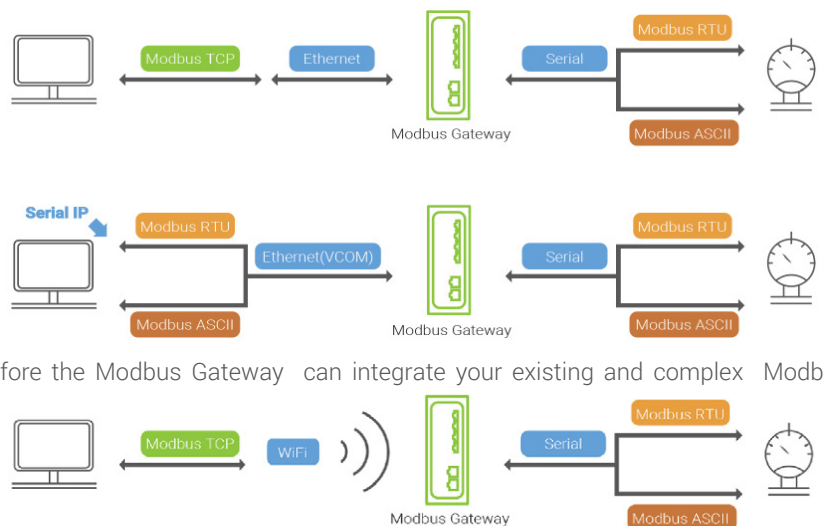
MW5501C/02C Industrial Wireless Modbus Gateway will provide you a flexible platform to convert bi-directionally Modbus RTU/ASCII/TCP through wired and wireless Ethernet Networks. It supports IEEE802.11 b/g/n standards over 2.4GHz for Wireless connectivity, wired Ethernet through one RJ45 port and supports the four most commonly used communication standards in Serial: RS-232/485 and 422 on one or two ports. The ease-of-use configuration utility provided with Modbus Gateway can quickly select the hardware interface, and easily switch to the existing communication infrastructure.

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	MW5501C MW5502C
Network interface	
Wired	IEEE 802.3 10BaseT IEEE 802.3u 100BaseT(X)
Connector ports	RJ45 x 1
Wireless interface	
Wireless Standard Conformance	IEEE 802.11b (1, 2, 5.5 and 11 Mbps) IEEE 802.11g (6, 9, 12, 18, 24, 36, 48 and 54 Mbps) IEEE 802.11n : (20 MHz: 1Nss: 65Mbps @ 800GI, 72.2Mbps @ 400GI (Max.) (40MHz: 1Nss: 135Mbps @ 800GI, 150Mbps @ 400GI (Max.)
Wireless Module	Atheros AR9382
Tx/Rx	1T1R MIMO (1 x 1 with MCS 0-7)
Antenna	3/5 dBi antenna design, SMA(R) Female connector
Operating Frequency	2.4 GHz
United States (FCC) Europe (ETSI)	2412-2462(20Mhz)/ 2422-2452(40MHz) 2412-2472(20Mhz)/ 2422-2462(40MHz)
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 (MW5501C) 2 (MW5502C)
Baud Rate	110 ~ 921,600 bps software selectable
Parity	None, Odd, Even, Mark, Space
Data Bits	5, 6, 7, 8 software selectable
Stop Bits	1, 2 software selectable
Flow Control	None, Xon/Xoff, RTS/CTS
Power	
Input Voltage	9 ~ 48VDC
Input Current (@ 9VDC)	0.65 A
Power Consumption	Approximately 5.85 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	IP30 SPCC housing 47 x 110 x 90 mm 500 g DIN-Rail, Wall mount (optional kit)

Reset Button	Yes					
Wifi-Direct Button	Yes					
Environmental Limits						
Operating Temperature	-10°C~60°C (14°F~140°F)					
Storage Temperature	-40°C~85°C (-40°F~185°F)					
Ambient Relative Humidity	5%~95%, 55°C (Non-condensing)					
Software						
Protocols	IPv4, ICMP, TCP, UDP, DHCP Client, SNMPv1,v2c,v3, SMTP, HTTP, DNS, NTP, RADIUS, RFC2217, WPS, SysLog, Modbus TCP, Modbus RTU, Modbus ASCII					
Wireless Security	WEP, WPA, WPA2, TKIP, AES, 802.1x					
Configuration	Atop Management Utility, Web UI					
VirtualCOM	Windows/Linux redirection software					
Modbus Specifications						
TCP Client	Maximum 16 Modbus TCP client connections Modbus RTU/ASCII via VirtualCOM					
TCP Server	Maximum 64 Modbus TCP connections; Modbus RTU/ASCII via VirtualCOM or reverse Telnet					
COM	Maximum 16 devices per COM port.					
Wireless Output Power						
IEEE 802.11b	+14dBm					
IEEE 802.11g	+17dBm @ 6, 9, 12,18,24Mbps / +17dBm @ 36Mbps / +16dBm @ 48Mbps / +16dBm @ 54Mbps					
IEEE 802.11n (2.4GHz / HT20)	+16dBm @ MCS 0 +16dBm @ MCS 4 +16dBm @ MCS 1 +16dBm @ MCS 5 +16dBm @ MCS 2 +16dBm @ MCS 6 +16dBm @ MCS 3 +15dBm @ MCS 7					
IEEE 802.11n (2.4GHz / HT40)	+15dBm @ MCS 0 +15dBm @ MCS 4 +15dBm @ MCS 1 +15dBm @ MCS 5 +15dBm @ MCS 2 +15dBm @ MCS 6 +15dBm @ MCS 3 +14dBm @ MCS 7					
Receiver Sensitivity						
Std	Data Rate	IEEE Spec (1 Rx dBm)	Std	Data Rate	IEEE Spec (1Rx dBm)	
802.11b	1M	not specified	802.11n (HT40)	MCS0	-79	
	5.5M	not specified		MCS1	-76	
	11M	not specified		MCS2	-74	
802.11g	6M	-82		MCS3	-71	
	9M	-81		MCS4	-67	
	12M	-79		MCS5	-63	
	18M	-77		MCS6	-62	
	24M	-74		MCS7	-61	
	36M	-70		802.11b/g/n (HT20/HT40)	MCS0	-82 / -79
	48M	-66			MCS1	-79 / -76
54M	-65	MCS2	-77 / -74			
802.11n (HT20)	MCS0	-82	MCS3		-74 / -71	
	MCS1	-79	MCS4		-70 / -67	
	MCS2	-77	MCS5		-66 / -63	
	MCS3	-74	MCS6		-65 / -62	
	MCS4	-70	MCS7	-64 / -61		
	MCS5	-66				
	MCS6	-65				
MCS7	-64					

REGULATORY APPROVALS

Regulatory Approvals				
EMC	EN55032, EN55024, EN 301489-1 V2.2.0; EN301489-17 V3.2.0; FCC 15B (Class A)			
Radio	FCC 15C 15.247, FCC 15E 15.407, EN 301893 V2.1.1, EN 300328 V2.1.1			
EMF	EN 62311: 2008, EN 50385: 2002			
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	AC Power Port	±2.0kV	3
		LAN Port	±2.0KV	4
IEC 61000-4-5	Surge	AC Power Port	Line-to Line±1.0KV	3
		AC Power Port	Line-to Earth±2.0KV	3
		LAN Port	Line-to Earth±2.0KV	3
IEC 61000-4-6	CS	Conducted (enclosure)	10 V rms	3
IEC 61000-4-8	PFMF	Enclosure	AC 50/60 Hz 10 A/m	3
Safety	UL60950-1 , CB IEC/EN60950-1, IEC/EN 62368-1			
Shock	IEC 60068-2-27			
Drop (Freefall)	IEC 60068-2-32			
Vibration	IEC 60068-2-64			
MTBF	15 years (MIL-HDBK-217F)			
Warranty	5 years			
RoHS II	Yes			

ORDERING INFORMATION

Ordering information

Model name	Part Number	Description
MW5501C	1P1MW5501C0001G	1-port 802.11b/g/n Industrial Wireless Modbus Gateway supporting Wifi-Direct, combo TB - DB9 port
MW5502C	1P1MW5502C0001G	2-port 802.11b/g/n Industrial Wireless Modbus Gateway supporting Wifi-Direct, DSub 9 connector
MW5502C-TB	1P1MW5502CTB01G	2-port 802.11b/g/n Industrial Wireless Modbus Gateway supporting Wifi-Direct, Terminal Block

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
UN315-2465 (US)	50500161240002G	Y-Type power adapter, 100~240VAC input, 0.65A @ 24VDC output, US plug, LV6
UNE315-2465 (EU)	50500161240012G	Y-Type power adapter, 100~240VAC input, 0.65A @ 24VDC output, EU plug, LV6
ADP-DB9(F)-TB5	59906231G	Female DB9 to Female 3.81 TB5 Converter
WMK-454-Black	70100000000043G	Black Aluminum Wall Mount Kit

DIMENSIONS & LAYOUT

