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# MW5501C Series MW5502C Series

# 1 or 2-Port Industrial Wireless Modbus TCP/RTU/ASCII Gateway



## 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

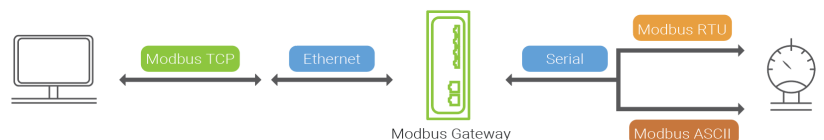
## PRODUCT DESCRIPTION

### 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.

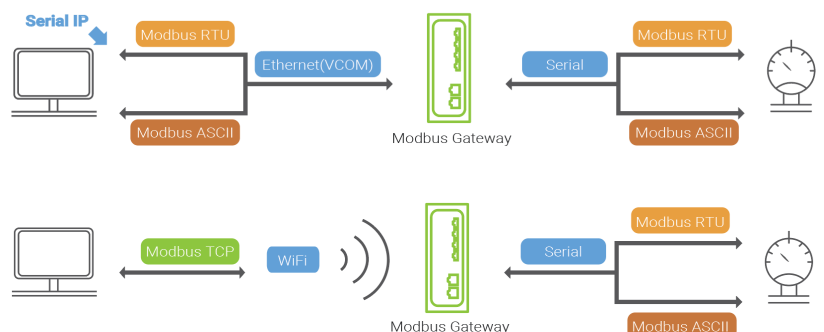
### Switching between Modbus Protocols

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.



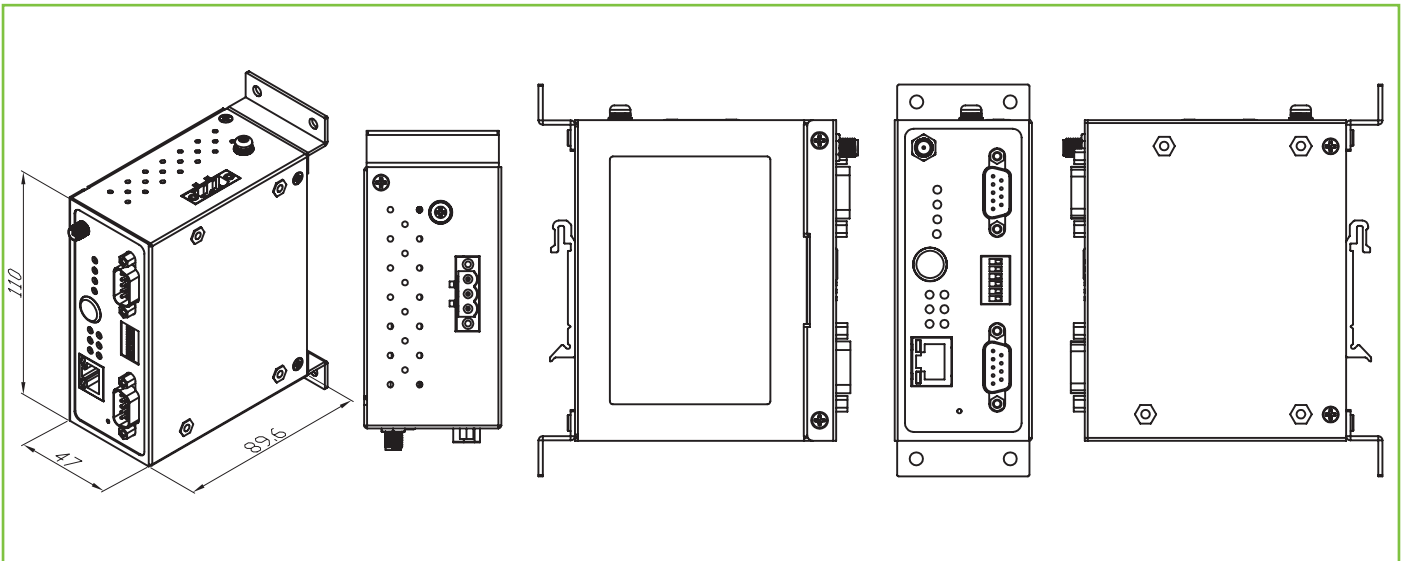
## SPECIFICATIONS

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				
<b>Environmental Limits</b>					
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)				
<b>Software</b>					
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				
<b>Modbus Specifications</b>					
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.				
<b>Wireless Output Power</b>					
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				
<b>Receiver Sensitivity</b>					
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	
MCS0	-82	MCS3		-74 / -71	
802.11n (HT20)	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			

## DIMENSIONS & LAYOUT



## REGULATORY APPROVALS

Regulatory Approvals				
Safety	UL60950-1/CB, EN60950-1			
EMC	EN 301489-1 V1.9.2, EN301489-17 V2.2.2 (Class A), FCC 15B (Class A), EN55032, EN55024			
Radio	FCC 15C 15.247, FCC 15E 15.407, EN 301893 V1.7.1, EN 300328 V1.8.1			
EMF	EN 62311: 2008, EN 50385: 2002			
Test	Item	Value	Level	
IEC 61000-4-2	ESD	Contact Discharge	±4kV	2
		Air Discharge	±8kV	3
IEC 61000-4-3	RS	Radiated (enclosure)	3 V/m	2
IEC 61000-4-4	EFT	AC Power Port	±2.0kV	3
		DC Power Port	±0.5kV / ±1.0kV	1/2
		Signal Port	±0.5kV	2
IEC 61000-4-5	Surge	AC Power Port	L-to-L±1.0kV/L-to Earth±2.0kV	3
		DC Power Port	Line-to Earth±0.5kV / ±1.0kV	1/2
		Signal Port	L-to-L±1.0KV/L-to Earth±1.0KV	2
IEC 61000-4-6	CS	Conducted (enclosure)	3 V rms	2
IEC 61000-4-8	PFMF	Enclosure	3 A/m	2
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	22 Years (MIL-HDBK-217F)
Warranty	5 years

## ORDERING INFORMATION

### Ordering information

Model name	Part Number	Description	Ethernet	Serial
MW5501C	1P1MW5501C0001G	1-port 802.11b/g/n Industrial Wireless Modbus Gateway supporting Wifi-Direct, combo TB - DB9 port	1	1 (TB/DB9)
MW5502C	1P1MW5502C0001G	2-port 802.11b/g/n Industrial Wireless Modbus Gateway supporting Wifi-Direct, DSub 9 connector	1	2 (DB9)
MW5502C-TB	1P1MW5502CTB01G	2-port 802.11b/g/n Industrial Wireless Modbus Gateway supporting Wifi-Direct, Terminal Block	1	2 (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-454-Black	70100000000043G	Black Aluminum Wall Mount Kit