

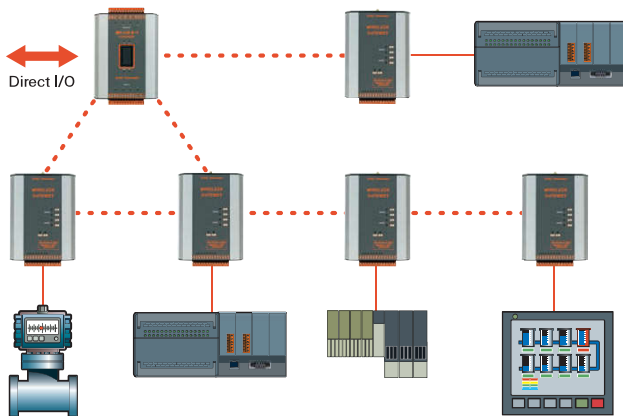
Wireless Gateways WI-GTWY-9

Wireless gateways interface between other Weidmüller wireless devices and control systems (such as PLC's, DCS and SCADA). In addition to channeling the wireless network data into one central control system, they can also act as an eight input/output transceiver.



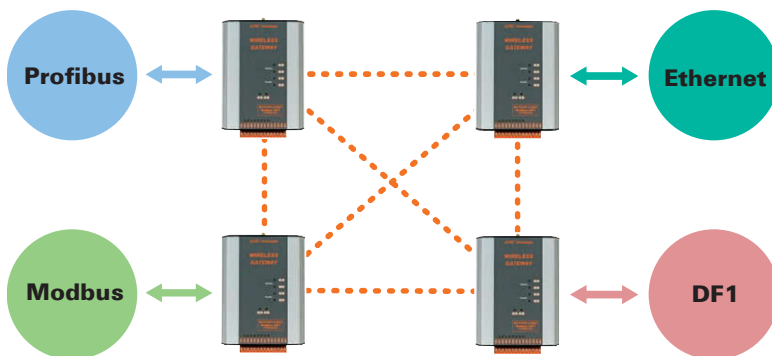
Applications

- Wirelessly connect PLCs on a new machine to an existing factory automation system
- Interface different automation systems in different sections of a plant
- Connect protocol devices into a common wireless network
- Weidmüller wireless units are used to wirelessly transmit signals for PLCs or DCS



Wireless gateways connect to popular process control and automation databuses and convert signal information to the proven WIB-net wireless protocol.

Interconnection Flexibility



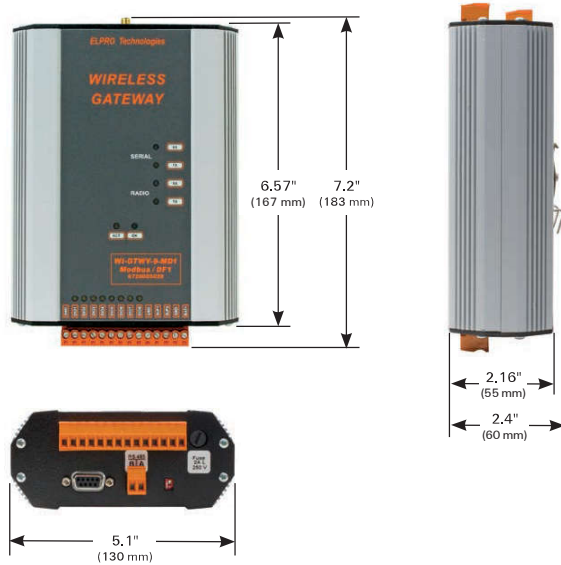
Main benefits:

- Wireless extension of factory automation, providing a high security firewall. The wireless gateway connects to a databus and transfers I/O values to another wireless gateway unit via WIB-net communications. The other gateway interfaces to its own databus. Multiple gateway units can communicate in a WIB peer-to-peer network.
- There is an efficient wireless protocol conversion in the modules enabling an efficient transfer of data to Modbus, Profibus, Ethernet and DeviceNet.
- Interface between PLCs, DCS, HMI, or SCADA and Weidmüller wireless units. The wireless gateway keeps an "image" of the remote wireless network in its memory and interfaces this image to the databus.
- Network wireless units and gateways to connect sensor signals and control systems

Features

- Connects to data bus at full bus speed (e.g. 12Mb/s for Profibus, 100Mb/s for Ethernet)
- Provides Protocol Conversion (Profibus, Modbus, Ethernet, DeviceNet)
- Can interconnect master-slave, slave-slave and master-master
- Interconnects different data buses - wireless protocol conversion
- Provides a peer-to-peer wireless network using WIB-net
- High security data encryption
- Automatic acknowledgment and error-correction
- Multiple path routing
- Eight on-board discrete I/O, individually configurable as input or output
- Network configuration is performed with easy-to-use free software
- Wide range power supply with integral back-up battery-charging feature
- Frequency hopping spread spectrum
- 902-928 MHz 1W license-free USA/Canada/Mexico
- Configurable sub-bands license-free South America, Australia/NZ, Asia, Europe available on request

Dimensions



General Specifications

- **Frequency:** frequency hopping spread spectrum 902-928 MHz, sub-bands configurable
- **Power:** transmit power 1W, approved to FCC Part 15.247, RSS210
- **Sensitivity:** receiver data sensitivity – 108 dBm
- **Max. Range (line-of-sight):** USA/Canada, 4W ERP 20+ miles; other countries, 1W ERP, 15+ km depending on local conditions
- **Data Rate:** 19.2 Kb/s with forward-error correction
- **Antenna Connector:** SMA female coaxial
- **Temperature:** -40 to 60°C / -40 to 140°F
- **Humidity:** 0 - 99% RH
- **Regulatory Approvals:** EMC Compliant EN 301 489, FCC Part 15
- **Certifications:** Class I, Division 2 (USA, Canada)
- **Housing:** extruded aluminum case 130 x 183 x 60 mm, 5.1 x 7.2 x 2.4 inches, DIN-rail mounting, removable terminal blocks for ease of module replacement, terminals suitable for 12 gauge (2.5 mm²) wire
- **Radio communications can be configured** for combination of event-reporting (change-of-state), update time, read/write blocks and poll response. Radio message includes system addressing, unit addressing, error-checking and configurable security encryption. Communication control includes message acknowledgments and up to four re-transmissions.
- **Peer-to-peer addressing.** Messages may be routed through five intermediate repeater addresses.
- **Fail-to-transmit and fail-to-receive** alarms are configurable.
- **LED indication** for processor OK, radio TX and RX, serial TX and RX, active status
- **Modbus RTU** (binary), master / slave configurable; RS232 or RS485, 300 - 19200 bits/sec.

Inputs and Outputs

- Eight discrete I/O, individually configurable as input or output. Inputs suitable for voltage-free contacts. Outputs are FET, 30VDC 500mA.

Power Supply

- **Battery Supply:** battery charging circuit included for 12V back-up battery, max. charge current regulated to 0.7A (>12V supply)
- **Normal Supply:** 9 - 30VDC / 12 - 24VAC
- **Normal current drain:** 12V 150mA; 24V 90mA
add 5mA per active I/O, current drain during radio transmission, add to above: 12V 350mA; 24V 200mA

Set-point Status

- Modbus 4300 I/O points (analog plus discrete)

Serial Port

- RS232 9 pin DB9 female connector
- RS485 terminal connections

Configuration and Diagnostics

- Diagnostics include online read/write of I/O registers, radio signal strength values from remote units and off-line testing of databus protocol.



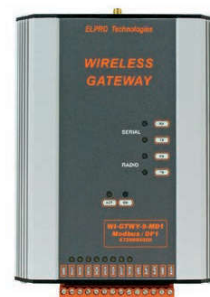


Radio communications can be configured for combination of event reporting (change-of-value), update time, read/write blocks and poll response. Radio message includes system addressing, unit addressing, error checking and configurable security encryption. Communication control includes message acknowledgments and up to four re-transmissions. Peer to peer addressing. Messages may be routed through four intermediate repeater addresses. Fail-to-transmit and fail-to-receive alarms configurable

**WI-GTWY-9-MD1
Modbus (Master and Slave), DF1**



**WI-GTWY-9-PR1
Profibus DP Slave**



Technical Data

Power Supply	9 - 30VDC / 12 - 24VAC	9 - 30VDC / 12 - 24VAC
	Battery charging circuit included for 12V back-up battery, max charge current regulated to 0.7A (> 12V supply) Normal current drain MD1 version 12V 150mA; 24V 90mA Other version 12V 270mA; 24V 170mA Add 5mA per active I/O	Battery charging circuit included for 12V back-up battery, max charge current regulated to 0.7A (> 12V supply) Normal current drain MD1 version 12V 150mA; 24V 90mA Other version 12V 270mA; 24V 170mA Add 5mA per active I/O
Current drain during radio transmission	Add 12V 350mA; 24V 200mA to above	Add 12V 350mA; 24V 200mA to above
I/O Capacity	4300 I/O points (analog plus discrete)	416 I/O bytes up to 1952 DI/1952 DO, or up to 122 AI/122 AO
Register Size	16 bit	16 bit
Number of remote WI-GTWY-9 addresses	500	500
General Data		
Operating Temperature	-40 to 60°C (-40 to 140°F)	0 to 60°C (30 to 140°F)
Humidity	0 - 99 %RH	0 - 95 %RH
EMC Standards	EN 301 489, FCC Part 15, Approved to FCC Part 15.247, RS210	EN 301 489, FCC Part 15, Approved to FCC Part 15.247, RS210
Approvals	Class 1 Div 2	Class 1 Div 2
Mounting	DIN-rail mounting.	DIN-rail mounting.
LED indication	for processor OK, radio TX and RX, serial TX and RX, active status	for processor OK, radio TX and RX, serial TX and RX, active status
Dimensions mm (in)	130 x 183 x 60 (5.1 x 7.2 x 2.4)	130 x 183 x 60 (5.1 x 7.2 x 2.4)
Wireless Communications	Modbus RTU (binary), master / slave configurable. RS232 or RS485, 300 - 19200 bits/sec. Allen-Bradley DF1 full-duplex, RS232 only, 300 - 19200 bits/sec.	Profibus-DP functionality according to EN 50170. RS-485 optically isolated with on-board DC/DC converter, automatic baudrate detection (9600 bit/s - 12 Mbit/s)
On-board I/O	Eight discrete I/O, individually configurable as input or output. Inputs suitable for voltage free contacts. Outputs are FET, 30VDC 500mA.	Eight discrete I/O, individually configurable as input or output. Inputs suitable for voltage free contacts. Outputs are FET, 30VDC 500mA.
Configuration	via free Windows software	via free Windows software
Diagnostics	on-line read/write of I/O registers, radio signal strength values from remote units, and off-line testing of data bus protocol.	on-line read/write of I/O registers, radio signal strength values from remote units, and off-line testing of data bus protocol.
Radio Transceiver		
Frequency hopping spread spectrum	902-908 MHz, sub-bands configurable	902-908 MHz, sub-bands configurable
Transmit power	1W	1W
Receiver data sensitivity	-108dBm	-108dBm
Maximum line-of-sight range	USA/Canada, 4W ERP, 20+ miles	USA/Canada, 4W ERP, 20+ miles
Data rate	19.2 Kb/s with forward-error correction	19.2 Kb/s with forward-error correction
Antenna connector	SMA female coaxial	SMA female coaxial

Ordering Data

	Type	Part No.	Type	Part No.
	WI-GTWY-9-MD1	6720005020	WI-GTWY-9-PR1	6720005021
Accessories: DB9 Male - DB9 Female Serial config. cable	WI-CSER-905-9	6720005105	WI-CSER-905-9	6720005105



Radio communications can be configured for combination of event reporting (change-of-value), update time, read/write blocks and poll response. Radio message includes system addressing, unit addressing, error checking and configurable security encryption. Communication control includes message acknowledgments and up to four re-transmissions. Peer to peer addressing. Messages may be routed through four intermediate repeater addresses. Fail-to-transmit and fail-to-receive alarms configurable

WI-GTWY-9-PR2 Profibus DP Master



WI-GTWY-9-ET1 Ethernet IP, Modbus TCP, TCP/IP functions



Technical Data

Power Supply	9 - 30VDC / 12 - 24VAC Battery charging circuit included for 12V back-up battery, max charge current regulated to 0.7A (>12V supply) Normal current drain MD1 version 12V 150mA; 24V 90mA Other version 12V 270mA; 24V 170mA Add 5mA per active I/O	9 - 30VDC / 12 - 24VAC Battery charging circuit included for 12V back-up battery, max charge current regulated to 0.7A (>12V supply) Normal current drain MD1 version 12V 150mA; 24V 90mA Other version 12V 270mA; 24V 170mA Add 5mA per active I/O
Current drain during radio transmission	Add 12V 350mA; 24V 200mA to above	Add 12V 350mA; 24V 200mA to above
I/O Capacity	2048 bytes input and 2048 bytes output up to 4300 discrete I/O points, or up to 1024 analog in / 1024 analog out	2048 bytes input and 2048 bytes output up to 4300 discrete I/O points, or up to 1024 analog in / 1024 analog out
Register Size	16 bit	16 bit
Number of remote WI-GTWY-9 addresses	500	500
General Data		
Operating Temperature	0 to 60°C (30 to 140°F)	0 to 60°C (30 to 140°F)
Humidity	0 - 95 %RH	0 - 95 %RH
EMC Standards	EN 301 489, FCC Part 15, Approved to FCC Part 15.247, RS210	EN 301 489, FCC Part 15, Approved to FCC Part 15.247, RS210
Approvals	Class 1 Div 2 Ⓢ	Class 1 Div 2 Ⓢ
Mounting	DIN-rail mounting,	DIN-rail mounting,
LED indication	for processor OK, radio TX and RX, serial TX and RX, active status	for processor OK, radio TX and RX, serial TX and RX, active status
Dimensions mm (in)	130 x 183 x 60 (5.1 x 7.2 x 2.4)	130 x 183 x 60 (5.1 x 7.2 x 2.4)
Wireless Communications	Profibus-DP functionality according to EN 50170. RS-485 optically isolated with on-board DC/DC converter, automatic baudrate detection (9600 bit/s - 12 Mbit/s)	10/100 Mbit/s, RJ45 connector, Transformer isolated interface Modbus/TCP class 0, class 1 and partially class 2 slave EtherNet/IP level 2 I/O Server Embedded Web system (Dynamic HTTP), on-board file system (1.4MB flash disc), user downloadable web pages through FTP server, Email functionality (SMTP)
On-board I/O	Eight discrete I/O, individually configurable as input or output. Inputs suitable for voltage free contacts. Outputs are FET, 30VDC 500mA.	Eight discrete I/O, individually configurable as input or output. Inputs suitable for voltage free contacts. Outputs are FET, 30VDC 500mA.
Configuration	via free Windows software	via free Windows software
Diagnostics	on-line read/write of I/O registers, radio signal strength values from remote units, and off-line testing of data bus protocol.	on-line read/write of I/O registers, radio signal strength values from remote units, and off-line testing of data bus protocol.
Radio Transceiver		
Frequency hopping spread spectrum	902-908 MHz, sub-bands configurable	902-908 MHz, sub-bands configurable
Transmit power	1W	1W
Receiver data sensitivity	-108dBm	-108dBm
Maximum line-of-sight range	USA/Canada, 4W ERP, 20+ miles	USA/Canada, 4W ERP, 20+ miles
Data rate	19.2 Kb/s with forward-error correction	19.2 Kb/s with forward-error correction
Antenna connector	SMA female coaxial	SMA female coaxial

Ordering Data

	Type	Part No.	Type	Part No.
	WI-GTWY-9-PR2	6720005022	WI-GTWY-9-ET1	6720005023
Accessories: DB9 Male - DB9 Female Serial config. cable	WI-CSER-905-9	6720005105	WI-CSER-905-9	6720005105



Radio communications can be configured for combination of event reporting (change-of-value), update time, read/write blocks and poll response. Radio message includes system addressing, unit addressing, error checking and configurable security encryption. Communication control includes message acknowledgments and up to four re-transmissions. Peer to peer addressing. Messages may be routed through four intermediate repeater addresses. Fail-to-transmit and fail-to-receive alarms configurable

WI-GTWY-9-DE1 DeviceNet Slave



WI-GTWY-9-M+1 Modbus Plus Slave



Technical Data

Power Supply	9 - 30VDC / 12 - 24VAC Battery charging circuit included for 12V back-up battery, max charge current regulated to 0.7A (>12V supply) Normal current drain MD1 version 12V 150mA; 24V 90mA Other version 12V 270mA; 24V 170mA Add 5mA per active I/O	9 - 30VDC / 12 - 24VAC Battery charging circuit included for 12V back-up battery, max charge current regulated to 0.7A (>12V supply) Normal current drain MD1 version 12V 150mA; 24V 90mA Other version 12V 270mA; 24V 170mA Add 5mA per active I/O
Current drain during radio transmission	Add 12V 350mA; 24V 200mA to above	Add 12V 350mA; 24V 200mA to above
I/O Capacity	512 bytes input and 512 bytes output up to 4300 discrete I/O points, or up to 256 analog in / 256 analog out	2048 bytes input and 2048 bytes output up to 4300 discrete I/O points, or up to 1024 analog in / 1024 analog out
Register Size	16 bit	16 bit
Number of remote WI-GTWY-9 addresses	500	500
General Data		
Operating Temperature	0 to 60°C (30 to 140°F)	0 to 60°C (30 to 140°F)
Storage Temperature		
Humidity	0 - 95 %RH	0 - 95 %RH
EMC Standards	EN 301 489, FCC Part 15, Approved to FCC Part 15.247, RS210	EN 301 489, FCC Part 15, Approved to FCC Part 15.247, RS210
Approvals	Class 1 Div 2 ☞	Class 1 Div 2 ☞
Mounting	DIN-rail mounting,	DIN-rail mounting,
LED indication	for processor OK, radio TX and RX, serial TX and RX, active status	for processor OK, radio TX and RX, serial TX and RX, active status
Dimensions mm (in)	130 x 183 x 60 (5.1 x 7.2 x 2.4)	130 x 183 x 60 (5.1 x 7.2 x 2.4)
Wireless Communications	DeviceNet 2.0 Slave, optically isolated RS422 with selectable baudrate between 125, 250 and 500 Kbit/sec.	Modbus RTU (binary), master / slave configurable, RS232 or RS485, 300 - 19200 bits/sec. Modbus Plus Slave, optically isolated RS485 with standard baudrate of 1 Mbit/sec, global data base transactions with routing for up to six networks.
On-board I/O	Eight discrete I/O, individually configurable as input or output, Inputs suitable for voltage free contacts. Outputs are FET, 30VDC 500mA.	Eight discrete I/O, individually configurable as input or output, Inputs suitable for voltage free contacts. Outputs are FET, 30VDC 500mA.
Configuration	via free Windows software	via free Windows software
Diagnostics	on-line read/write of I/O registers, radio signal strength values from remote units, and off-line testing of data bus protocol.	on-line read/write of I/O registers, radio signal strength values from remote units, and off-line testing of data bus protocol.
Radio Transceiver		
Frequency hopping spread spectrum	902-908 MHz, sub-bands configurable	902-908 MHz, sub-bands configurable
Transmit power	1W	1W
Receiver data sensitivity	-108dBm	-108dBm
Maximum line-of-sight range	USA/Canada, 4W ERP, 20+ miles	USA/Canada, 4W ERP, 20+ miles
Data rate	19.2 Kb/s with forward-error correction	19.2 Kb/s with forward-error correction
Antenna connector	SMA female coaxial	SMA female coaxial

Ordering Data

	Type	Part No.	Type	Part No.
	WI-GTWY-9-DE1	6720005024	WI-GTWY-9-M+1	6720005025
Accessories: DB9 Male - DB9 Female Serial config. cable	WI-CSER-905-9	6720005105	WI-CSER-905-9	6720005105