WC45i-GW

WaveContact Series

WC45i Wireless Gateway

WC45i-GW-DIN

Rugged, Simple, Flexible

FreeWave's WC45i Wireless Gateway provides a wireless management system for WaveContact IO products with an integrated antenna. It stores all sensor data in Modbus format and manages outbound communications. The WaveContact system is easily and quickly installed and deployed at a low price point.

Together with the WC45i Gateway, the WaveContact system is easily and quickly deployed to implement industrial automation where wired installations would be cost prohibitive. The WaveContact System has been designed for deployment in Class I, Division 1 locations.

Key Features

- Gateway for all WaveContact Series endpoints
- Industry-standard Modbus RTU communications (Modbus TCP available with optional module)
- Self-organizing, self-healing mesh network topology
- Detects off-line sensors
- Supports wireless configuration of remote endpoints
- HART Pass-Through enables remote configuration of connected HART devices
- Simple configuration interface
- Available with integrated onmi-directional antenna or as standalone gateway and radio
- Low power consumption
- 5 km (3 miles) range
- Class I, Division 1, intrinsically safe

Designed, Manufactured, and Tested in Boulder, CO

Made in USA

Transmitter

Frequency Range	902 to 928 MHz, FHSS, license-free ISM Band Compliant with FCC Part 15
Range	Up to 5 km (3 miles) or more, depending on placement and clear line of sight
Over-the-Air Rate	10 kbps

Receiver

Sensitivity	-105 dBm
Antenna Gain	5 dB

Interfaces

Data Interface	RS485; Ethernet when equipped with optional WC45i-GW-P Module
Data Protocol	Modbus RTU; Modbus TCP when equipped with optional WC45i-GW-P Module
Configuration Interface	RS232; Ethernet when equipped with optional WC45i-GW-P Module
Internal Diagnostics	Line voltage, signal strength, error conditions, internal event logging

Power Requirements

Power	6 to 36 VDC
Radio Power	500 mW
Current Draw	25 mA @ 12 VDC (WC45i-GW and WC45i-GW-DIN)

General Information

Operating Temperature	-40°C to +85°C (-40°F to +185°F)
Humidity	0 to 100%, non-condensing
Dimensions	**WC45i-AN:** 158.75 L x 95.25 W x 57.2 H (mm) 6.25 L x 3.75 W x 2.25 H (in) **WC45i-GW-DIN and WC45i-P:** 12.7 L x 12.7 W x 8.9 H (mm) 5.0 L x 5.0 W x 3.5 H (in)
Weight	**WC45i-GW:** 580 g (1.28 lbs) **WC45i-GW-DIN:** 100 g (0.22 lbs) **WC45i-P:** 120 g (0.26 lbs)
Antenna Type	Omni-directional (WC45i-GW only)
Enclosure	Weather tight, integrated electronics and antenna, NEMA 3R (WC45i-GW)
Safety	Non-incendive, Class I, Division 2, Groups C&D, Temp Code T5

Accessories

WC-USB-DB9	USB to Serial Interface Cable DB9
WC-ANT-WHIP	Whip antenna for use in fiberglass or plastic enclosure with direct mount to a DIN mounted card; Use with WC45i-GW-DIN, WC25i
WC-ANT-PM	Panel mount antenna to mount outside an enclosure

Related Products

WC20i Modular Endpoints

WC25i Wireless IO

WC30i Wireless Sensors

WC40i Modbus, Multi-IO, and Remote Shutdown nodes

Information to Order

Model Number	Description
WC45i-AN	Output module with 8 analog and 2 relay outputs; Can be used to output a signal corresponding to any remote sensor value
WC45i-GW	Gateway with integrated omni-directional antenna
WC45i-GW-DIN	DIN-mounted gateway with RP-SMA antenna connection
WC45i-P	Ethernet Interface Module provides Modbus-TCP connection and diagnostic interface for remote configuration
WC45i-BB	Breakout board provides DB9 configuration interface for WC45i-GW

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