




# Falcon

## Wireless Gateways

The FDS-Wi is a wireless gateway designed for easy integration with facility monitoring and management systems. The convenient wireless design helps reduce installation costs associated with hard-wired sensors and systems.

The FDS-Wi comes equipped with a 418 megahertz radio receiver capable of receiving signals from select transmitters sensing temperature, humidity, motion, power transmitters, dry contact, analog (0-20mA), 0-5VDC, and 0-10VDC signals and a 900 megahertz receiver capable of receiving signals from sensors and point repeaters. The FDS-Wi integrates these signals to facilities monitoring systems in the form of SNMP, Modbus TCP/IP, Modbus RTU, and BACnet/IP.

The FDS-Wi can receive signals within 100 feet (30.48m) in open air space with the 418 MHz frequency and up to a quarter mile (402.34m) of open air space with the 900 MHz frequency. Repeaters are used to add additional distance between the FDS-Wi and the wireless sensors (transmitters).

### Mesh Network

The FDS-Wi operates over a wireless distributed system (WDS), a type of wireless mesh network (WMN). The benefits of this system over other wireless networks is that it offers increased coverage and is typically more reliable. A distributed system helps increase performance and scalability and still allows the units to be geographically separate.

### Network Repeater

The FDS-Wi can be integrated into larger systems, such as a network management system (NMS) via SNMP protocol, or a building management system (BMS) through BACnet and Modbus protocols and can serve as a network repeater to convey alarm status information to a centralized location.

### Features

- Wireless design
- 900MHz & 418MHz receivers
- Optional 418MHz only
- Operates on a mesh network
- Receives transmissions up to 100 feet (30.48m) in open air with the 418MHz antenna and up to a quarter mile (402.34m) in open air with the 900MHz antenna
- Provides direct alarm notification
- Ability to output to Modbus, BACnet, and SNMP

### Benefits

- Easy, low cost installation
- Allows for adjustable signal strength
- Increases reliability of communication
- Increases distance between units and supports multiple sensors
- Easy integration with building management system (BMS) and network management system (NMS)

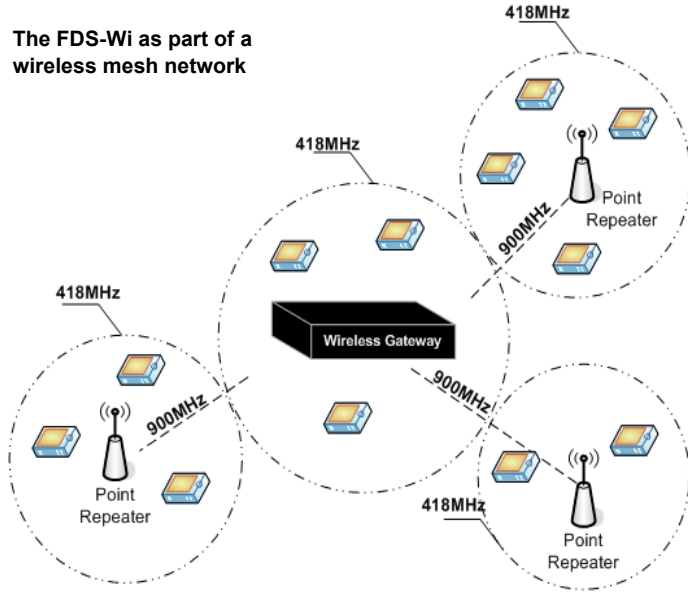
### Available Transmitters

- Analog: 0-20mA, 0-5v, 0-10v
- Current: 15A CT, 40A CT
- Digital: Dry Contact
- Motion
- Temperature
- Temperature/Humidity
- Thermistor

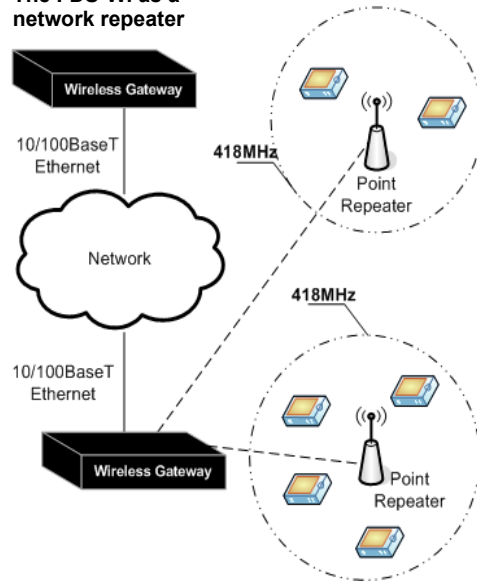
# Monitoring & Notification

# Example Wireless Gateway Applications

**The FDS-Wi as part of a wireless mesh network**



**The FDS-Wi as a network repeater**



## Wireless Gateway Specifications

<b>Power</b>	24VAC @ 600mA max, 50/60Hz, 24VDC @ 600mA max.
<b>Communication Ports</b>	<ul style="list-style-type: none"> <li>Ethernet: 10/100 BASE-T, RJ45 connector; 500VAC RMS isolation</li> <li>EIA-232: DB9 female connector; 9600 baud; No parity, 8 data bits, 1 stop bit</li> <li>EIA-485: 1200, 2400, 9600 or 19200 baud (selectable); Parity: none, even or odd, 8 data bits, 1 stop bit</li> </ul>
<b>Accessories</b>	Point Repeater (Wi-PR), 900MHz Antenna (Wi-ANT9), Field Verifier (FV-KIT)
<b>Protocols</b>	<ul style="list-style-type: none"> <li>TCP/IP, HTML, TFTP, SNMP</li> <li>Modbus (EIA-485)</li> <li>Modbus TCP/IP UDP/IP</li> <li>BACnet/IP</li> <li>BACnet/MSTP</li> <li>Terminal Emulation (EIA-232)</li> </ul> V1: V2C MIB-2 compliant; NMS Manageable with Get Modbus Slave; RTU mode; Supports function codes 03 Modbus Slave; TCP/IP transmission protocol ASHRAE STD 135-2004 Annex J EIA-485 VT100 compatible
<b>Login Security</b>	<ul style="list-style-type: none"> <li>Web Browser Access (Ethernet): 1 Web password Read Only; 1 Web password Read/Write</li> <li>Terminal Emulation Access: None</li> </ul>
<b>Maximum Number of Wireless Ports</b>	400 with repeaters; 100 without repeaters
<b>Wireless Interface</b>	900MHz and 418MHz receivers. RP/SMA connectors for Antenna
<b>Indicators</b>	<ul style="list-style-type: none"> <li>Network Status: 2 Green Active &amp; Speed</li> <li>Status: 1 Red LED</li> <li>EIA-485 Status: 2 Green Transmit &amp; Receive</li> </ul>
<b>Operating Environment</b>	<ul style="list-style-type: none"> <li>Operating Temperature: 32°F to 122°F (0°C - 50°C)</li> <li>Humidity: 5% to 95% RH (Non-condensing)</li> <li>Altitude: 15,000 ft (4572m) max.</li> </ul>
<b>Storage Temperature</b>	-4°F to 185°F (-20°C - 85°C)
<b>Mounting</b>	Desktop or rack mount (brackets included)
<b>Dimensions</b>	9.8"W x 5.3"D x 1.8"H (248mmW x 135mmD x 46mmH)



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