



Field Wireless Product Profile

Reliable and scalable field wireless network infrastructure with a variety of sensors offers the perfect solutions ranging from operation to maintenance, monitoring to control.

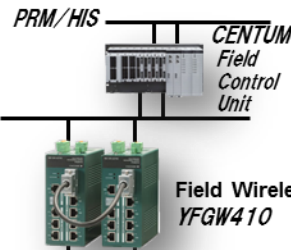
Plant Operation
(Monitoring/Control)



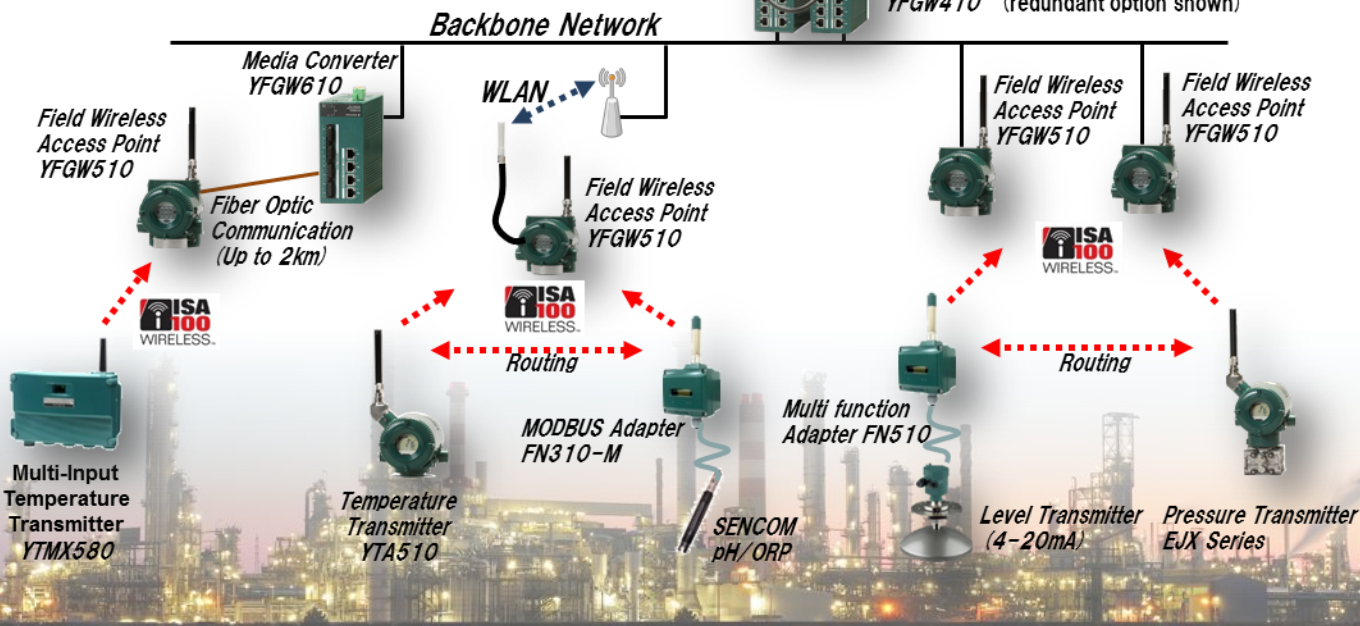
Facility Maintenance
(Monitoring)



Material Surveillance
(Monitoring)



Plant-wide Field Wireless










Main features of Yokogawa Plant-wide Field Wireless infrastructure:




- Typical communication range of 500 meters with line of sight
- Up to 500 sensors can be accommodated
- Extended communication range of more than three kilometers with repeaters
- Battery-powered transmitters and adapters
- Battery life up to 10 years
- Path redundancy and mesh network, improving communication reliability

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<http://www.field-wireless.com/>

Image	Product name / Model name / Feature	Performance / Specification
Field wireless infrastructure device		
	Field Wireless Management Station / YFGW410 This product manages wireless network and security based on ISA100 Wireless ⁽¹⁾ and works as a gateway to host applications. A pair of this product forms a redundant gateway. Combining this product with YFGW510 composes the field wireless communication infrastructure	Maximum number of field wireless devices to be connected in accordance with update period • 1 second update: 200 devices • 5 second update: 500 devices • Max number of YFGW510 : 20 • Rated Power: 24 VDC (Max. 10W)
	Field Wireless Access Point / YFGW510 This product provides a backbone router function specified in ISA100 Wireless ⁽¹⁾ and functions as an access point for field wireless devices. A pair of YFGW510 offers route redundancy without degrading network latency. Wireless LAN interface for wireless backbone to YFGW410 is also available.	• Maximum number of field wireless devices to be connected: 100 devices • Network interface: Ethernet • Redundancy mechanism: Duocast • Rated Power: 24 VDC (Max. 3.5W)
	Field Wireless Media Converter / YFGW610 This product extends the transmission distance between YFGW410 and YFGW510 using optical fiber. YFGW510 with fiber interface is required.	• Maximum transmission distance: 2 km • Convert between twisted-pair cable (100BASE-TX) and optical fiber (100BASE-FX) • Rated Power: 24 VDC (Max. 10W)
	Field Wireless Integrated Gateway / YFGW710 This product integrates the gateway function between an upper system and ISA100 Wireless ⁽¹⁾ field wireless devices, network configuration/management function, and field wireless network communication function into an all-in-one box, providing communication infrastructure for a small scale field wireless system.	• Maximum number of field wireless devices to be connected: 50 devices • Network interface: Ethernet • Rated Power: 24 VDC (Max. 10W)

Field wireless adapters		
	Field Wireless Communication Module / FN110 This module includes all the wireless functions required by ISA100 Wireless ⁽¹⁾ . This module coupled with FN310/FN510 runs as a field wireless device. Because of compliance with major radio regulations, FN110 enables sensor developers to develop a field wireless device quickly.	• ISA100 Wireless ⁽¹⁾ stack included • Comply with major international and local regulations • Power Supply Voltage: 2.9 - 4.8 V • Consumption current: Max. 60 mA
	Field Wireless Multi-Protocol Module / FN310 This module and FN110 convert a wired device to a wireless device. The built-in batteries power a FN110. The connected wired device can be powered by this module or external power source. This module supports HART and Modbus protocol. Extension cable allows flexible FN110 installation.	• Powered by 2 x D Size batteries ⁽²⁾ • Update Period: 5 or 8~3600 seconds • Battery Life: 4 years with 10 minute update time
	Field Wireless Multi-Function Module / FN510 This module and FN110 convert a variety of I/Os to a wireless device. Batteries are included and power a FN110. External power may be required for some I/O. Extension cable allows flexible FN110 installation.	• Powered by 2 x D Size batteries ⁽²⁾ • Update Period: 1~3600 seconds • 2 DI, 1 DO, 1 Pulse input, 1 AI • Battery Life: 10 years with 10 second update time

Field Wireless Transmitters		
	Wireless Differential Pressure/Pressure Transmitters / EJX B Series This product can measure absolute pressure or gauge pressure of liquid, gas, steam flow, as well as flow and liquid level. The accuracy of this product is the same as wired transmitters. The low power consumption design achieves long battery life. Extension coaxial cable allows flexible antenna installation.	• Powered by 2 x D Size batteries ⁽²⁾ • Update Period: 0.5~3600 seconds • Battery Life: 6 years with 10 second update time
	Wireless Temperature Transmitter / YTA510 This product can accept measurement from thermocouples (8 types) or RTD signals (3 types). The two input model can measure and process each input independently. Extension coaxial cable allows flexible antenna installation.	• Powered by 2 x D Size batteries ⁽²⁾ • Update Period: 1~3600 seconds • Battery Life: 9 years with 10 second update time
	Multi-Input Temperature Transmitter / YTMX580 YTMX580 can accept up to 8 points of measurement from thermocouples (8 types) or RTD signals (3 types). It can also accept DC voltage, resistance, and 4 to 20 mA DC signal input.	• Powered by 2 x D Size batteries ⁽²⁾ • Update Period: 1 to 3600 seconds • Battery Life: 6 years with 60 second update time

(1) An international, industrial wireless standard (IEC 62734) engineered to serve the needs of process industries
 (2) D size Lithium Thionyl Chloride battery. The battery pack is replaceable in hazardous area.

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