Gateway Module

FN110 (Modbus Communication for PLC/RTU)

Palm-sized ISA100 Wireless gateway

Features

- Optimized for a small system
- Reduce system configuration steps
- Provide a host system with ISA100 Wireless functions via serial communication

Shown in actual size

Challenges and benefits

Challenges
- Want to try a wireless system but wireless systems in the market are over performance
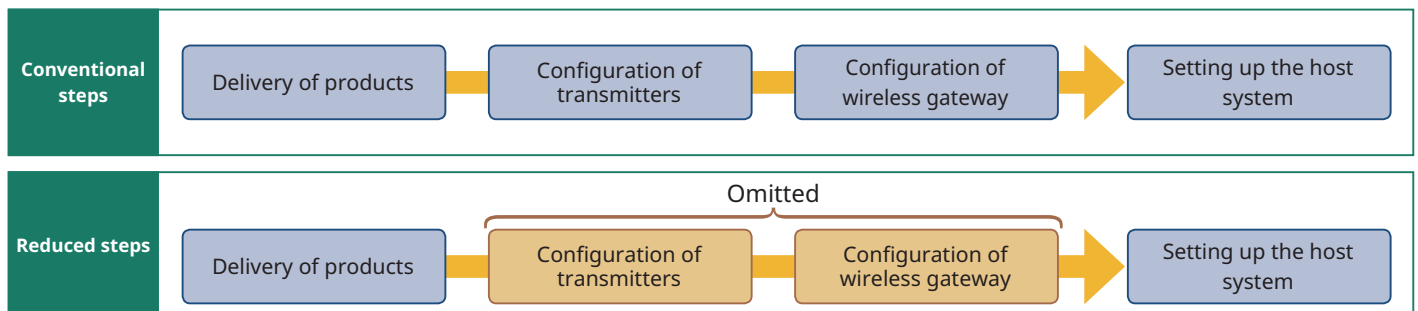- Setting up a wireless network requires expertise and time

Benefits
- Reduce system configuration steps
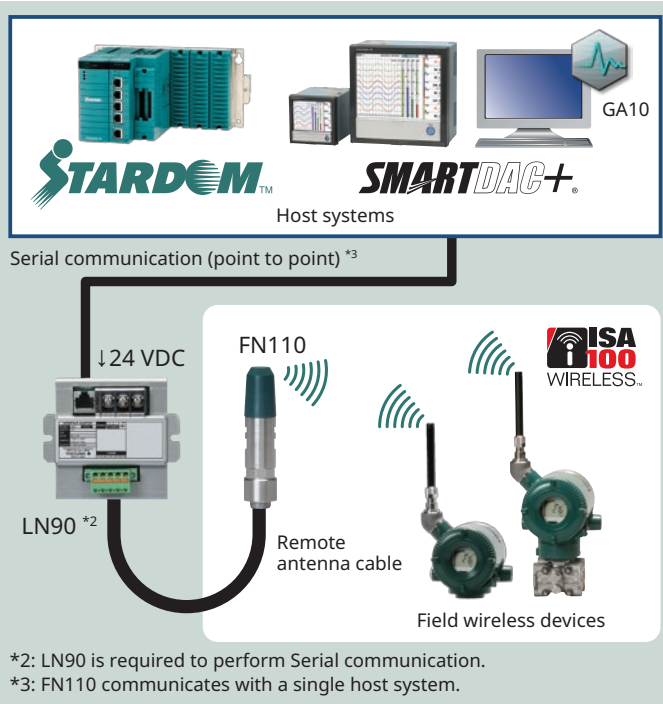- Make launching a wireless system easier

Shortening setting up time

Using the gateway module with Yokogawa transmitters allows omitting part of the configuration of the transmitters[1] and ISA100 Wireless gateway, reducing start-up time.

*1: Specify Tag Name and Network ID in Ordering Information when ordering

Conventional steps	Delivery of products	Configuration of transmitters	Configuration of wireless gateway	Setting up the host system

Omitted

Reduced steps	Delivery of products	Configuration of transmitters	Configuration of wireless gateway	Setting up the host system

System configuration

Host systems

Serial communication (point to point) *3

↓24 VDC

FN110

LN90 *2

Remote antenna cable

Field wireless devices

*2: LN90 is required to perform Serial communication.
*3: FN110 communicates with a single host system.

FN110 (Modbus Communication for PLC/RTU) specifications

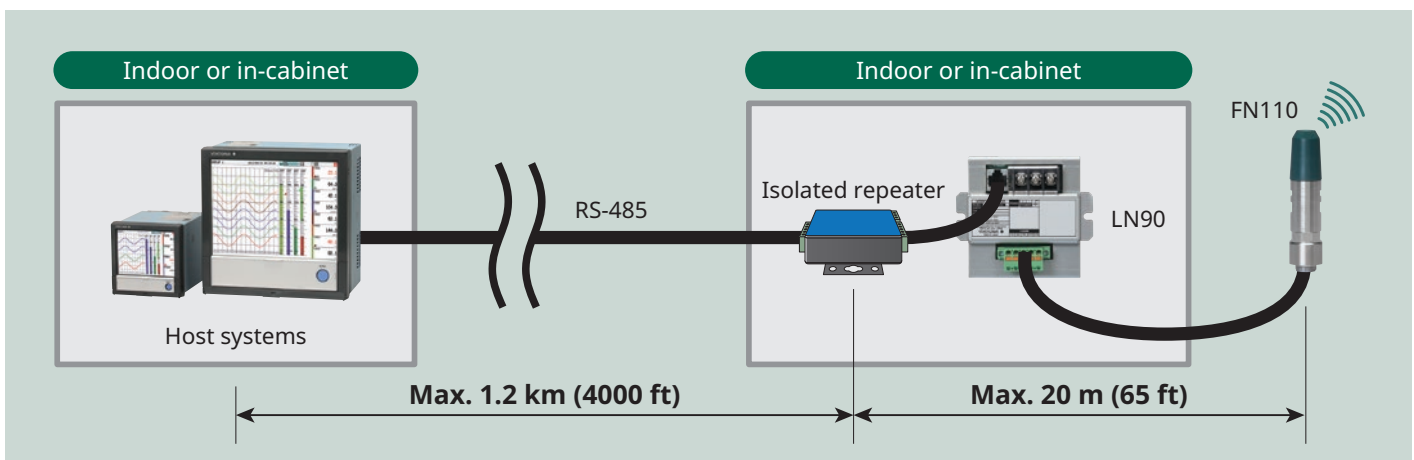|	
Network Topology	Star
Field Wireless Subnet	1 subnet
Field Wireless Device	Max. 20 devices (update rate: 2 to 3600 s) Max. 10 devices (update rate: 1 s)
Serial Communication	Mode : Half-duplex communication (RS-485) Speed : Max. 38400 bps Distance : Max. 20 m (dedicated cable)
Ambient Temprature Limits	Operating: -40 to 85°C (-40 to 185°F)
Degree of Protection	IP66, IP67, and Type 4X

LN90 specifications

Communication Mode	Half-duplex communication (RS-485)
Communication Speed	Max. 38400 bps
Ambient Temprature Limits	Operating: -40 to 70°C (-40 to 158°F)
Input Voltage Range	10 to 30 VDC

Application example

Adding an isolated repeater between a host system and LN90 extends serial communication distance up to 1.2 km (4000 ft)*4.

*4: Result obtained with GX10/20 as a host system and MOXA TCC-120/120i is an isolated repeater.
    Your result may vary depending on hardware and environmental factors

Indoor or in-cabinet

Indoor or in-cabinet

FN110

Host systems

RS-485

Isolated repeater

LN90

Max. 1.2 km (4000 ft)

Max. 20 m (65 ft)

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