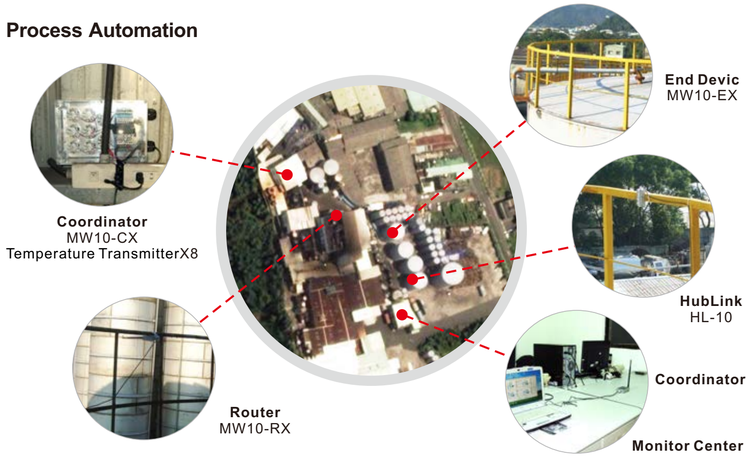
FineTek

ISO-9001:2000 Certified

Process Automation



Geography Monitoring

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Wireless Monitoring Total Solution

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Flu-Tech Fluid Control Specialists

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FineTek

Product Introduction

End device:

It supports every single sensor to communicate through wireless mode directly

- Power Source: DC 9~30V
- Signal Input Interface: RS-485*1
- RF Interface: 3.5mm SMA Female
- RF Band: ISM Band 2.4G

Router:

It collects data from end nodes and communicates with backbone monitoring systems. They increase broadcast transmission distance and implement peer-to-peer communication.

- Power Source: DC 9~30V
- RF Interface: 3.5mm SMA Female connector (ANT)
- RF Band: 2.4G ISM Band

Coordinator:

The devices of Wireless Monitoring Total Solution are managed with the MMS. It allows users to create a network, add device to a network, defines parameters and monitor measuring data.

- Power Source: DC 5V
- RF Interface: 3.5mm SMA Female connector (ANT)
- RF Band: ISM Band 2.4G
- Interface: USB

HubLink:

These devices are operated in Wireless or Wired versions for expanding connected to measuring sensors. 4 ports 4-20mA or 4 ports RS-485, 4 ports 1-wire and 4 port I/O communication is selectable to meet demands of applications.

- Power Source: DC 9~30V
- Signal Input Interface:
  1. RS-485*4 3. 1 Wire* 4
  2. 4-20mA*4 4. I/O* 4
- RF Interface: 3.5mm SMA Female connector (ANT)
- RF Band: 2.4G ISM Band or Quad band: GSM

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System Structure Diagram

Features

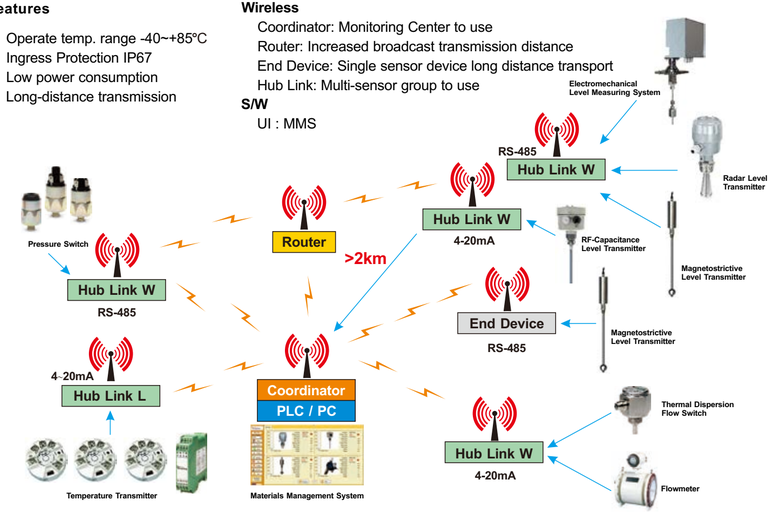
- Operate temp. range -40~+85℃
- Ingress Protection IP67
- Low power consumption
- Long-distance transmission

Wireless

Coordinator: Monitoring Center to use
Router: Increased broadcast transmission distance
End Device: Single sensor device long distance transport
Hub Link: Multi-sensor group to use

S/W

UI : MMS



Specification: Coordinator/ Router/ End device

Features

- Comply with IEEE802.15.4
- Max. numbers of connecting nodes: 65535
- 1 set of RS-485 communication interface
- Transmission distance: 2KM (Visible range/ 7dBi ANTENNA)
- Replacement of wire monitoring

Operating Power	9~30Vdc	**Transmission Power Rate**	±12dBm
Operating Temperature	-40~80°C	**Receiver Sensitivity**	-100dBm(PER≤1%)
Storage Temperature	-40~85°C	**Impedance Matching**	50Ω
Operating Frequency	2405~2480MHz	**Transmit Current Consumption**	34~36mA
Numbers of Channels	16CH	**Receive Current Consumption**	27~30mA
Interval of Channel	5MHz	**Serial Communication Interface**	RS-485
Frequency Offset	±15MHz	**UART Baud Rate**	9600/3800/57600 b/s (Default 9600b/s)
Frequency Change Mode	O-QPSK		
Data Transmission Rate	250kb/s	**Dimensions(LxWxH)**	146.37x66.37x30mm

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Specification

Comply with EIA-485 standard, 4 sets of input, 1 set of output, available for multi to one transmission
Optional with wireless module (ZigBee or GSM), suitable for wireless network establishment
Can connect with FineTek UI (MMS)

Communication Interface	RS-485/ZigBee/GPRS
Sensor Interface	4 sets of RS-485/ 4 sets of 4~20Ma (Each set is independent and isolated)
Operating mode	Rs485 Asynchronous half-duplex
Transmission format	Compatible to ModBus Master/Slave Function
Baud rate	1200~57600 b/s (wireless 9600~57600 b/s)
Communication distance	RF transmission distance 2 KM (visible range/ 7d Bi ANTENNA)
Power input	9~30Vdc
Current input	2A
Power output	9~30Vdc
Current output	400 mA / CH
Storage temperature	-40~80°C
Operating temperature	-40~80°C
Static electricity protection	IEC61000-4-2 ESD 15kV Air, 8kV contact
Dimensions	220 x 160 x 55 (without antenna and connector)
IP rating	IP67

Wireless System

1. Zigbee

Characteristic	Min.	Typical	Max.	Units
Operating Frequency Range	2405		2480	MHZ
Frequency Error Tolerance	-20		+20	KHz
Spread Spectrum Method		Direct Sequence		
Modulation Type		QPSK		
Number of RF Channels		16		
RF Data Transmission Rate		250		kb/s
Symbol Rate Tolerance			120	ppm
RF Channel Spacing		5		MHz
Receiver Sensitivity, 1% PER		100		dBm
Upper Adjacent Channel Rejection, +5 MHz		51		dB
Lower Adjacent Channel Rejection,-5 MHz		49		dB
Upper Alternate Channel Rejection, +10 MHz		55		dB
Lower Alternate Channel Rejection,-10 MHz		54		dB
Maximum RF Transmit Power	-13		12	dBm
Transmit Power Adjustment		25		dB
Optimum Antenna Impedance		50		Ω

Combine with 7dBi antenna that direct vision range over 2.0 km

2. GSM
Quad band:GSM850/900/1800/1900 MHz

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