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F8914 ZigBee TERMINAL TECHNICAL SPECIFICATION

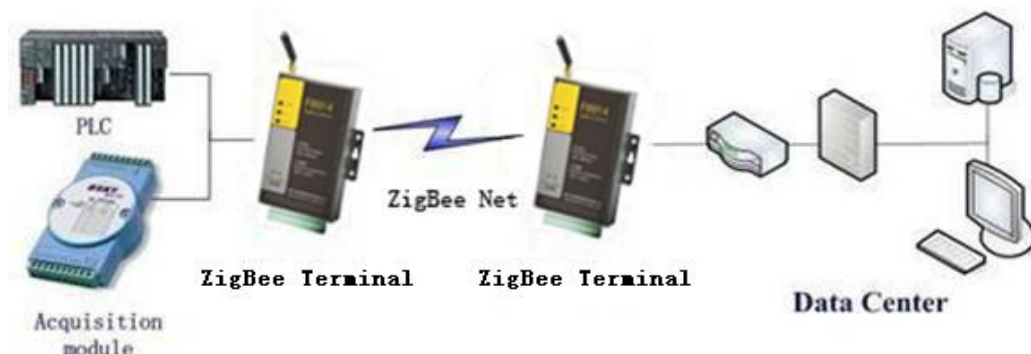


General

F8914 ZigBee Terminal is a kind of data cellular terminal device that provides data transfer function by ZigBee network.

It adopts high-powered industrial ZigBee solution and embedded real time operating system. It supports RS232 and RS485 (or RS422) port that can conveniently and transparently connect one device to a ZigBee network, allowing you to connect to your existing serial devices with only basic configuration. It has low power consumption states in which the power consumption 2.2mA@12VDC. It has compatible digital 5 I/O channel, ADC, input pulse counter and pulse wave output function.

It has been widely used on M2M fields, such as intelligent transportation, smart grid, industrial automation, telemetry, finance, POS, water supply, environment protection, post, weather, and so on.



Product Feature

Design for Industrial Application

- ◆ High-powered industrial ZigBee processing chip
- ◆ Low power consumption design, support multi-sleep and trigger modes to reduce the power dissipation farthest
- ◆ Housing: iron, providing IP30 protection
- ◆ Power range: DC 5~35V

Stability and Reliability

- ◆ Support hardware and software WDT
- ◆ RS232/RS485/RS422 ports: 15KV ESD protection
- ◆ Power port: reverse-voltage and overvoltage protection

Standard and Convenience

- ◆ Adopt terminal block interface, convenient for industrial application
- ◆ Support standard RS232/RS485 ports that can connect to serial devices directly
- ◆ TTL logic level RS232 interface can be customized
- ◆ Support intellectual mode, enter into communication state automatically when powered
- ◆ Support several work modes
- ◆ Convenient configuration and maintenance interface

High-performance

- ◆ Support ZigBee wireless short-distance data transmission
- ◆ Support repeater and terminal device function
- ◆ Support Point-to-Point, Point-to-Multipoint, Peer-to-Peer and Mesh network
- ◆ Support 65000 nodes
- ◆ Support center node, route node and terminal node
- ◆ Support broadcast and target address transfer
- ◆ Support wide communication range
- ◆ Supply 5 I/O channels, compatible 2 pulse wave output channels, 3 analog inputs and 2 pulse input counters.

Product Specification

ZigBee Specification

Item	Content
ZigBee Chip	Industrial ZigBee Chip
Standard and Band	IEEE 802.15.4 ISM 2.4 GHz
Indoor/Urban Range	30m 90m(With PA)
Outdoor/RF Line-of-Sight Range	500m 2000m(With PA)
Transmit Power	2.82 mw (+4.5dBm) 100 mw (+20dBm) (With PA)
Bandwidth	250Kbps
Receiver Sensitivity	-97dBm -103dBm (With PA)
Network Topologies	Point-to-Point, Point-to-Multipoint, Peer-to-Peer and Mesh
Number of channels	16 Direct Sequence Channels
Channels	11 to 26
Max package size	300 Bytes

Hardware System

Item	Content
CPU	Industrial ZigBee Processor

Interface Type

Item	Content
Serial	1 RS232 port and 1 RS485(orRS422) port, 15KV ESD protection

	Data bits: 8 Stop bits: 1,2 Checksum: none,odd,even Baud rate: 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps
Indicator	"Power", "ACT", "ZigBee"
Antenna	Standard SMA female interface, 50 ohm, lightning protection(optional)
Power	Terminal block interface, reverse-voltage and overvoltage protection

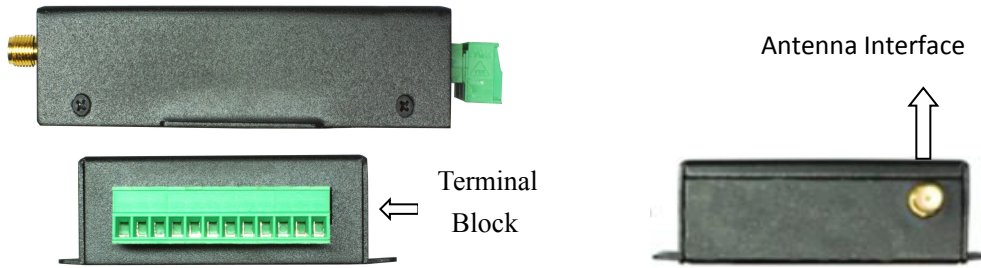


Figure-1 F8914 Interfaces illustrate

Power Input

Item	Content
Standard Power	DC 12V/0.5A
Power Range	DC 5~35V

Power Consumption

Working States		Power Consumption
F8914-N	RX Mode	≤15mA/12V@4.5dBm
	TX Mode	≤20mA/12V@4.5dBm
	Timing wake up	≤3.5mA/12V@4.5dBm
	Deep Sleep	≤2.5mA/12V@4.5dBm
F8914-E	RX Mode	≤15mA/12V@21dBm
	TX Mode	≤80mA/12V@21dBm
	Timing wake up	≤4.5mA/12V@21dBm
	Deep Sleep	≤3.5mA/12V@21dBm

Physical Characteristics

Item	Content
Housing	Iron, providing IP30 protection
Dimensions	91x58.5x22 mm
Weight	205g

Environmental Limits

Item	Content
Operating Temperature	-40~+85°C (-104~+185 °F)
Storage Temperature	-40~+125°C (-104~+257°F)
Operating Humidity	95% (unfreezing)