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F8223 ZigBee+CDMA ROUTER TECHNICAL SPECIFICATION

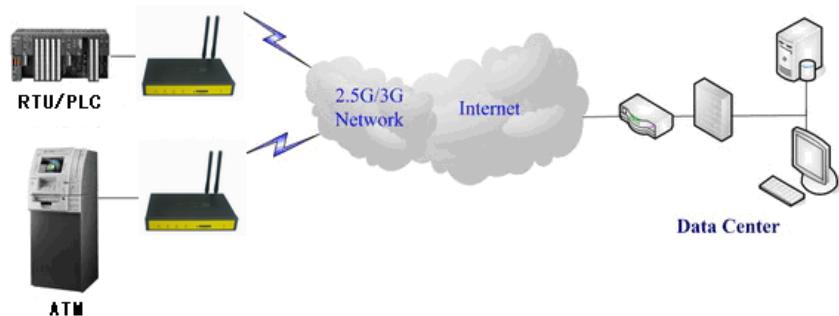


General

F8223 ZigBee+CDMA ROUTER is a kind of cellular terminal device that provides data transfer function by public CDMA and ZigBee network.

It adopts high-powered industrial 32-bits CPU and embedded real time operating system. It supports RS232 (or RS485/RS422), Ethernet and ZigBee port that can conveniently and transparently connect one device to a cellular network, allowing you to connect to your existing serial, Ethernet and ZigBee devices with only basic configuration.

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 cellular module
- ◆ High-powered industrial 32bits CPU
- ◆ High-powered industrial ZigBee module
- ◆ Support low-consumption mode, including sleep mode, scheduled online/offline mode, scheduled power-on/power-off mode(optional)
- ◆ Housing: iron, providing IP30 protection.
- ◆ Power range: DC 5~35V

Stability and Reliability

- ◆ Support hardware and software WDT
- ◆ Support auto recovery mechanism, including online detect, auto redial when offline to make router always online

- ◆ Ethernet port: 1.5KV magnetic isolation protection
- ◆ RS232/RS485/RS422 port: 15KV ESD protection
- ◆ SIM/UM port: 15KV ESD protection
- ◆ Power port: reverse-voltage and overvoltage protection
- ◆ Antenna port: lightning protection(optional)

Standard and Convenience

- ◆ Support standard RS232(or RS485/RS422), Ethernet and ZigBee port that can connect to serial, Ethernet and ZigBee devices directly

- ◆ Support intellectual mode, enter into communication state automatically when powered
- ◆ Provide management software for remote management
- ◆ Support several work modes
- ◆ Convenient configuration and maintenance interface (WEB or CLI)

High-performance

- ◆ Support data transfer by cellular and ZigBee network
- ◆ Support VPN client(PPTP,L2TP,IPSEC and GRE)(only for VPN version)

- ◆ Support multi online trigger ways, including SMS, ring and data. Support link disconnection when timeout
- ◆ Support APN/VPDN
- ◆ Support wireless video monitoring and dynamic picture transfer
- ◆ Support DHCP server and client, DDNS, firewall, NAT, DMZ host etc.
- ◆ Support multi protocols, such as TCP/IP, UDP, ICMP, SMTP, HTTP, POP3, OICQ, TELNET, FTP, SNMP, etc.

Product Specification

Cellular Specification

Item	Content
Cellular Module	Industrial cellular module
Standard and Band	CDMA2000 1xRTT 800MHz, 800/1900MHz(optional),450MHz(optional)
Bandwidth	153.6Kbps
TX power	<30dBm
RX sensitivity	<-104dBm

ZigBee Specification

Item	Content
ZigBee Module	Industrial ZigBee module
Standard and Band	IEEE 802.15.4 ISM 2.4 GHz
Indoor/Urban Range	60m 90m(for enhanced version)
Outdoor/RF Line-of-Sight Range	1200m 3200m(for enhanced version)
Transmit Power	3.1 mw (+5dBm) /Normal mode, 6.3 mw (+8dBm)/Boost mode 63 mw (+18dBm) (for enhanced version)
Bandwidth	250Kbps
Receiver Sensitivity	-102dBm
Network Topologies	Point-to-Point, Point-to-Multipoint, Peer-to-Peer and Mesh
Number of channels	16 Direct Sequence Channels 15 Direct Sequence Channels (for enhanced version)


Channels	11 to 26 11 to 25 (for enhanced version)
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Hardware System

Item	Content
CPU	Industrial 32bits CPU
FLASH	4MB(Extendable to 16MB)
SDRAM	32MB(Extendable to 64MB)

Interface type

Item	Content
Ethernet	1 10/100 Mbps Ethernet port(RJ45), auto MDI/MDIX, 1.5KV magnetic isolation protection
Serial	1 RS232(or RS485/RS422) port, 15KV ESD protection Data bits: 5, 6, 7, 8 Stop bits: 1, 1.5, 2 Parity: none, even, odd, space, mark Baud rate: 110~230400 bps
Indicator	"Power", "Online", "ZigBee", "System", "Link/ACT"
Antenna	Cellular: Standard SMA female interface, 50 ohm, lightning protection(optional) ZigBee: Standard SMA female interface, 50 ohm, lightning protection(optional)
SIM/UIM	Standard 3V/1.8V user card interface, 15KV ESD protection
Power	Standard 3-PIN power jack, reverse-voltage and overvoltage protection
Reset	Restore the router to its original factory default settings



Power supply

Item	Content
Standard Power	DC 12V/1.5A
Power range	DC 5~35V
Consumption	<430mA (12V)

Physical Characteristics

Item	Content
Housing	Iron, providing IP30 protection
Dimensions	157x97x25 mm

Weight	445g
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Environmental Limits

Item	Content
Operating Temperature	-25~+65 ℃ (-13~+149°F)
Extended Operating Temperature	-30~+75 ℃ (-22~+167°F)
Storage Temperature	-40~+85 ℃ (-40~+185°F)
Operating Humidity	95% (unfreezing)