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F8125 ZigBee+GPRS ROUTER TECHNICAL SPECIFICATION



General

F8125 ZigBee+GPRS ROUTER is a kind of cellular terminal device that provides data transfer function by public GPRS network and ZigBee function.

It adopts high-powered industrial 32-bits CPU and embedded real time operating system. It supports RS232 (or RS485/RS422) and Ethernet port that can conveniently and transparently connect one device to a cellular network, allowing you to connect to your existing serial and Ethernet devices with only basic configuration. Also, it supports ZigBee 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 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/UIM 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) and Ethernet port that can connect to serial and Ethernet 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 3G/HSPA/4G WAN access methods.
- ◆ Support ZigBee function
- ◆ Support VPN client(PPTP, L2TP, OPENVPN, IPSEC and GRE)(only for VPN version)
- ◆ Support VPN server(PPTP, L2TP, OPENVPN, IPSEC and GRE)(only for VPN version)

- ◆ Support local and remote firmware upgrade,import and export configure file.
- ◆ Support NTP, RTC embedded.
- ◆ Support multiple DDNS provider service.
- ◆ Support MAC Address clone, PPPoE Server
- ◆ Support multi online trigger ways, including SMS, ring and data. Support link disconnection when timeout
- ◆ Support APN/VPDN
- ◆ Support DHCP server and client, firewall, NAT, DMZ host , URL block, QoS, ttraff,statistics, real time link speed statistics etc.
- ◆ Full protocol support , such as TCP/IP, UDP, ICMP, SMTP, HTTP, POP3, OICQ, TELNET, FTP, SNMP, SSHD, etc.
- ◆ Schedule Reboot, Schedule Online and Offline,etc.

Product Specification

Wireless Specification

Item	Content
Cellular Module	Industrial cellular module
Standard and Band	EGSM900/GSM1800MHz, GSM850/900/1800/1900MHz(optional) Compliant to GSM phase 2/2+ GPRS class 10, class 12(optional)
Bandwidth	85.6Kbps
TX power	GSM850/900: <33dBm GSM1800/1900: <30dBm
RX sensitivity	<-107dBm

ZigBee Specification

Item	Content
ZigBee Module	Industrial ZigBee Platform
Standard and Band	IEEE 802.15.4 ISM 2.4 ~2.5GHz
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
Channel	11 to 26
Max package size	300Bytes

Hardware System

Item	Content
CPU	Industrial 32bits CPU
FLASH	8MB(Extendable to 64MB)
SDRAM	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(optional), 2 Parity: none, even, odd, space(optional), mark(optional) Baud rate: 2400~115200bits/s
Indicator	"Power", "System", "Online", "Link/ACT", "Alarm", "ZigBee", "Signal Strength".
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 Input

Item	Content
Standard Power	DC 12V/1.5A
Power Range	DC 5~35V
Consumption	<450mA (12V)

Physical Characteristics

Item	Content
Housing	Iron, providing IP30 protection
Dimensions	157x97x25 mm
Weight	445g

Environmental Limits

Item	Content
Operating Temperature	-35~+75°C (-31~+167°F)
Storage Temperature	-40~+85°C (-40~+185°F)
Operating Humidity	95% (unfreezing)