H12 Industrial 4G 5G Router Spec

Description

H12 industrial router, based on the international standard FDD-LTE, TDD-LTE 4G / 5G Redcap mobile broadband network, provides users with stable and reliable high-speed network connection and data transmission. It is with small size, providing 1 x Ethernet, 1 x RS232 and 1 x RS485 interface.

This series of products use high-performance 32-bit professional network communication processor, embedded Linux operating system as the software support platform, using software and hardware watchdog and multiple built-in security mechanism, dual SIM card slot, to ensure that the product can be long-term reliable operation in the industrial environment.

It can be widely used in finance, postal service, smart grid, intelligent transportation, environmental protection monitoring, fire monitoring, security monitoring, water conservancy monitoring, public safety, advertising release, industrial control, earthquake monitoring, meteorological monitoring, instrument monitoring and other industries.

Features

Industrial grade design

- High performance industrial wireless module
- High performance industrial 32bit processor
- Low power mode, including sleep mode, timing up and down mode, and timing switch mode
- Use sheet metal cold-rolled steel shell, with good heat dissipation.
- Power supply: +7.5V~+32V DC

Network characteristic

- Port traffic detection
- Real-time link monitoring, backup, and failover
- Multiple VPN protocol (PPTP, L2TP, IPSec, GRE…)
- Serial port transmission and MQTT protocol
- On-demand dialing (voice,SMS, or data-enabled)
- Multiple platform management protocols

Stable and reliable

- Use soft and hardware watchdog and multi-stage link detection, with capability of fault automatic diagnosis and automatic recovery to ensure equipment working in stable and security way
- Multiple equipment self-inspection mechanism to ensure smooth link and have alarm function
- ESD protection for each port, prevent static shock

Remote management

- Remote parameters configuration
- Remote parameters backup
- Remote restart and log query
- Remote equipment upgrading
- Equipment online monitoring

Functions

- Down compatible to WCDMA, GSM and GPRS network
- Support 1 X LAN
- Support IPv6
- Support RS-232/485, Serial DTU, Modbus, RTU function and MQTT protocol reporting
- Support hardware WDT, provide anti-line mechanism to ensure terminal is always online
- Support multiple VPNs (PPTP/L2TP, GRE, IPSec, OpenVPN, DMVPN, WireGuard, Zerotier etc.)
- Support multi-link monitoring, multi-link mutual backup, multi-link load balancing
- Support multiple network protocols (ICMP, TCP, UDP, Telnet, SSH, FTP, HTTP, HTTPS etc.)
- Support industrial SIM/UIM card design
- Support Dual SIM slot design
- Support base station auxiliary positioning function

Extend functions

- Support extend high precision independent GPS orientation function (optional)
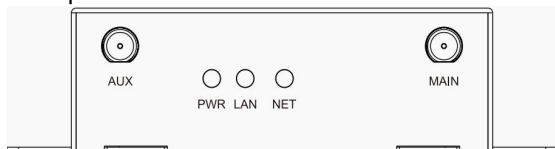- Support e-SIM (optional)

Specifications

Wireless parameters

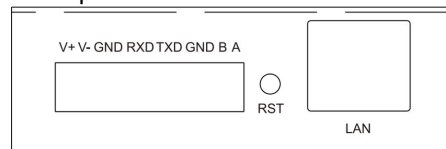|	
Module:	Industrial 4G, 5G Redcap wireless module
5G bands:	N1/N2/N3/N5/N7/N8/N12/N20/N25/N28/N40/N41/N66/N71/N77/N78/N79
4G bands:	FDD-LTE: Band1/3/5/7/8/20/28 TDD-LTE: Band38, 39, 40, 41 WCDMA/HSDPA/HSUPA/HSPA+: Band1, 2, 5, 8
Theory bandwidth:	MAX DL: 150Mbps ; MAX UL: 50Mbps (Category 4, MIMO)
Transmit power:	23dBm+/-1dB @25℃
Power consumption:	Data mode < 300mA/12V; Idle mode < 165mA/12V
Accepting sensitivity:	-97dBm @10MHz QPSK

Interface type

LAN:	1 x Ethernet interface (RJ45), self-adaption MDI/MDIX, built-in electromagnetic isolation protection
Serial Port:	1 x RS232 interface(default baud rate: 115200), 1 x RS485 interface(default baud rate: 9600), used for the acquisition equipment which has RS232/RS485 port
Indicator：	3 indicator lights, "NET", "LAN", "PWR". 3 color of "NET" (Red: poor; Yellow: general; Green: good;)
Antenna interface：	1 Main antenna interface (3G/4G)，characteristic impedance 50Ω；1 Aux/GPS antenna interface, used as 3G/4G AUX antenna or GPS function active antenna
SIM/UIM interface：	SIM/UIM engineering card cover, protect the card from falling. 1.8V/3V automatic detection
Power interface：	+7.5V ~ 32V (standard DC 12V/1.5A)，built-in power instantaneous overvoltage protection and opposite connection protection
Reset:	Press this button, the parameters will return to factory setting

H12 series interface drawing

Back panel

Front panel

Power supply
- Standard power: DC 12V/1.5A

Appearance
- Housing: Metal
- Dimension: 78.5×59×23.5mm
- Weight: about 230g

Other features
- CPU：580MHz
- Flash/RAM：128Mb / 512Mb
- Working temperature: -30 ~ +75℃ (can be extended)
- Storage temperature: -40 ~ +85℃
- Relative humidity: <95% (No condensation)

V+	V-	GND	RXD	TXD	GND	B	A
power input positive pole	power input negative pole	Signal ground	232 Serial port receive	232 Serial port send	Signal ground	485 interface B	485 interface A