

# H23 Industrial 4G 5G Router Spec

## Description

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 rich data interfaces, including 3 x Ethernet, 1 x RS232, 1 x RS485, 1 x DI and 1 x DO.

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: +9V~+60V 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

### Functions

- Down compatible to WCDMA, GSM and GPRS network
- Support 2 x LAN, 1 x WAN/LAN, IPv6
- Support RS-232/485, Serial DTU, Modbus, RTU function and MQTT protocol reporting
- Support external USB interface to upgrade or read device running logs
- 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 SNMPv3, TR069, MQTT, HomtecsM2M and other platform management protocol function
- Support multi-link monitoring, multi-link mutual backup, multi-link load balancing

### 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
- Support multiple network protocols (ICMP, TCP, UDP, Telnet, SSH, FTP, HTTP, HTTPS etc.)
- Support industrial Dual SIM/UIM card design
- Support internal e-SIM card
- Support 802.11n 150M/300M Wi-Fi
- Support base station and Wi-Fi hybrid positioning

### Extend functions

- Support WAN, wired and wireless mutual backup (optional)
- Support 3 x LAN (optional)
- Support extend high precision independent GPS orientation function (optional)
- Support internal mass storage expansion (optional)

# Specifications

## Wireless parameters

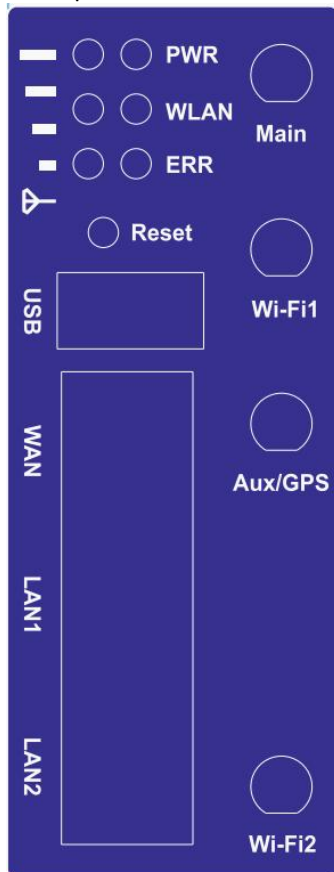
Module:	Industrial 4G, 5G Redcap wireless module
5G bands:	N1/N2/N3/N5/N7/N8/N12/N20/N25/N28/N40/N41/N66/N71/N77/N78/N79
4G bands:	FDD-LTE: Band1/3/5/7/8/20/28 TDD-LTE: Band38, 39, 40, 41 WCDMA/HSDPA/HSUPA/HSPA+: Band1, 2, 5, 8
Theory bandwidth:	MAX DL: 150Mbps ; MAX UL: 50Mbps (Category 4, MIMO)
Transmit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

## Interface type

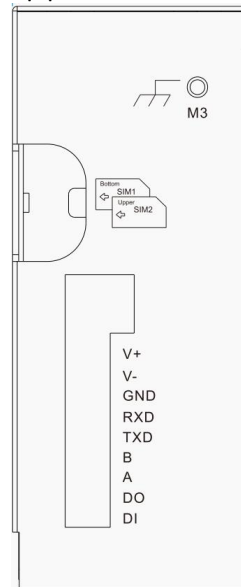
LAN:	2 x Ethernet interface (RJ45), self-adaption MDI/MDIX, built-in electromagnetic isolation protection
WAN/LAN:	1 x WAN/LAN port multiplex, suitable for wired dialing or used as LAN port hung on two terminals
Serial Port:	1 x RS232 interface, 1 x RS485 interface
USB:	USB2.0 interface, used for system software upgrade import, or export the system run log
Indicator:	Six indicator lights, 3 "Signal strength LED", "Power", "WLAN", "Error". 3 signal strength indicator lights (1: poor. 2: general. 3: 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; 2 WiFi 802.11n antenna interface
SIM/UIM interface:	SIM/UIM engineering card cover, protect the card from falling. 1.8V/3V automatic detection, support dual SIM card.
Terminal interface:	Power supply, industrial serial port, general IO; power supply is with non-polar to prevent reverse connection, support overvoltage and overcurrent protection.
Reset:	Press this button, the parameters will return to factory setting

## H23 series interface drawing

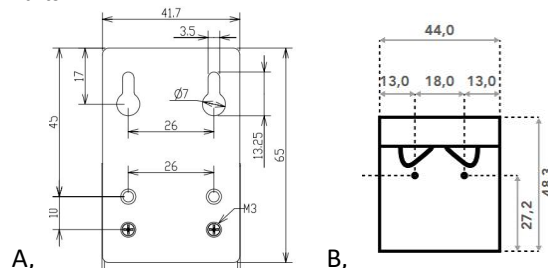
Front panel:



Top panel:



Parts:



**Power supply**

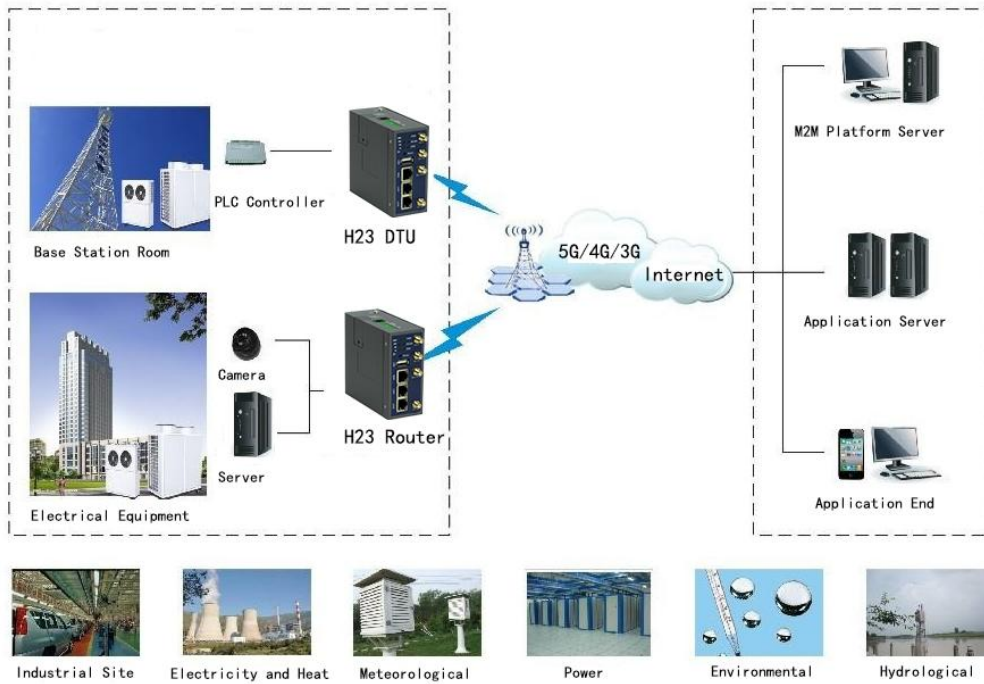
- Standard power: DC 12V/1.5A

**Appearance**

- Housing: Metal
- Dimension: 102×100×42mm
- Weight: 450g

**Other features**

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

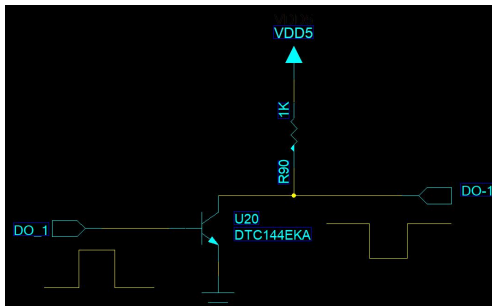


**Serial connection description**

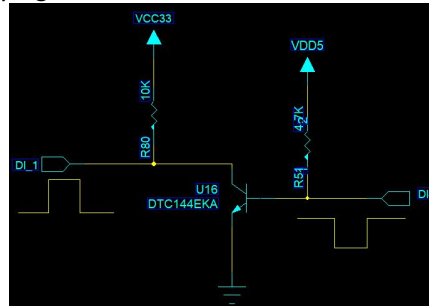
V+	V-	GND	RXD	TXD	B	A	DO	DI
Power input positive pole	power input negative pole	Signal ground	RS232 input	RS232 output	485-B	485-A	Digital signal output	Digital signal input

DO: be used to output an alarm signal, or to control an external 5V relay

DI: be used to receive the external switching quantity signals



DO Internal diagram reference



DI Internal diagram reference