

G92-M5 5G Ultra Broadband Router

Introduction

G92-M5 5G Ultra Broadband Router is a kind of internet of things wireless communication router. It uses 5G/LTE-FDD/LTE-TDD/HSPA+ industrial module, to provide convenient and high speed network transmission function.

This series of product uses industrial grade high performance MIPS 1004Kc Dual Core communication processor, and embedded real-time operation system as software supporting platform. It provides safe, high speed, stable 5G/4G wireless network, and provides 5 gigabit Ethernet, RS-485/232 and 2.4G/5G WIFI interface.

It can be used in bus Wi-Fi, finance, postal, smart power grids, smart transportation, environment monitor, fire protection monitor, security, water conservancy, public safety, advertising release, industrial control, earth quake monitor, meteorological watch, instrument monitor.etc



Features

Industrial design

- Use high performance industrial wireless module
- Use high performance industrial MIPS Dual Core processor
- Support low power consumption, include sleep mode, timing online and offline mode, timing switch on and off mode
- Use plate metal CRS shell, with good heat dissipation
- Power supply: +9V~32V DC(48V DC extendable)
- Degree of protection: IP34(can be extended to IP51)

Network characteristic

- Port flow detection
- Link real time monitoring
- Multiple VPN protocol(PPTP, L2TP, IPSec, GRE, VPN)
- Support serial port DTU function
- Support dial as required(audio, SMS, data trigger)
- Support UPnP

Stability

- Soft and hardware watchdog and multilevel link detection, with the capability of fault automatic diagnosis and automatic recovery, to ensure device working on stable and safe way
- Multiple-mechanisms of equipment self-checking, to ensure link unimpeded and alarming
- ESD protection for each port, to prevent static shock
- Wireless network signal indicator light(NET)

Software

- HOMTECS OS
- OEM OS
- OpenWRT OS

Remote management

- Remote parameter configuration
- Remote parameter backup
- Remote reboot and log query
- Remote upgrading
- Remote online monitoring

Functions

- Support 5G, 4G(FDD and TDD) LTE network, down compatible for 3G network
- Support 5x gigabit Ethernet, provide RS-232 / RS-485
- Support WIFI(IEEE802.11n / 802.11ac)
- Support wire and wireless backup
- Support hardware WDT, provide anti-log off mechanism to ensure data terminal online forever
- Support PPTP, L2TP, GRE etc. multiple VPN
- Support SNMP management protocol
- Support Wi-Fi forced AD pushing function
- Support multiple functions (DHCP, DDNS, firewall, NAT, DMZ host etc.)
- Support ICMP, TCP, UDP, Telnet, FTP, HTTP, HTTPS etc.
- Industrial Drawer Dual SIM/UIIM Card design, support hot plugging

Extended functions

- Single module dual SIM 【optional】
- Dual module dual SIM 【optional】
- GPS/Beidou orientation 【optional】
- USB internal storage extension, 8GB-256GB 【optional】
- USB external storage extension, 8GB-256GB 【optional】
- eMMC Card, max 8G 【optional】

Specification

Wireless

Wireless module:	Industrial grade
Bands:	5G Band: N1/N2/N3/N5/N7/N8/N12/N20/N25/N28/N40/N41/N66/N71/N77/N78/N79 FDD-LTE Band: B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28/B29/ B30/B32/B66/B71 TDD-LTE Band: B34/B38/B39/B40/B41/B42/B43/B48
Theory bandwidth:	5G: 300Mbps UL; 4Gbps DL FDD/FDD: 200Mbps UL; 2.4Gbps DL
Transmitted power:	<24dBm
Consumption:	data<1A/12V; idle <500mA/12V
Receive sensitivity:	<-109dBm

WIFI

Bandwidth:	IEEE802.11n/802.11ac standard, 2.4G 300Mbps / 5G 867Mbps 【optional】
Security encryption:	WEP, WPA, WPA2, WPS 【optional】
Transmitted power:	17-18dBm(11g), 18-20dBm(11b), 15dBm (11n), 17-18dBm(11ac)
Receive sensitivity:	2.4G: <-72dBm@54Mbps, <-64dBm@HT20 MCS7 , <-61dBm@HT40 MCS7 5G: <-64dBm@HT20 MCS7, <-61dBm@HT20 MCS7, <-55dBm@VHT80 MCS9

Interface

LAN/WAN:	5x Gigabit Ethernet(RJ45 port), self-adaption MDI/MDIX, built-in electromagnetic isolation protection
Industrial interface:	1 x RS232, 1 x RS485 port, apply to the collecting equipment which comes with RS485/RS232 interface
Indicator light:	5 x “LAN”, “WLAN”, “NET1”, “NET2”, “PWR”, “WTD”
Antenna interface:	11 x SMA interface(5G-1; 5G-2; 5G-3; 5G-4; 5G-5; 5G-6; 2.4G Wi-Fi x 2; 5.8G Wi-Fi x 2; GPS/BD) , 50ohm
SIM/UIIM interface:	Industrial Drawer Dual SIM/UIIM card design, 1.8V/3V automatic detection
Power interface:	9V~36V interface terminals, standard DC connectors and on-board terminals, no-polarity
Reset:	Parameters can be restored to the factory
External storage:	External USB2.0, used for external data storage extensions or system upgrading

Address: 2A, F5 Building, TCL International E-City, #1001 Zhongshanyuan Road, Nanshan District, Shenzhen, 518052, China

Internal storage:	Internal USB2.0 or eMMC storage, used for internal data storage extensions or application extensions
GPIO interface:	2x GPIO input signal detection and 1x GPIO output instruction

Power supply

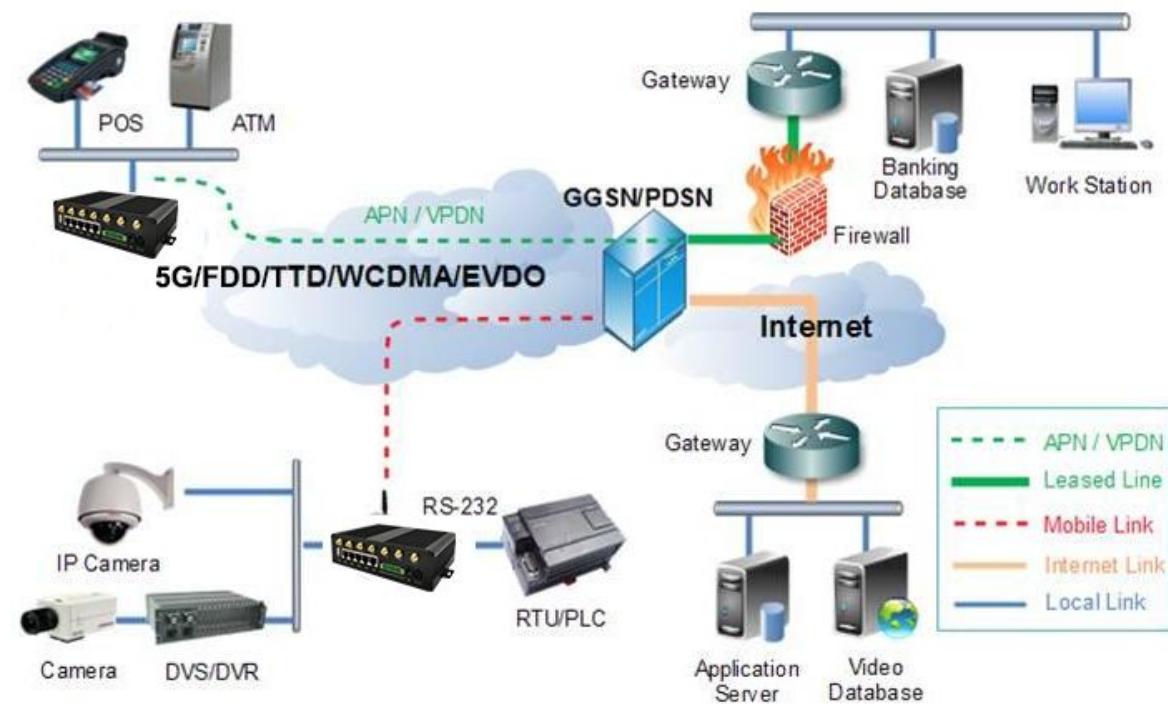
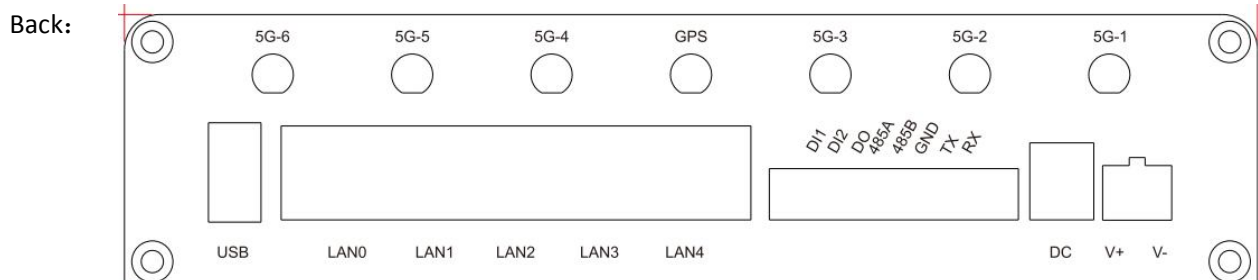
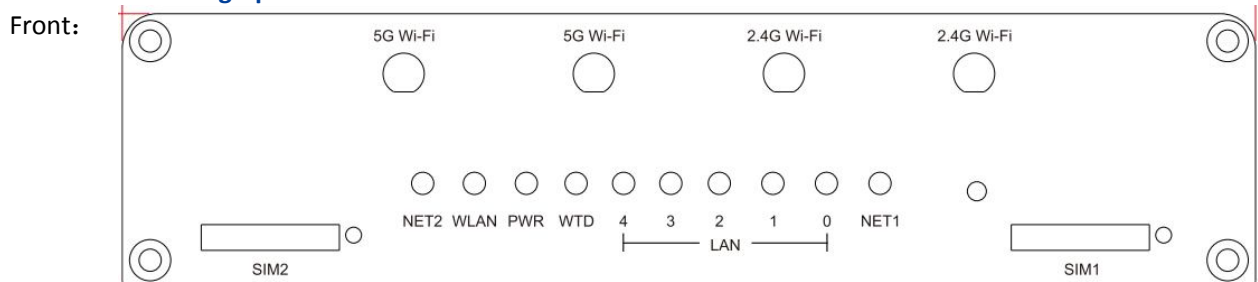
- Standard power: DC 12V/2A, non-polarity

Appearance

- Shell: aluminum profiles
- Dimension: 179×124×43mm
- Weight: about 600g

Others

- CPU: MIPS Dual Core – 880MHz
- Flash/RAM: 32MB /512MB DDR3
- NAND Flash: 512MB
- Working temperature: -30~+75°C
- Storage temperature: -40~+85°C
- Relative humidity: < 95% non condensing

Technical graph

G92-M5 interface graph


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G92-M5 interface instruction
Front:

1	Reset	Restore to factory settings
2	SIM1	SIM Card Interface of Module1
3	SIM2	SIM Card Interface of Module1

Back:

Terminal		
1	DI1	Digital signal input1, 3V~26V, Triode Open base, can be used for signal detection such as ACC ignition
2	DI2	Digital signal input2,Default 4.7 K/5V pull-up, can be used for external switch signal detection
3	DO	Digital signal output, 5V high level, can drive the electric current no more than 50mA
4	485A	Serial port RS485A signal
5	485B	Serial port RS485B signal
6	GND	Digital GND signal
7	TXD	Serial port RS232 TX signal
8	RXD	Serial port RS232 RX signal
Power		
	DC	Standard 5.5mm DC input(12V@2A)
	V+	Power inout, positive, +7.5V ~ +30V DC
	V-	Power input, negative, +7.5V ~ +30V DC
Card		
SIM2	SIM 2	SIM 2 interface
SIM1	SIM 1	SIM 1 interface, (single card mode use this as default)
USB2.0	USB2.0 interface	Support external USB2.0 storage, used for external data storage extensions or system upgrading
Ethernet		
LAN	1, 2, 3, 4	Gigabit Ethernet
WAN	0	Gigabit Ethernet
Antenna		
2.4G Wi-Fi	SMA interface, 2	802.11n Wi-Fi, dual antenna interface, 300Mbps
5G Wi-Fi	SMA interface, 2	802.11ac Wi-Fi, dual antennainterface, 866Mbps
5G ANT	SMA interface, 6	5G Cellular antenna interface
GPS	SMA interface, 1	GPS/BD antenna interface