

TR321 Series Industrial Cellular Routers



Introduction

TR321 Series Router is a type of compact industrial cellular router, which adopts high-powered industrial 32-bits CPU, with multi-layer software detection and hardware protection mechanism to ensure reliability and stability of the device. It supports worldwide carrier 4G/3G/2G cellular network FDD-LTE, TDD-LTE, and WCDMA, EVDO, TD-SCDMA, EDGE, CDMA 1X and GPRS. With rich VPN protocols(IPSEC, PPTP, L2TP, GRE, OpenVPN) to ensure the security of data transmission, and rich interfaces, such as RS232, RS485(Optional), Ethernet Port, I/O(Optional), GPS(Optional) and WIFI(Optional), etc.

TR321 Series Router enables users to quickly access the Internet, to ensure secure and reliable data transmission. It's ideal for IOT (Internet of Things) and M2M (Machine to Machine) applications, and has been widely used in many applications, such as Intelligent Transportation, Smart Grid, Oil and Gas, ATM,

Vending Machine, Agricultural Irrigation, Environmental Protection, Industrial Automation, Energy Saving, Smart Home, etc.

Key Features

- OPEN WRT, support second development
- 1x WAN(Can be configured as LAN), 1x LAN(10/100M), 1x RS232, 1x RS485(Optional)
- 4G/3G/PPPoE/DHCP and Static address connection mode, switchover between wired and wireless connectivity
- Support MQTT protocol(Optional)
- APN/VPDN to ensure the security of data transmission.
- Multiple VPN protocols, IPsec, L2TP, PPTP, GRE and OPEN VPN.
- DHCP server, DHCP binding MAC address, DDNS, Firewall, NAT, DMZ host, QoS, Traffic Analysis, Real-time display of data transfer rate, etc.
- TCP/IP, UDP, FTP, HTTP network protocols.
- SPI Firewall, DoS attack, VPN traversal, Access Control, Port Mapping, DMZ Mapping, Access Control List(ACL), IP-MAC binding and Clone function, etc.
- Heartbeat link detection, offline automatic reconnection.
- Hardware and software auto inspection technology, enable operation fault auto repairing.
- Status query of system, network connection, routing.
- Telnet, web, ssh configurations.
- Web upgrade, local system log, remote log, serial port output log.
- WIFI(Optional) or GPS(Optional)
- Sending SMS via web UI(Optional)
- Remote configuration and management

Specifications

System

CPU: Industrial 32-bit

FLASH: 16MB(Extendable to 32MB)

SDRAM: 128MB(Extendable to 256MB)

Cellular Interface

4G/3G/2G for option (FDD-LTE, TDD-LTE, HSPA/WCDMA, EVDO, TD-SCDMA, EDGE, CDMA 1X and GPRS)

Cellular Antenna Interface

Number of Ports: 1

Note: Standard SMA female antenna interface, characteristic impedance 50Ω

SIM Interface

Number of Ports: 1

Note: Standard drawer type card holder, support 1.8V/3V

SIM/UIM card, built-in 15KV ESD protection

Ethernet Port(RJ45)

Number of Ports: 2, 1x WAN(Can be configured as LAN), 1x LAN

Note: 10/100M, Auto MDI/MDIX, 1.5KV magnetic isolation protection

WIFI (Option)

Standard: IEEE802.11b/g/n for wireless LAN

Transmission Rates:

IEEE802.11b/g: Up to 54Mbps, IEEE802.11n: Up to 300Mbps

Security: WEP, WPA/WPA2

TX Transmit Power: 18dBm(11g), 21dBm(11b)

RX Sensitivity: <-72dBm@54Mbps

GPS (Option)

Support from the built-in cellular module

Note: GPS may be unavailable for some cellular modules.

Serial Interface (5-PIN Industrial terminal block)

Number of interfaces: 2, 1x RS232, 1x RS485(Option)

Note: Built-in 15KV ESD protection, and TTL GPIOs is customizable

Serial Communication Parameters

Baudrate: 300~230400bits/s

Data Bit: 5, 6, 7, 8 bits

Stop Bit: 1, 1.5, 2 bits

Check: No, Even-parity, Odd Parity, SPACE and MARK

Power Requirements

Standard Power: DC 12V/1.5A

Power Range: DC 5~35V

Note: Built-in power inverting protection and over voltage protection

Power Consumption

Communication: 123~250mA@12VDC

Standby: 110~200mA@12VDC

Scheduled Shutdown: 2mA@12VDC

LED Indicators

Power, Signal Strength, System, Online, Alarm, WAN and LAN

Reliability

EMC up to level 3

Use NTP technology, build-in RTC

SIM/UIM card port built-in 15KV ESD protection

Warranty

Warranty Period: 12 months

Environmental Limits

Operating Temperature: -35~+75°C(-31~+167 °F)

Storage Temperature: -40~+80°C(-40~+176 °F)

Ambient Relative Humidity: 93%±3%, non-condensing

Physical Characteristics

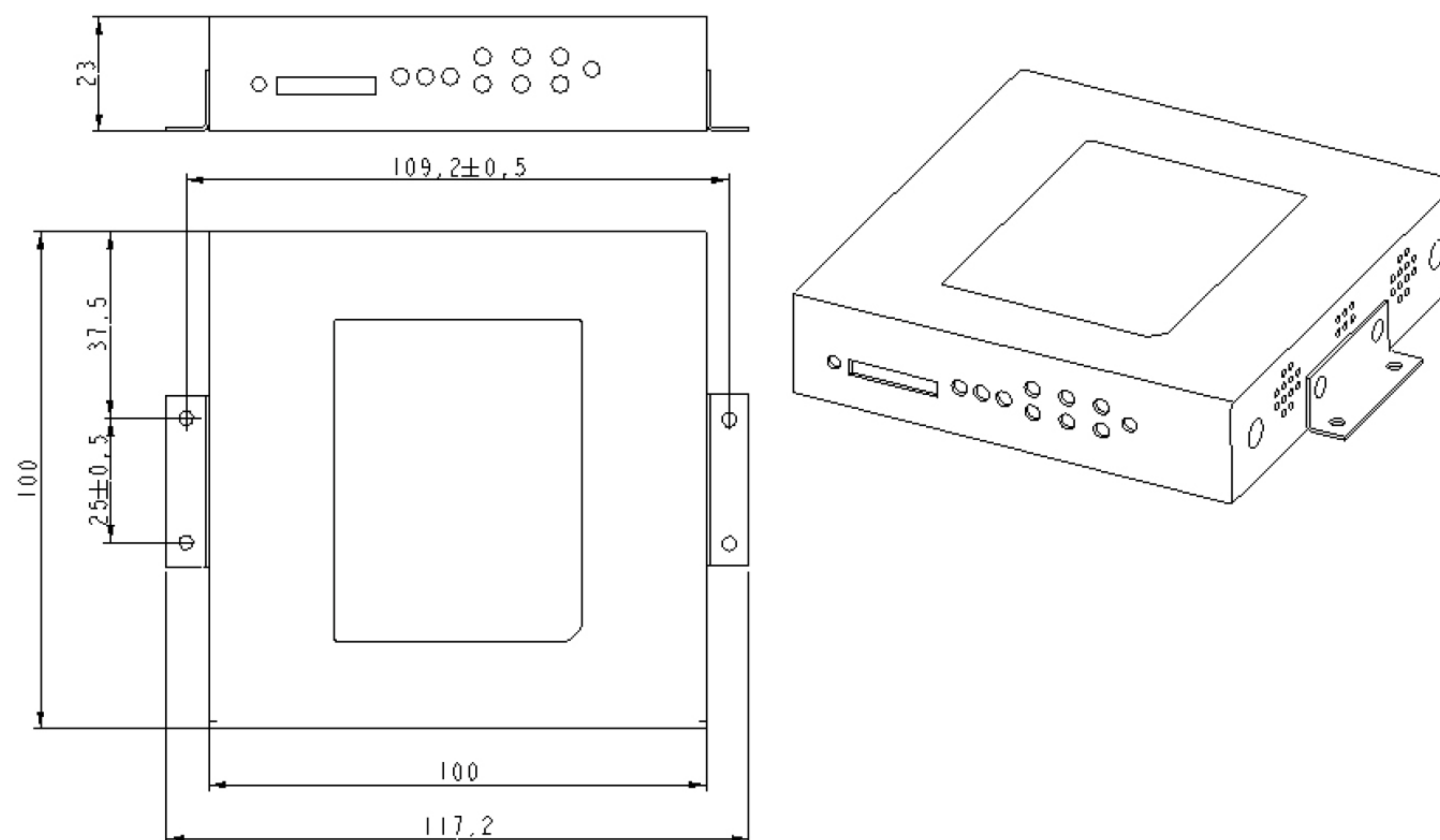
Protection Class: IP30, Housing and system are isolated safely, ideal for industrial automation application

Housing: Iron

Weight: 320g(0.71lbs)

Dimension: 100x100x23mm(3.94x3.94x0.91 inches), Antenna and other accessories not included

Dimensions



Order Information

Models to choose (WIFI or GPS is Optional)

TR321-LF, Industrial LTE Router

TR321-W, Industrial WCDMA Router

Package Content

- TR321 Router Host
- Power Adapter(DC 12V/1.5A)
- Cellular Antenna (Male SMA)
- Console Cable(RS232)
- Ethernet Cable(1 meter)
- 5-Pin Terminal Block

Note: Please visit our website for available frequency band of Bivocom industrial cellular routers, or contact sales@bivocom.com for more information.