

Compact Industrial 4G/ Wi-Fi Router

# InRouter202

## Industrial LTE Router



InRouter202 (IR202) is a series of IoT wireless router that integrates 4G network, virtual private network and other technologies. It relies on 4G wireless wide area network and Wi-Fi wireless local area network technology to provide uninterrupted multiple network access capabilities. With its comprehensive security and wireless services and other features, IR202 support up to 10,000-level equipment networking, providing high-speed data access for equipment informalization.

The design of IR202 fully meets the needs of unattended on-site communication, and adopts software and hardware watchdogs and multi-level link detection mechanisms to ensure the stability and reliability of communication. Moreover, it supports InHand DeviceManager cloud management platform, which provides convenience for users to manage remotely and fully guarantees the intelligence of device management. IR202's humanized WEB configuration interface design facilitates user configuration and greatly reduces the difficulty of use.

Multiple network access, easy deployment and complete remote management functions shine in the wave of IoT construction.

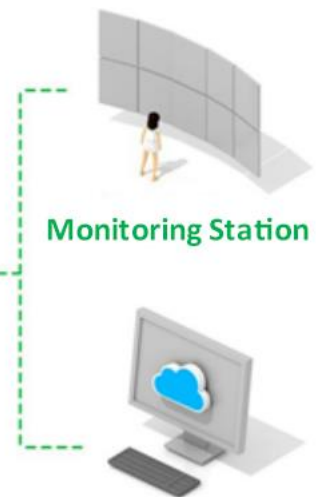
IR202 router is mainly suitable for large-scale equipment networking, and it is applied in many fields, such as

- Express cabinet terminal
- Branch network
- Business networking
- Municipal heating, gas valve rooms
- Water treatment
- Security or criminal investigation
- Smart grid
- Intelligent manufacturing
- Photovoltaic
- Automated industry

### Application Case



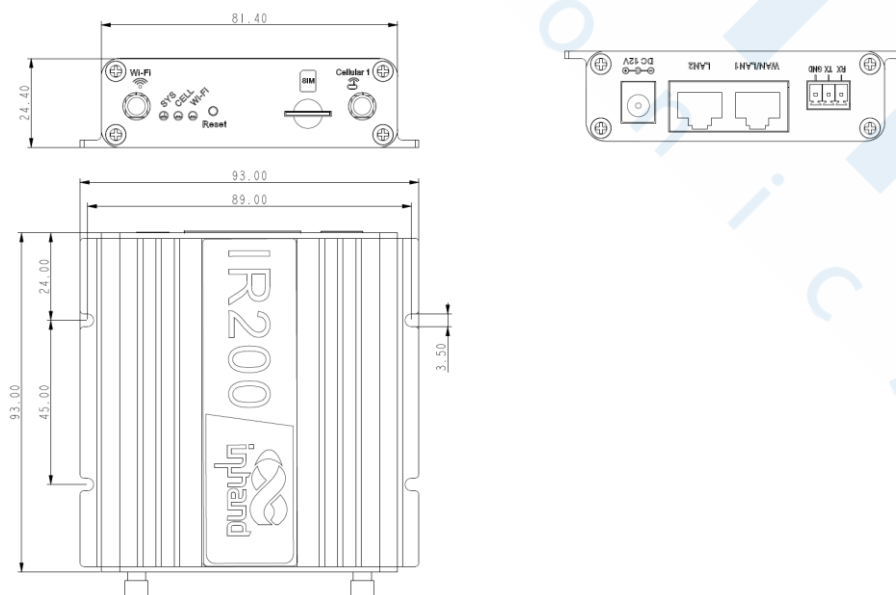
4G/3G



## Features and Advantages

- + Supports 4G/LTE/CAT4 high speed network
  - + 2 Ethernet ports, WAN/LAN
  - + Support IPSEC VPN functions
  - + Multiple link redundancy design ensures uninterrupted communication
  - + Supports InHand Device Manager cloud platform, realizes remote centralized network management
  - + Support large-scale equipment network deployment
  - + Compact sized, easy to fit
- **Provide uninterrupted multiple network access capabilities**  
Provides fast LTE wide area network link to achieve business continuity and wide area network diversity. Regardless of where the device is located, users can choose a 4G network with extensive global coverage to ensure device interconnection. Users can choose LTE CAT4 (downlink 150Mbps, uplink 50Mbps) network service.  
  
IR202 supports Wi-Fi, integrates AP/client, and easily builds a secure wireless network. It supports 802.11b/g/n standard communication to meet the needs of users for WLAN wireless access. The rate can reach up to 150Mbps, easy to build a wireless local area network. IR202 also support WEP/WPA/WPA2 encryption to ensure the security of wireless LAN.
  - **Strong security protection**  
Transmission security: supports IPsec VPN to ensure data transmission security.  
Network protection: supports SPI stateful detection, Secure Shell (SSH), intrusion protection (forbidden ping), DDoS defense, attack defense, IP-MAC binding, etc. to protect against external attacks.  
Access security: supports user hierarchical authorization, implements secure access management by giving different roles different permissions.
  - **High reliability and stability**  
Link layer detection: detects link conditions, auto redial when dropped off to maintain link connection.  
PPP layer detection: maintains connection to carrier network side, prevents forced hibernation, and keep network link smooth.  
VPN tunnel detection: maintains stable connection of VPN tunnels and continuous data transmission.  
Device fault self-recovery: embedded hardware watchdog, self-recovers from malfunctions, maintaining high device availability.
  - **Network management cloud platform for centralized management and deployment**  
Supports InHand Device Manager (DM) cloud platform to facilitate remote monitoring and central management of large-scale device networks. Batch configures large numbers of devices, improve network deployment and maintenance efficiency
  - **Industrial-grade design**  
Metal housing, IP30 protection rating. Reach level 2 on EMC indexes. Ethernet port supports 1.5KV isolation protection. Wide operating temperature: -20°C~70°C.

## Dimensions (mm)



## Product Specifications

| IR202 Hardware Specifications |  |                   |                          |
|-------------------------------|--|-------------------|--------------------------|
| Product                       | IR202  |                   |                          |
| CPU                           | MT7628DAN , 580MHz   |                   |                          |
| RAM                           | 64MB DDR2  |                   |                          |
| Flash                         | 16MB SPI Flash   |                   |                          |
| Interface                     |  |                   |                          |
| Ethernet Port                 | 2*10/100Mbps fast Ethernet ports, WAN/LAN port<br>1.5KV network isolation protection   |                   |                          |
| Power Supply                  | DC12V, ±20% deviation  |                   |                          |
| Industrial Serial Port        | RS-232 x 1;<br>ESD protection: 15KV  |                   |                          |
| Reset                         | Pinhole reset button   |                   |                          |
| SIM Card                      | Drawer-type Micro SIM card slot x 1  |                   |                          |
| Antenna Connector             | 3G/4G: SMA<br>WLAN: RP-SMA   |                   |                          |
| Ground Terminal               | Has no ground terminal   |                   |                          |
| Mechanical Specs              |  |                   |                          |
| Dimensions (mm)               | 103x81.4x26.5mm  | Weight (g)        | 168g                     |
| Installation Method           | Integrated lugs mounting   | Protection Rating | IP30                     |
| Housing                       | Metal housing  | Cooling           | Fanless                  |
| Power Rate                    |  |                   |                          |
| Standby Power                 | 0.98-1.46W   |                   |                          |
| Working Power                 | 1.37-1.58W   |                   |                          |
| Peak Power                    | 1.62W  |                   |                          |
| Wi-Fi Transmit Power          |  |                   |                          |
| Transmit Power                | 802.11b:16dBm +/-2dBm(11Mbps)<br>802.11g:16dBm +/-2dBm(54Mbps)<br>802.11n@2.4GHz:16dBm +/-2dBm(HT20 MCS7)<br>802.11n@2.4GHz:16dBm +/-2dBm(HT40 MCS7) |                   |                          |
| Ambient Environment           |  |                   |                          |
| Storage Temperature           | -40 ~ 85°C   | Ambient Humidity  | 5 ~ 95% (non-condensing) |
| Operating Temperature         | -20 ~ 70°C   |                   |                          |
| Indicator                     |  |                   |                          |
| LED                           | SYS, CELLULAR, WIFI  |                   |                          |
| Certification                 |  |                   |                          |
| CE                            |  |                   |                          |

| IR202 Software Specifications |   |
|-------------------------------|---|
| Product                       | IR202   |
| Network Connection            |   |
| Network Access                | APN、VPDN, supports dual-APN access  |
| Access Authentication         | CHAP/PAP authentication   |
| Network Type                  |   |
| Network Type                  | GSM/GPRS/EDGE, UMTS/HSPA+/EVDO/TD-SCDM, TD-LTE/FDD LTE  |
| LAN Protocol                  | ARP、Ethernet  |
| WAN Protocol                  | Static IP, DHCP, PPPoE, PPP   |
| IP Application                | Ping, Trace, DHCP Server, DHCP Relay, DHCP Client, DNS relay, Telnet  |
| IP Routing                    | Static routing  |
| NAT                           | Support network address translation   |
| Network Security              |   |
| Firewall                      | Stateful Packet Inspection (SPI), DoS attack defense<br>Multicast filter/Ping packet, Access Control List (ACL)<br>Content URL filter, port mapping, virtual IP mapping, IP/MAC binding |
| Access Security               | Multi-level user authorization  |
| Data Security                 | IPsec VPN   |
| Reliability                   |   |
| Link Detection                | Send heartbeat packets, auto redial when disconnected   |
| Embedded Watchdog             | Device operation self-detection, auto recover from malfunctions   |
| WLAN(Optional)                |   |
| Protocol & Standard           | IEEE 802.11b/g/n  |
| Transmission Rate             | Supports 150Mbps  |
| Security                      | Open system, shared key, WPA/WPA2 certification<br>WEP/TKIP/AES encryption  |
| Working Mode                  | AP and Client modes   |
| Transmission Distance         | 100m (actual transmission distance depends on site environment)   |
| Intelligence                  |   |
| Integrated DTU Functions      | TCP, UDP transparent transmission mode, TCP Server mode<br>Supports conversion of Modbus RTU to Modbus TCP bridge;<br>Supports DCUDP, DCTCP mode<br>Supports for up to 15 data centers  |
| Network Management            |   |
| Configuration Method          | Telnet, web, ssh and console  |
| Upgrade Method                | Web, Device Manager   |
| Logs                          | Local system logs, remote logs, and serial export of logs.  |
| SMS Functions                 | Status query, configuration, restart  |
| Dial-on-demand                | Dial-on-demand, data / SMS activation   |
| Network Management            | Supports InHand Device Manager, batch management  |
| Traffic Management            | Supports data traffic threshold setting, supports traffic statistics and traffic alarm  |
| Alarms                        | System restart alarm, LAN port online/offline alarm, data traffic alarm, SIM card failure alarm, etc.   |
| Maintenance Tools             | Ping, route tracking, network speed test  |
| Status Query                  | System status, modem status, network connection status, and routing status  |

## Ordering Guide

| Model             | Mode code: IR202-<WMNN>-<W/NA><br><WMNN>: Cellular Type & Module  | <W/NA>: WLAN               |
|-------------------|---|----------------------------|
| IR202-LQ20-<W/NA> | (LTE CAT4 For China)<br>LTE-FDD Band 1/3/5/8<br>LTE-TDD Band 34/38/39/40/41<br>WADMA Band 1/5/8<br>GSM 900/1800MHz        | W: Wi-Fi<br><NA>: no Wi-Fi |
| IR202-FQ58-<W/NA> | (LTE CAT4 For Europe & APAC)<br>LTE-FDD Band 1/3/5/8/20/28A<br>LTE-TDD Band 38/40/41<br>WADMA Band 1/8<br>GSM 900/1800MHz | W: Wi-Fi<br><NA>: no Wi-Fi |



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### About Us

InHand Networks is a global leader of Industrial IoT, with a record of tremendous success following ground-breaking innovation since our inception in 2001.

InHand serves world-class partners and customers with industrial M2M routers, gateways, industrial Ethernet switches, rugged computers and IoT management platforms. We provide IoT solutions for various vertical markets including Smart Grid, Industrial Automation, Remote Machine Monitoring, Smart Vending, Smart City, Retail and more.

Proudly bearing the marks of both Rockwell Automation Encompass Product Partner in Asia-Pacific and Schneider Electric CAPP Technology Partner, InHand Networks defines industrial innovation and reliability.



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