# ICR-W401

## 4G LTE, GPS, IEEE 802.11 b/g/n 2T2R and DI/DO Router

▲ Multi-band connectivity with FDD LTE/ TDD LTE/ WCDMA/ GSM/ LTE Cat 4

▲ IEEE 802.11b/g/n WiFi 2T2R

▲ Enhance security and encryption for authentication and transmission

▲ -30 ~ 70° C for use in harsh environments

▲ Compact size

▲ EN62368-1, CE, RED and NCC certified

The industrial grade 4G LTE router ICR-W401 is a compact, lightweight and cost-effective product that has 1 LAN plus 1 WAN Fast Ethernet connection and supports uplink to 2G/3G/4G mobile data networks. Built for harsh environments, the router is equipped with a DI/DO interface. The ICR-W401 is simple to configure through its embedded Web user interface applications. The ICR-W401's WiFi is compliant with IEEE 802.11b/g/n wireless connectivity. The Router features VPN Tunneling with Firewall and management capability via TR069 and SNMP. The ICR-W401 provides highly secure authentication, encryption and management, to protect your data between public and private networks and simplify your complicated solutions for smart city and industrial networking.

## Features

- Highly reliable and secure for mission-critical cellular communications
- Compact and lightweight design with 1 LAN and 1 WAN Ethernet interfaces
- Supports multi-band connectivity with FDD LTE/ TDD LTE/ WCDMA/ GSM/ LTE Cat 4
- Provides IEEE 802.11b/g/n WiFi 2T2R
- Micro SIM connector and DI/DO interfaces
- LED indicators for connection and data transmission status
- Industrial temperature rated from -30 ~ 70° C for use in harsh environments
- IPv6/IPv4 dual stack and all applications are IPv6 ready
- Enhance security and encryption for authentication and transmission

## Specifications

| Standard | | |
|---|---|---|
| | IEEE 802.3 | 10Base-T 10Mbit/s Ethernet |
| | IEEE 802.3u | 100Base-TX Fast Ethernet |
| | IEEE 802.1Q | 1000Base-T Gbit/s Ethernet over twisted pair |
| | IEEE 802.3x | Flow control for Full Duplex |
| | IEEE 802.1p | LAN Layer 2 QoS for Traffic Prioritization |
| | IEEE 802.1X | Port based and MAC based Network Access Control, Authentication |
| LTE Interface | Cellular MobilComm standard: (Please see order information for optional area and band) 4G LTE: FDD-LTE, TDD-LTE 3G: WCDMA 2G: GSM/EDGE GNSS: GPS LTE Data rate: Cat 4, 150Mbps (Download), 50Mbps (upload) 1x micro SIM Connector (push-push type) | |
| WiFi Interface (ICR-W401) | IEEE 802.11b/g/n WiFi Standards | |
| | Supports AP or Station mode | |
| | 2x RP-SMA for WiFi Antenna | |
| | 2T2R 300Mbps wireless operation rate | |
| | 2.4GHz radio for wireless | |

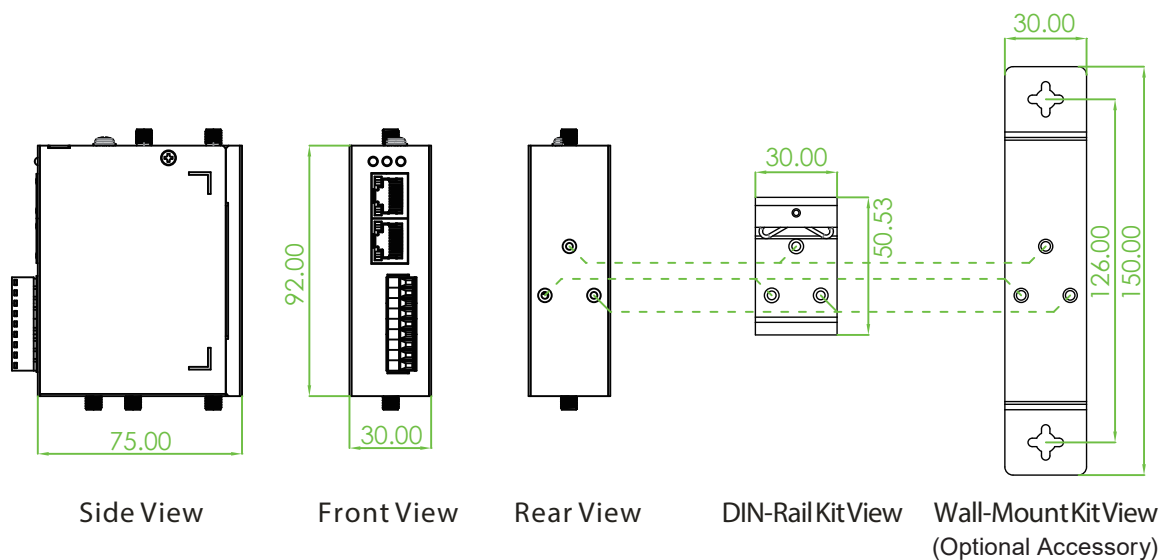| Hardware Interface | 1x Micro SIM Connector (push-push type) |
| --- | --- |
| | 1x LAN 10/100 Mbps Ethernet port |
| | 1x WAN 10/100 Mbps Ethernet port |
| | Reset Button for device reset |
| | 1x RS232 for console configuration (TXD/RXD/GND) |
| | 1x DI (Non-Isolated), 1x DO (Non-Isolated) |
| | 2x SMA connectors for detachable LTE Antenna |
| | 2x RP-SMA for WiFi Antenna |
| | 1x GPS detachable Antenna |
| Housing | Rugged metal, Fanless, IP30 protection |
| Dimensions | 75x 92x 30mm (D x W x H) |
| Weight | 400g |
| Installation | DIN Rail mounting, or wall mounting (optional) |
| LED Display | 1x Power LED |
| | 2x Ethernet LED for each port (LAN/WAN) |
| | 1x LTE LED |
| | 1x Function LED (User define by Web) |
| Power Supply | Power Consumption: 7 Watt(Max) |
| | Power Input:  12/24/48VDC (9.6~60VDC) |
| Operating Temperature | -30 ~ 70°C |
| Storage Temperature | -40 ~ 85°C |
| Operating Humidity | 10 ~ 95% (non-condensing) |
| MTBF | 271,952 Hours   (MIL-HDBK-217) |
| Warranty | 5 Years |

## Certification

| EMC | CE (EN55032, EN55035) |
| --- | --- |
| Radio | NCC (ICR-W401-TW) |
| | EN62311 |
| | RED ETSI EN301 489-1 |
| | RED ETSI EN301 489-17 |
| | RED ETSI EN301 489-19 |
| | RED ETSI EN301 489-52 |
| | RED ETSI EN301 511 |
| | RED ETSI EN301 908-1 |
| | RED ETSI EN301 908-2 |
| | RED ETSI EN301 908-13 |
| | RED ETSI EN300 328 |
| | RED ETSI EN303 413 |
| Safety | EN62368-1 |
| Shock | IEC 60068-2-27 |
| Freefall | IEC 60068-2-32 |
| Vibration | IEC 60068-2-6 |
| EMC | CE (EN55032, EN55035) |
| EMI (Electromagnetic Interference) | FCC Part 15 Subpart B Class A,CE |
| EMS (Electromagnetic Susceptibility) Protection Level | EN61000-4-2 (ESD) Level 3, Criteria B |
| | EN61000-4-3 (RS) Level 3, Criteria A |
| | EN61000-4-4 (Burst) Level 3, Criteria A |
| | EN61000-4-5 (Surge) Level 3, Criteria B |
| | EN61000-4-6 (CS) Level 3, Criteria A |
| | EN61000-4-8 (PFMF, Magnetic Field) Field Strength: 300A/m, Criteria A |
| Shock | IEC 60068-2-27 |
| Freefall | IEC 60068-2-31 |
| Vibration | IEC 60068-2-6 |

## Software Specifications

| | |
|---|---|
| Network Protocols | IPv4, IPv6, IPv4/IPv6 dual stack, DHCP server and client, PPPoE, Static IP, SNTP, GPS sync time, DNS Proxy, VRRP, OSPF, Message Queue Telemetry Transport (MQTT Broker), BGP |
| Routing/Firewall | NAT, Virtual Server, DMZ, MAC Filter, URL Filter, IP Filter, VLAN, Static Routing, RIP 1, RIP 2, IPS, Policy Route |
| VPN | OpenVPN, IPSec (3DES, AES128, AES196, AES256, MD5, SHA-1, SHA256), GRE, PPTP, L2TP |
| WiFi | Security with WPA2-PSK (AES) |
| | Multiple SSID |
| | Wireless Mac Filtering |
| | Wireless client isolation |
| | Wireless Connectivity: WAN WiFi Client |
| Others | DDNS, QoS, UPnP, SMS action, GPS track Drawing, GPS TCP Push |
| Alarm | DI, DO, SMS, VPN/WAN Disconnect, SNMP Trap, Email, TR069 |
| Management | Web GUI for remote and local management, CLI |
| | Syslog monitor |
| | SNMP, TR069 |
| | Remote management via SSH v2, HTTPS |
| | Local management via Telnet, SSH v2, HTTP/HTTPS |

## Dimensions



Side View    Front View    Rear View    DIN-Rail Kit View    Wall-Mount Kit View (Optional Accessory)

## Ordering Information

| Model Name | Managed | WAN | | LAN | | | Certification | | | | |
| | | Cellular Mobile Band | 10/100 Base-TX | WiFi IEEE 802.11 b/g/n | 10/100 Base-TX | DI/DO | EN62368-1 | CE | RED | NCC | Shock, Freefall, Vibration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ICR-W401-EU | V | see Region code table-EU | 1 | 1 | 1 | 1 | V | V | V | | V |
| ICR-W401-A | V | see Region code table-A | 1 | 1 | 1 | 1 | V | V | V | | V |
| ICR-W401-TW | V | see Region code table-TW | 1 | 1 | 1 | 1 | V | V | V | V | V |

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## Region Code Table

| Region Code | 4G LTE | | 3G | 2G | Region |
| --- | --- | --- | --- | --- | --- |
| | FDD LTE | TDD LTE | WCDMA | GSM / EDGE | |
| EU | B1(2100), B3(1800), B5(850), B7(2600), B8(900), B20(800) | B38(2600), B40(2300), B41(2500) | B1(2100), B5(850), B8(900) | B3(1800), B8(900) | Europe, Africa, Middle East, Korea,Thailand, India |
| A | B2(1900), B4(1700), B12(700) | | B2(1900), B4(1700), B5(850) | | USA (AT&T, T-Mobile) |
| TW | B1(2100), B2(1900), B3(1800), B4(1700), B5(850), B7(2600), B8(900), B28(700) | B40(2300) | B1(2100), B2(1900), B5(850), B8(900) | B2(1900), B3(1800), B5(850), B8(900) | ANZ, South America, Taiwan |

## Optional Accessories

### ■ Antenna Accessories

ANT-BASE-01     Antennas Base with Magnetic, SMA (Male) connector, 1.5meter for 4G LTE extension



ANT-BASE-01

### ■ Wall Mount Kit Accessories

IND-WMK03     Wall Mount kit for Industrial product (Compact, 150x 30mm)

### ■ Industrial Power Supply

MDR-40-48     Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 48VDC, 40W, -20 ~ +70°C

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