



# ICR-W403

4G LTE, WiFi ac/b/g/n 2T2R Gateway



The ICR-W403 is a high-performance industrial grade wireless gateway. It combines IEEE802.11b/g/n/ac WLAN and 4G LTE cellular technologies to provide flexible wireless network connectivity. It is designed to offer the flexible connectivity over cellular and Wireless LAN for industrial applications. ICR-W403's Ethernet ports can allow up to 3 Ethernet devices link, provides dual SIM cards for failover redundancy to ensure uninterrupted connectivity. ICR-W403 with support for secure VPN communications, GPS, static and dynamic IP routing of RIP1/2 and OSPF, NAT, port forwarding, Firewall, built-in DI/DO and Serial port services. In addition, ICR-W403 uses the highest level of industrial grade design for connected in the most demanding environments, is ideal solution for Industrial Internet of Things (IIoT) and M2M (Machine-to-Machine) applications, such as remote control and monitoring, bus ticketing collection system, CCTV, SCADA, digital signage, kiosk and intelligent traffic systems.

## Features

- 4G LTE, GPS, IEEE 802.11b/g/n/ac WiFi, 2x SIM card, 3x GbE RJ45 LAN/WAN + 2x DI + 1x DO, 1x RS232 com port
- Supports multi-band connectivity with FDD 4G LTE/ TDD 4G LTE/ 3G WCDMA/2G GSM
- Supports concurrent dual band WiFi With 802.11n 2T2R (2.4GHz), and 802.11ac 2T2R (5GHz)
- Supports 4G LTE/ WiFi/ UTP port to configure WAN ports for failover redundant
- Supports GPS and GNSS for location tracking
- Built-in NAT/Port Forward/Routing/IPv6 are compatible with existing IP networks
- Built-in various VPN protocols for security, Firewall & IPS, ACL & Authentication by MAC/User to enhance access security
- IEEE 802.11 a/b/g/n/ac, multiple SSID, captive portal for WiFi hotspot
- Web, CLI, SNMP, TR069, SMS for management and configuration
- Events triggered by pre-defined, and notification sent by SMS, SNMP trap, or e-mail
- Supports USB for log storage
- EN-60950-1, CE, FCC, Rail Traffic EN50121-4 certified
- Heavy industrial grade EMS, EMI, EN61000-6-2, EN61000-6-4 certified
- Rugged metal, IP30 protection & Fanless design

## Specifications

|                  |  |                               |  |
|------------------|--|-------------------------------|--|
| <b>Standard</b>  | Cellular MobilComm standard: (Please see order information for optional band)<br>4G LTE: FDD-LTE, TDD-LTE<br>3G: WCDMA<br>2G: GSM/EDGE<br>GPS: GNSS  | <b>Connector</b>              | 2x 2.3dBi LTE Antenna and connector<br>2x 5dBi WiFi Antenna and connector<br>1x SMA Female connector for GPS antenna (Antenna optional)<br>2 SIM card socket<br>1x USB 2.0 socket<br>3 RJ45 for GbE LAN/WAN<br>1x Removable Terminal block (Input power, 1x GN, 2x DI, 1x DO, RS232) |
|                  | IEEE 802.3 10Base-T 10Mbit/s Ethernet<br>IEEE 802.3u 100Base-TX Fast Ethernet<br>IEEE 802.3ab 1000Base-T Gbit Ethernet over twisted pair<br>IEEE 802.1Q Virtual LANs (VLAN)<br>IEEE 802.3x Flow control for Full Duplex<br>IEEE 802.1p LAN Layer 2 QoS for Traffic Prioritization<br>IEEE 802.1X Port based and MAC based Network Access Control, Authentication | <b>4G LTE data rate</b>       | Cat 4, Maxium 150Mbps download, upload 50Mbps  |
| <b>Interface</b> | <b>WAN</b><br>1x 3G/4G LTE (Please see order information for detail optional mobil band)<br>Built-in dual SIM card for network redundancy / failover/ roaming over/ back up<br>IEEE802.11ac (5G Hz)<br>1x GbE UTP (WAN or LAN configureable)   | <b>Power Supply</b>           | 12/24 VDC (9~36VDC)  |
|                  | <b>LAN</b><br>Concurrent WiFi 2.4G/5G with IEEE802.11ac 2T2R (5GHz), and IEEE802.11b/g/n 2T2R (2.4GHz)<br>3x 10/100/1000Base-T UTP port, port 1 could be WAN or LAN configureable  | <b>Power consumption</b>      | <14W   |
|                  | <b>COM port</b><br>1x RS232  | <b>LED</b>                    | Power (Green), GPS (Green)<br>2.4G (Green), 5G (Green)<br>Sim 1 (Green), Sim 2 (Green)<br>LTE signal High (Green), LTE signal Low (Green)<br>WAN/LAN LNK/ACT (Green)   |
|                  | <b>DI/DO</b><br>2x DI, 1x DO, 1x IGN (Ignition Sense for Vehicle)  | <b>Alarm message Handling</b> | Events triggered by pre-defined, and notification sent by SMS, SNMP trap, or e-mail  |
|                  | <b>GPS</b><br>1x GNSS receiver   | <b>Operation Temperature</b>  | -30~ 75°C  |
|                  | <b>Log Storage</b><br>1x USB 2.0   | <b>Housing</b>                | Rugged Metal, IP30 Protection, Fanless   |
|                  |  | <b>Dimensions (D x W x H)</b> | TBD  |
|                  |  | <b>Weight</b>                 | TBD  |
|                  |  | <b>Installation</b>           | Wall mounting  |
|                  |  | <b>MTBF</b>                   | TBD (MIL-HDBK-217)   |
|                  |  | <b>Warranty</b>               | 5 years  |

| Certification                                    |   |
|--|---|
| <b>EMC</b>                                       | CE (EN55024, EN55032)                             |
| <b>EMI</b>                                       | FCC Part 15 Subpart B Class A, CE EN55022 Class A |
| <b>Railway Traffic</b>                           | EN50121-4   |
| <b>Immunity for Heavy Industrial Environment</b> | EN61000-6-2                                       |
| <b>Emission for Heavy Industrial Environment</b> | EN61000-6-4                                       |

|  |   |
|--|---|
| <b>EMS (Electromagnetic Susceptibility) Protection Level</b> | 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 |
| <b>Safety</b>  | EN60950-1   |
| <b>Shock</b>   | IEC 60068-2-27  |
| <b>Freefall</b>  | IEC 60068-2-32  |
| <b>Vibration</b>   | IEC 60068-2-6   |

## Software Specifications

|  |   |
|--|---|
| <b>Routing</b>                                 | Static routing , Dynamic routing, RIP1/RIP2, OSPF, BGP  |
| <b>Security</b>                                | Firewall: SPI Firewall with Stealth Mode, IPS<br>VPN Tunneling: IPSec, OpenVPN, PPTP, L2TP, GRE;<br>Tunneling with Full Tunnel, Tunnel Failover<br><br>VPN Scenario: Site to Site, Site to Host, Host to Site, Host to Host, Hub and Spoke, Dynamic VPN<br><br>Port Forwarding: Virtual Server/ Computer, DMZ Host, Special AP & APG, VPN Pass-through<br><br>Access control: Packet Filter, URL Blocking, MAC Filter, Content Filter, Application Filter<br><br>Authentication: Captive Portal, MAC Authentication |
| <b>VLAN</b>                                    | Port-based VLAN, Tag-based VLAN   |
| <b>QoS</b>                                     | Policy-based Bandwidth Control and Packet Flow Prioritization   |
| <b>Management</b>                              | Web, CLI, Telnet, SNMP V3, TR069  |
| <b>IPV6</b>                                    | Dual Stack  |
| <b>Upgrade F/W</b>                             | Support   |
| <b>Backup &amp; Restore Configuration file</b> | Support   |

| Others   |   |
|--|---|
| <b>System Time Information</b>                         | NTP client  |
| <b>DHCP</b>  | Server and Client   |
| <b>Cellular toolkit</b>                                | SIM PIN, USSD, Network Scan, SMS, Data Usage                                    |
| <b>Alarm message Handling</b>                          | DI, DO, SMS, Syslog, SNMP Trap, Email Alert, Reboot                             |
| <b>Location Tracking</b>                               | GNSS  |
| <b>Diagnostic</b>                                      | Packet Analyzer, Diagnostic tools   |
| <b>Power Control</b>                                   | Ignition Sense for delay OFF  |
| <b>MobilComm Connectivity</b>                          | Two SIM for muti ISP failover/ back up Seamless                                 |
| <b>Multi WAN connections</b>                           | 4G LTE , 1xWiFi IEEE802.11ac and 1x Ethernet WAN for failover/ back up Seamless |
| <b>WiFi mode</b>                                       | AP Router, WDS, WDS Hybrid  |
| <b>WiFi Security</b>                                   | WEP, WPA, WPA2, WPA-PSK, WPA2-PSK, IEEE802.1X                                   |
| <b>Virtual COM</b>                                     | TCP Client, TCP Server, UDP, RFC2217  |
| <b>Others DDNS, UPnP, QoS</b>                          |   |
| <b>Remote management via Telnet, SSH v2, HTTPS</b>     |   |
| <b>Local management via Telnet, SSH v2, HTTP/HTTPS</b> |   |
| <b>Syslog monitor</b>                                  |   |

## Application

Figure 1 : Application of Wireless Transmission in Logistics Center

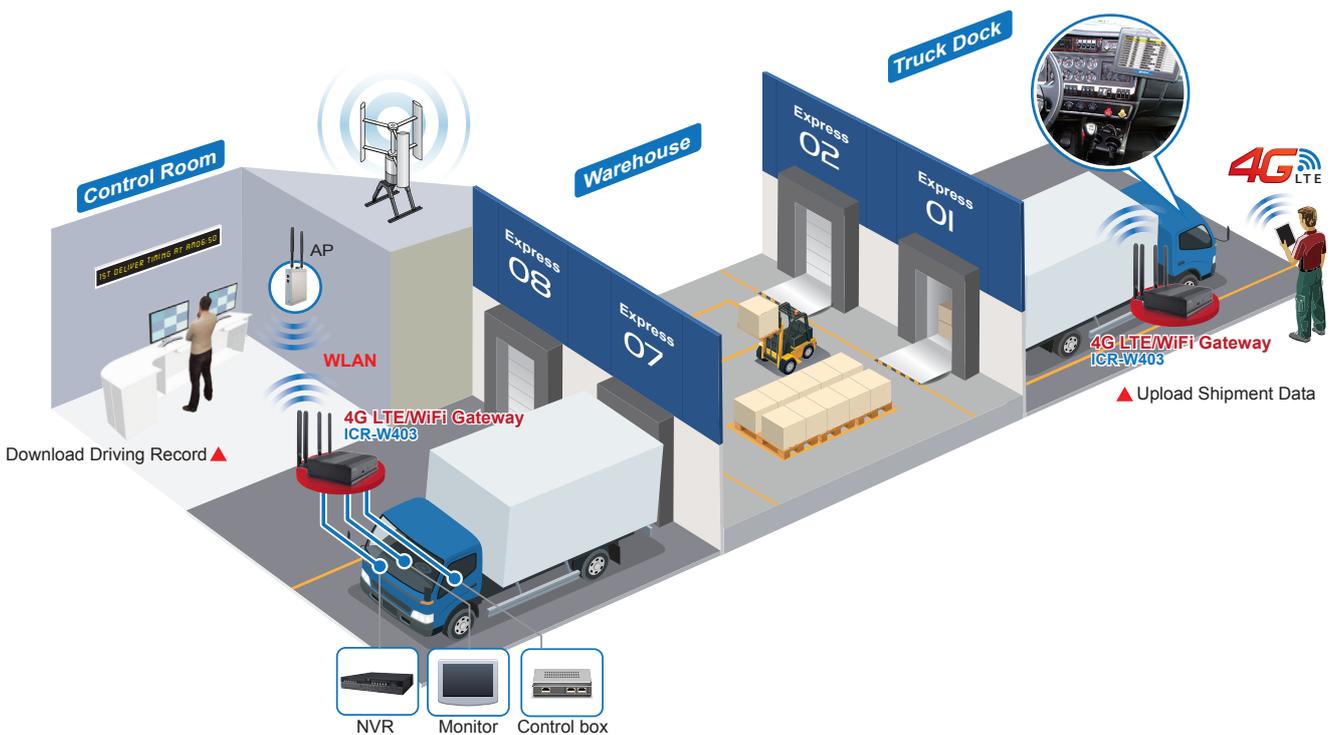
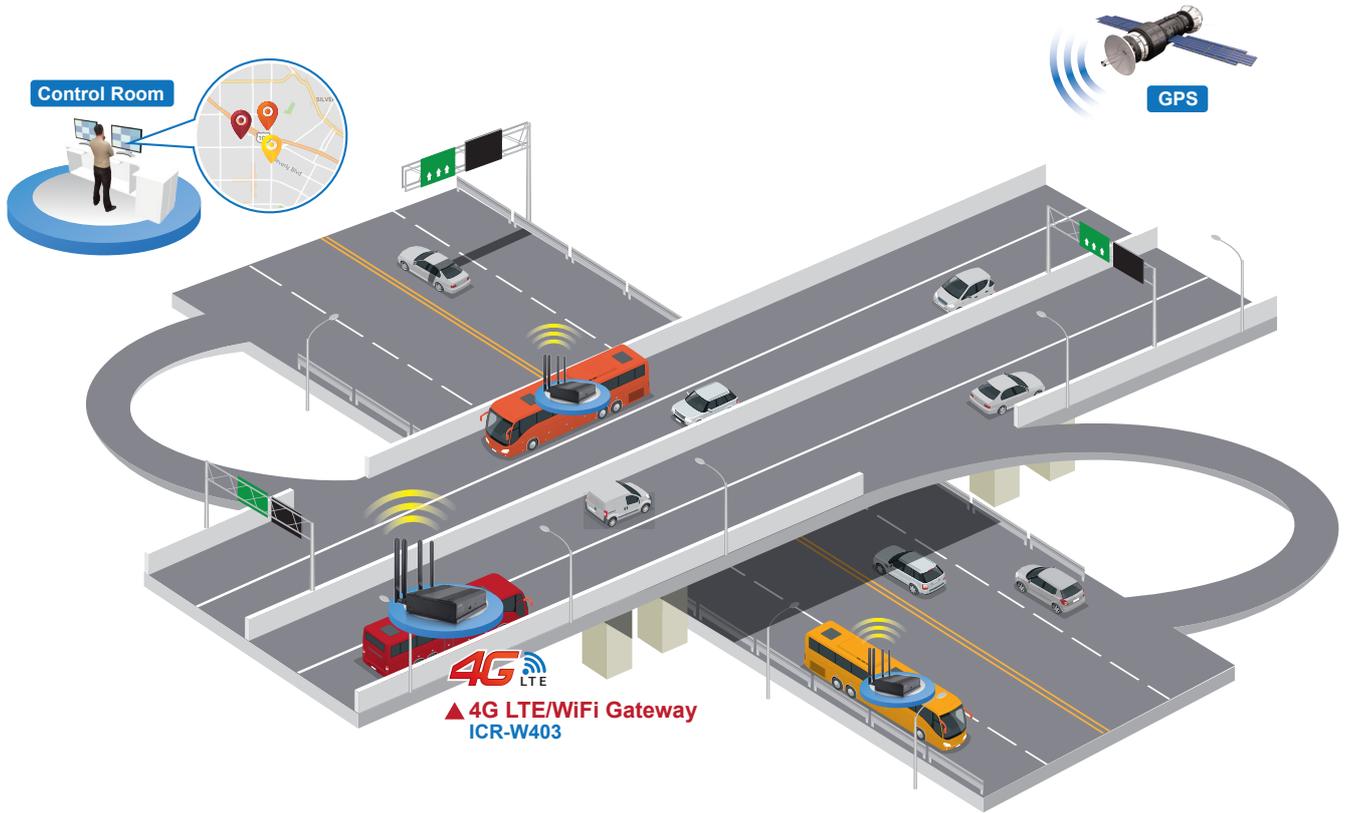


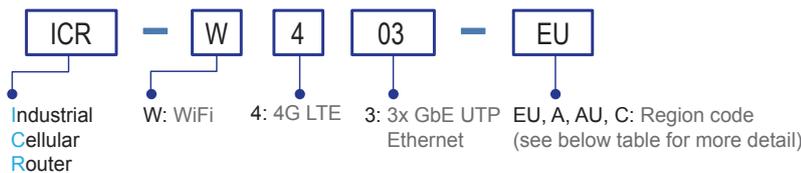
Figure 2 : Application of Vehicle Location Tracking System



### Ordering Information

| Model Name  | WAN                                       |                     | WAN/LAN  |                          | Local Port |       | Certification    |                   |                         |         |
|-------------|---|---------------------|--|--------------------------|------------|-------|------------------|-------------------|-------------------------|---------|
|             | Cellular Mobil Band (2 Sim for Redundant) | GPS (Ant. Optional) | WiFi   | UTP 10/100/1000Base-T    | DI, DO     | RS232 | Safety EN60950-1 | RailWay EN50121-4 | EN61000-6-2 EN61000-6-4 | CE, FCC |
| ICR-W403-EU | see Region code table EU                  | 1x GNSS             | IEEE802.11ac/b/g/n (LAN) or IEEE802.11ac (WAN) | 2x(LAN) +1x (LAN or WAN) | 2xDI, 1xDO | 1     | V                | V                 | V                       | V       |
| ICR-W403-A  | see Region code table A                   | 1x GNSS             | IEEE802.11ac/b/g/n (LAN) or IEEE802.11ac (WAN) | 2x(LAN) +1x (LAN or WAN) | 2xDI, 1xDO | 1     | V                | V                 | V                       | V       |
| ICR-W403-AU | see Region code table AU                  | 1x GNSS             | IEEE802.11ac/b/g/n (LAN) or IEEE802.11ac (WAN) | 2x(LAN) +1x (LAN or WAN) | 2xDI, 1xDO | 1     | V                | V                 | V                       | V       |
| ICR-W403-C  | see Region code table C                   | 1x GNSS             | IEEE802.11ac/b/g/n (LAN) or IEEE802.11ac (WAN) | 2x(LAN) +1x (LAN or WAN) | 2xDI, 1xDO | 1     | V                | V                 | V                       | V       |

#### Model Naming Rule



### MobilComm region Code Optional

| Region Code | 4G LTE   |   | 3G                                   | 2G                                   | GNSS | Region   |
|-------------|--|---|--------------------------------------|--------------------------------------|------|--|
|             | FDD LTE  | TDD LTE                                     | WCDMA                                | GSM / EDGE                           |      |  |
| EU          | B1(2100) , B3(1800), B7(2600), B8(900), B20(800)                             |   | B1(2100), B8(900)                    | B3(1800), B8(900)                    | Yes  | Europe, Africa, Middle East, Korea,Thailand, India |
| A           | B2(1900), B4(1700), B12(700)   |   | B2(1900), B4(1700), B5(850)          |                                      | Yes  | USA (AT&T, T-Mobil)                                |
| AU          | 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) | Yes  | ANZ, South America, Taiwan                         |
| C           | B1(2100), B3(1800)   | B38(2600), B39 (1900), B40(2300), B41(2500) | B1(2100), B2(1900), B5(850), B8(900) | B2(1900), B3(1800), B5(850), B8(900) | Yes  | China  |

### Optional Accessories

#### Antenna accessories

|            |                   |
|------------|-------------------|
| ANT-GPS-01 | Antennas for GNSS |
|------------|-------------------|