4G LTE
Industrial Products

IWA-AR114

WAN: 1x GbE SFP + 1GbE UTP   LAN: WiFi IEEE802.11 a/b/g/n/ac 2T2R + 4x GbE UTP

NEW

- Ethernet UTP and SFP for WAN Failover & Load Balancing
- WAN or virtual WAN interfaces for various IP applications (Data, WiFi hotspot, VoIP, Video Streaming etc)
- USB2.0 port for log storage

The IWA-AR114 is a compact, lightweight and cost-effective Industrial Grade Router with 3 10/100/1000Base-T LAN ports plus 1 100/1000Base-T WAN/LAN and a 100/1000Base-X WAN SFP interface. It also equips with four Virtual WANs that can be used for various IP applications and provides IEEE 802.11 a/b/g/n/ac dual band(2.4G/5G selectable) wireless connections for optimal coverage. Built for harsh environments, the router equips features such as NAT, port forwarding, VPN Tunneling, Firewall and management capability via TR-069 and SNMP. All in all, the IWA-AR114 provides highly secure authentication, encryption and management to protect your data between public and private networks and to simplify your complicated solutions for SoHo, smart city and industrial networking.

Features

- WiFi IEEE 802.11 a/b/g/n/ac (2.4G/5G selectable) + 3 x GbE LAN + 1x WAN/LAN GbE + 1x GbE SFP WAN Router
- Compact and easy to be integrated into IP network solutions.
- Rich VPN tunnel technology to build VPN tunnel between IP network/network device with remote centers.
- Both IPv4/IPv6 protocol stack meet ISP requirements.
- Gateway based on IP pass through or DHCP-based NAT with Port Forwarding.
- Rich Routing function covers static, dynamic and OSPF compatible with most IP networks.
- Web UI, CLI and Command Script for basic and advanced configurations.

Specifications

Device Interface		
	Ethernet	4x RJ45 GbE, 1x GbE SFP
	WiFI	802.11a/b/g/n/ac 2T2R (2.4G/5GHz Selectable)
	Log Storage	1x USB 2.0
	Power Input	12V (DC Jack)
WAN & Uplink	WAN	Ethernet UTP and SFP, for WAN Failover, Load Balancing
	Ether-WAN	Dynamic IP, Static IP, PPPoE, PPTP,L2TP
	Network Monitor	ICMP/DNS Query
WiFi	Standard	802.11 Industry Compliance
	Mode	AP Router, WDS, WDS Hybrid Modes
	Function	Multi-SSID, WMM
	Security	WEP, WPA, WPA2, WPA-PSK, WPA2-PSK, 802.1x, WPA-Enterprise, WPA2-Enterprise
	Captive Portal	External & Internal web portal
Protocol	LAN & VLAN	DHCP Server/Relay, Port/ Tag based VLAN
	IPv6	Static IPv6, DHCPv6, PPPoEv6
	Port Forward	Virtual Server, Virtual Computer, DMZ, VPN Pass-through
	Routing	Static, Dynamic - RIP1/RIP2, OSFP, BGP
	QoS	Policy-based Bandwidth Control and Packet Flow Prioritization
Security	VPN Tunneling	IPSec, OpenVPN, PPTP, L2TP, GRE
	Scenario	Site/Host to Site/Host ; Dynamic VPN
	VPN Capability	IPSec: Up to 16 tunnels
	Firewall	SPI Firewall with Stealth Mode, IPS
	Access Control	Packet Filter, URL Blocking, MAC Filter, IP, TCP, UDP

Object		
	Scheduling	Time Schedule List
	Grouping	Host Grouping List
	Ext. Server	Email, Syslog, SCEP
	Certificate	My Certificate, Trusted Certificate, Issue Certificate
Administration	Configuration	Web UI, CLI, Command Script
	Management	SNMPv3 Std. MIB, TR-069
	System	Upgrade, Backup & Restore, Reboot & Reset, Syslog
	Software Upgrade	TFTP / Web
	Diagnostic	Packet Analyzer, Diagnostic Tools, Ethernet port setup
Service	Event Handling	User Defind Manage/Notify Event ; SMS, Mail, Syslog, SNMP Trap
Environment	OP/Store Temp.	-30℃ ~ 60℃ ; -40℃ ~ 85℃
	Humidity	10%~95% (non-condensing)
	Enclosure	Metal, Bracket / DIN-Rail
	Dimension	50.8 x 125 x 160mm
Certificate-CE	Standard & Regulation	
	EMI	EN 55032: 2015 +AC: 2016 ClassB, EN61000-3-6
	EMS	EN 55024, IEC 61000, EN61000-6
	Radio	EN 301 489, EN 300 328, EN 301 893, EN50385
	Safety	EN 60950-1
Package List	1x Device	
	2x WiFi Antenna	
	Power Adapter DC12V/2A	
	1x DIN Rail Kit	

Dimensions
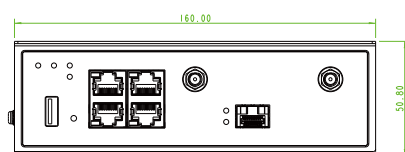
Front View
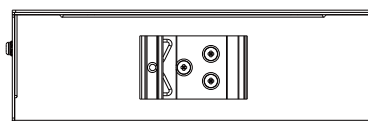
Rear View
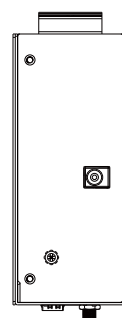
Side View

Ordering Information

Model Name	WAN / LAN		WiFI (LAN)	Certification	
	Fiber	UTP Ethernet		Safety EN60950-1	CE
IWA-AR114	1x GbE SFP	3x GbE (LAN) + 1x GbE (LAN or WAN)	IEEE802.11 a/b/g/n/ac 2.4G/5G selectable	V	V

WiFi Router IWA-AR114

ICR-W403

4G LTE, GPS, IEEE 802.11ac/b/g/n 2T2R, 2x SIM, 3x GbE + DI/DO, RS232

- Multi-band connectivity with FDD 4G LTE/ TDD 4G LTE/ 3G WCDMA/2G GSM
- Concurrent dual band WiFi With 802.11n 2T2R (2.4GHz), and 802.11ac 2T2R (5GHz)
- 4G LTE/ WiFi/ UTP to configure WAN port for failover redundant
- GPS and GNSS for location tracking
- NAT/Port Forward/Routing/IPv6 are compatible with existing IP networks
- Various VPN protocols for security, Firewall & IPS, ACL & Authentication by MAC/User to enhance access security

The ICR-W403 is a high-performance industrial grade wireless router. It combines IEEE 802.11b/g/n/ac WLAN and 4G LTE cellular technologies to provide flexible wireless network connectivity for industrial applications. ICR-W403 provides 3 Ethernet ports and dual SIM cards for failover redundancy, to ensure uninterrupted connectivity. ICR-W403 has 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 connection in the most demanding environments, and is an ideal solution for Industrial Internet of Things (IIoT) and M2M (Machine-to-Machine) applications, such as remote control and monitoring, fleet management, bus ticketing collection systems, CCTV, SCADA, digital signage, KIOSK and intelligent traffic systems.

Features

- IEEE 802.11 ac/b/g/n, 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

Standard	Cellular MobilComm standard: (Please see order information for optional band) 4G LTE: FDD-LTE, TDD-LTE 3G: WCDMA 2G: GSM/EDGE GNSS: GPS	
	IEEE 802.3	10Base-T 10Mbit/s Ethernet
	IEEE 802.3u	100Base-TX Fast Ethernet
	IEEE 802.3ab	1000Base-T Gbit Ethernet over twisted pair
	IEEE 802.1Q	Virtual LANs (VLAN)
	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
WiFi Standard	IEEE802.11ac, IEEE802.11b, IEEE802.11g, IEEE802.11n	
Interface	WAN	1x 3G/4G LTE (Please see order information for detail optional mobil band)
		Built-in dual SIM card slots for network redundancy / failover/ roaming over/ back up
		IEEE 802.11ac (5G Hz)
		1x GbE UTP (WAN or LAN configureable)
	LAN	Concurrent WiFi 2.4G/5G with IEEE 802.11ac 2T2R (5GHz), and IEEE 802.11b/g/n 2T2R (2.4GHz)
		3x 10/100/1000Base-T UTP port, port 1 could be WAN or LAN configurable
	COM port	1x RS232
	DI/DO	2x DI, 1x DO, 1x IGN (Ignition Sense for Vehicle)
	GNSS	1x GPS receiver
	Log Storage	1x USB 2.0

Connector	2x 2.3dBi LTE Antenna and connector 2x 5dBi WiFi Antenna and connector 1x SMA Female connector for GPS antenna (Antenna optional) 2 SIM card sockets 1x USB 2.0 socket 3 RJ45 for GbE LAN/WAN 1x Removable Terminal block (Input power, 1x IGN, 2x DI, 1x DO, RS232)
4G LTE data rate	Cat 4 , Maxium 150Mbps download, upload 50Mbps
Power Supply	12/24VDC (9~36VDC)
Power consumption	<14W
LED	Power (Green), GPS (Green)
	2.4G (Green), 5G (Green)
	SIM 1 (Green), SIM 2 (Green)
	LTE signal High (Green), LTE signal Low (Green)
	WAN/LAN LNK/ACT (Green)
Alarm message Handling	Events triggered by pre-defined, and notification sent by SMS, SNMP trap, or e-mail
Operation Temperature	-40~ 75°C
Operating Humidity	5% to 95% (Non-condensing)
Storage Temperature	-40 ~ 85°C
Housing	Rugged Metal, IP30 Protection, Fanless
Dimensions (D x W x H)	120 x 200 x 39.5 mm (Dx Wx H)
Weight	975g
Installation	Wall mounting
MTBF	394,330 Hours (MIL-HDBK-217)
Warranty	5 years

4G LTE Router ICR-W403

2020 V1.0
Specifications & design are subject to change without prior notice. Please visit CTC Union website for more details. www.ctcu.com / sales@ctcu.com

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

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
Safety	EN60950-1
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

Software Specifications

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

Others	
System Time Information	NTP client
DHCP	Server and Client
Cellular toolkit	SIM PIN, USSD, Network Scan, SMS, Data Usage
Alarm message Handling	DI, DO, SMS, Syslog, SNMP Trap, Email Alert, Reboot
Location Tracking	GPS
Diagnostic	Packet Analyzer, Diagnostic tools
Power Control	Ignition Sense for delay OFF
MobilComm Connectivity	Two SIM for muti ISP failover/ back up Seamless
Multi WAN connections	4G LTE , 1xWiFi IEEE 802.11ac and 1x Ethernet WAN for failover/ back up Seamless
WiFi mode	AP Router, WDS, WDS Hybrid
WiFi Security	WEP, WPA, WPA2, WPA-PSK, WPA2-PSK, IEEE 802.1X
Virtual COM	TCP Client, TCP Server, UDP, RFC2217
Others DDNS, UPnP, QoS	
Remote management via Telnet, SSH v2, HTTPS	
Local management via Telnet, SSH v2, HTTP/HTTPS	
Syslog monitor	

Application
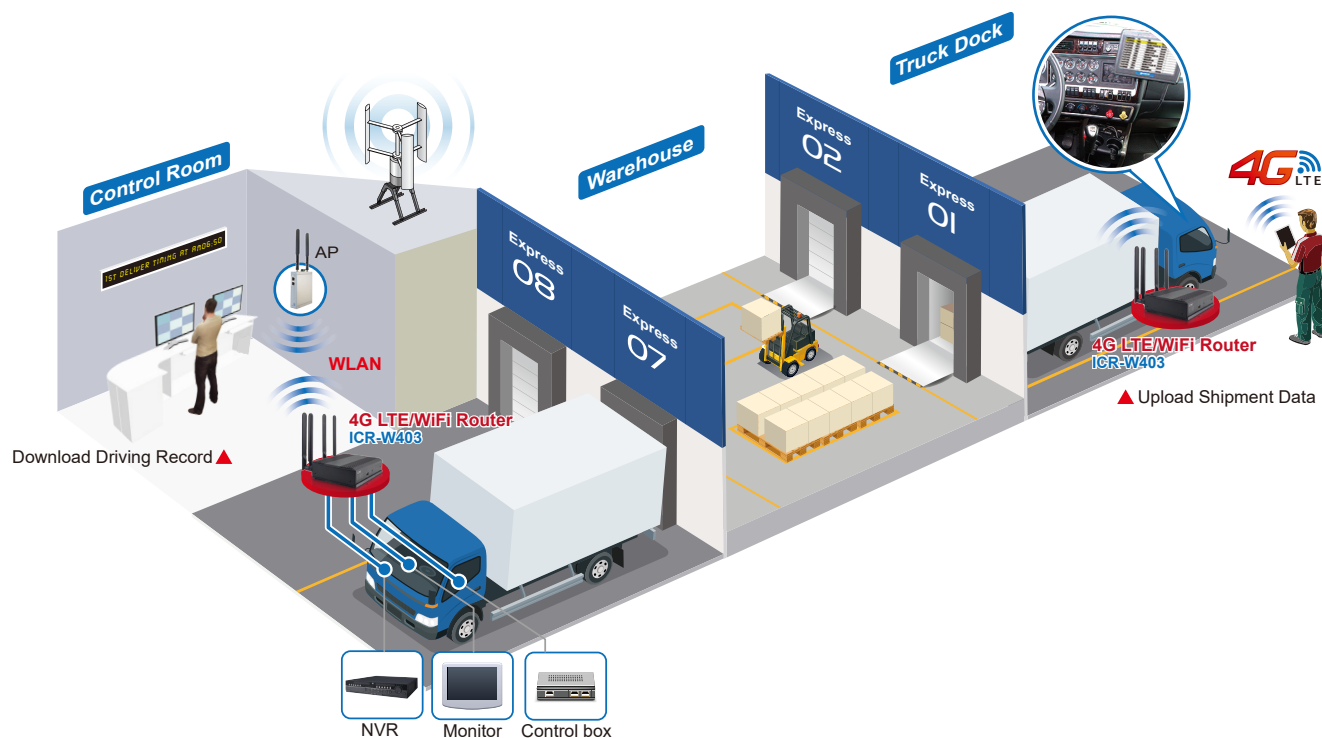
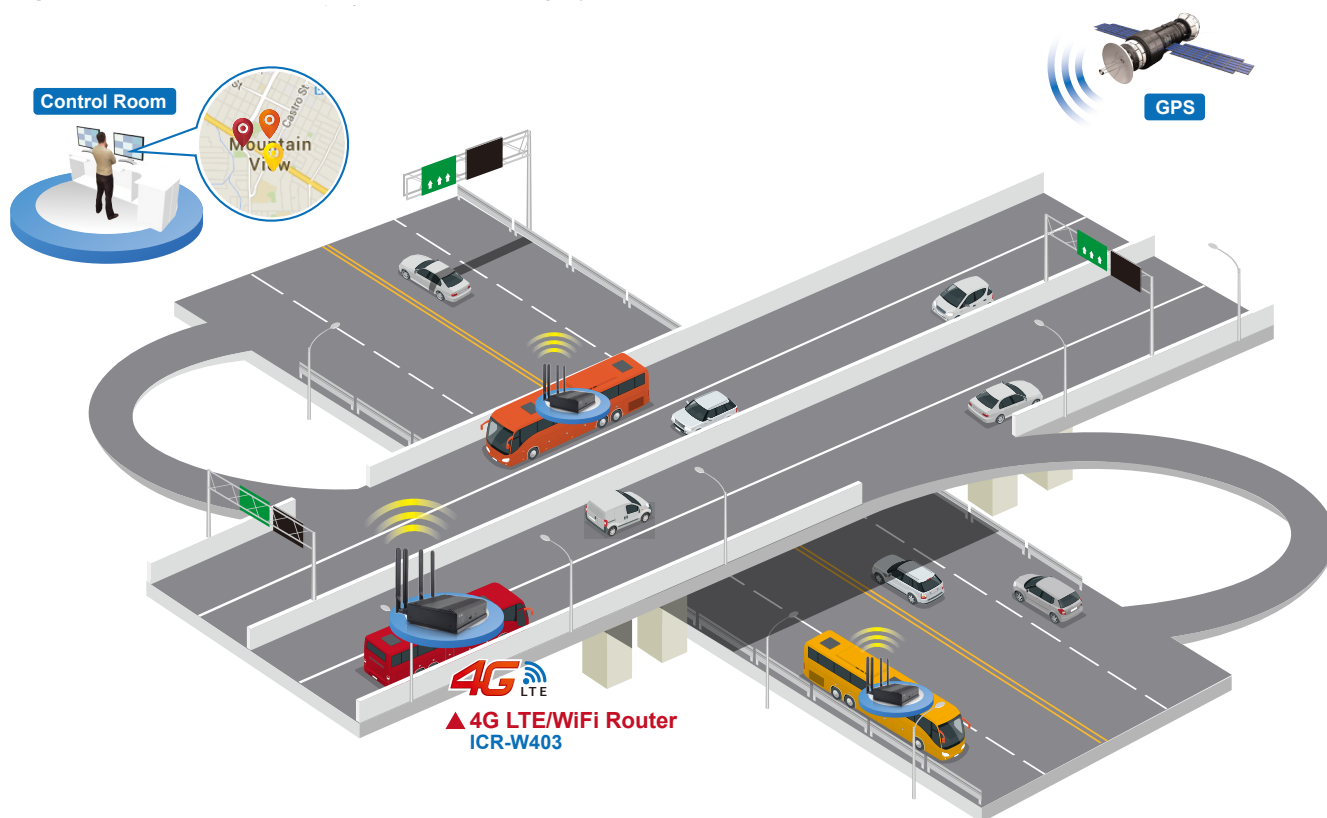**Figure 1 :** Application of Wireless Transmission in Logistics Center
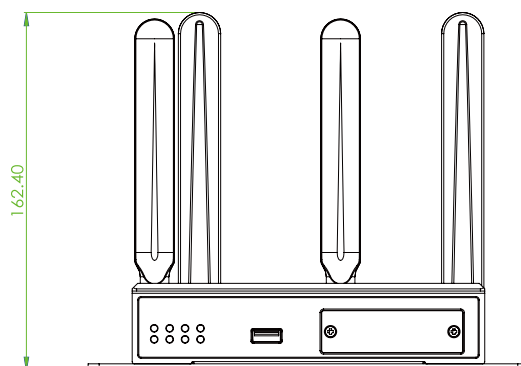
Figure 2 : Application of Vehicle Location Tracking System

Control Room

GPS

▲ 4G LTE/WiFi Router
ICR-W403

Dimensions

160.80
120.00
86.00
182.00
200.00

Top View

162.40

Front View

39.50

Side View

Rear View

CTC union
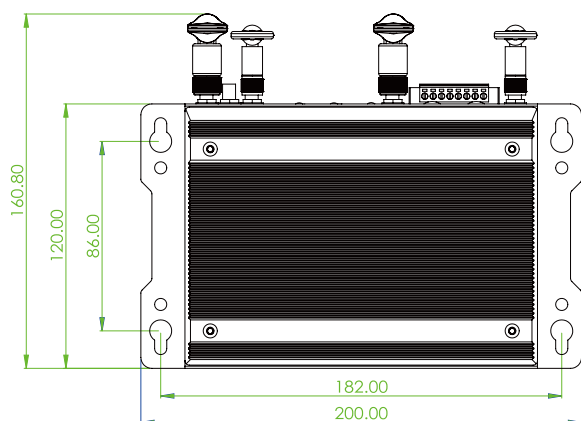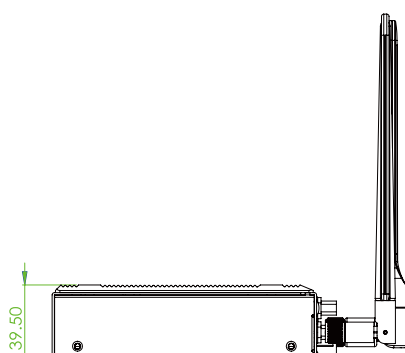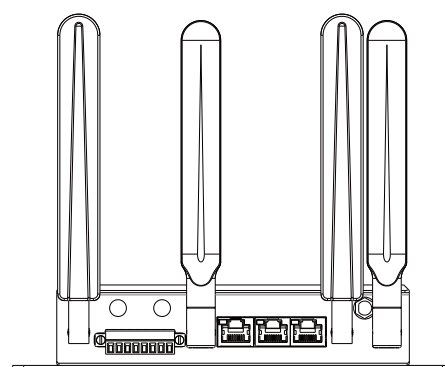
Ordering Information

Model Name	WAN		WAN/LAN		LAN		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	IEEE 802.11ac/b/g/n (LAN) or IEEE 802.11ac (WAN)	2x(LAN) +1x (LAN or WAN)	2xDI, 1xDO	1	V	V	V	V
ICR-W403-A	see Region code table A	1x GNSS	IEEE 802.11ac/b/g/n (LAN) or IEEE 802.11ac (WAN)	2x(LAN) +1x (LAN or WAN)	2xDI, 1xDO	1	V	V	V	V
ICR-W403-AU	see Region code table AU	1x GNSS	IEEE 802.11ac/b/g/n (LAN) or IEEE 802.11ac (WAN)	2x(LAN) +1x (LAN or WAN)	2xDI, 1xDO	1	V	V	V	V
ICR-W403-J	see Region code table J	1x GNSS	IEEE 802.11ac/b/g/n (LAN) or IEEE 802.11ac (WAN)	2x(LAN) +1x (LAN or WAN)	2xDI, 1xDO	1	V	V	V	V

Model Naming Rule

ICR – W 4 03 – EU

Industrial Cellular Router

W: WiFi

4: 4G LTE

3: 3x GbE UTP Ethernet

EU, A, AU, J: Region code (see below table for more detail)
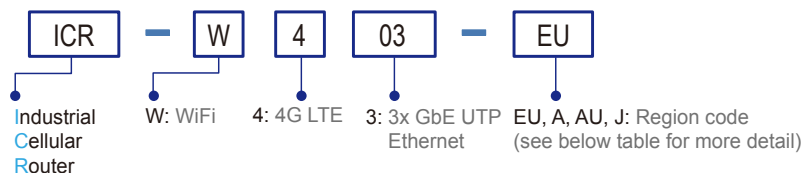
MobilComm Region Code Options

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-Mobile)
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
J	B1(2100), B3(1800), B8(900), B18(850), B19(850), B26(850)	B41(2500)	B1(2100), B6(850), B8(900), B19(850)		Yes	China

Optional Accessories

◼ Antenna accessories

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

ANT-GPS-01   ANT-BASE-01

ICR-W401

4G LTE, GPS, WiFi 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

The ICR-W401 is a compact, lightweight and cost-effective Industrial grade 4G LTE Router 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
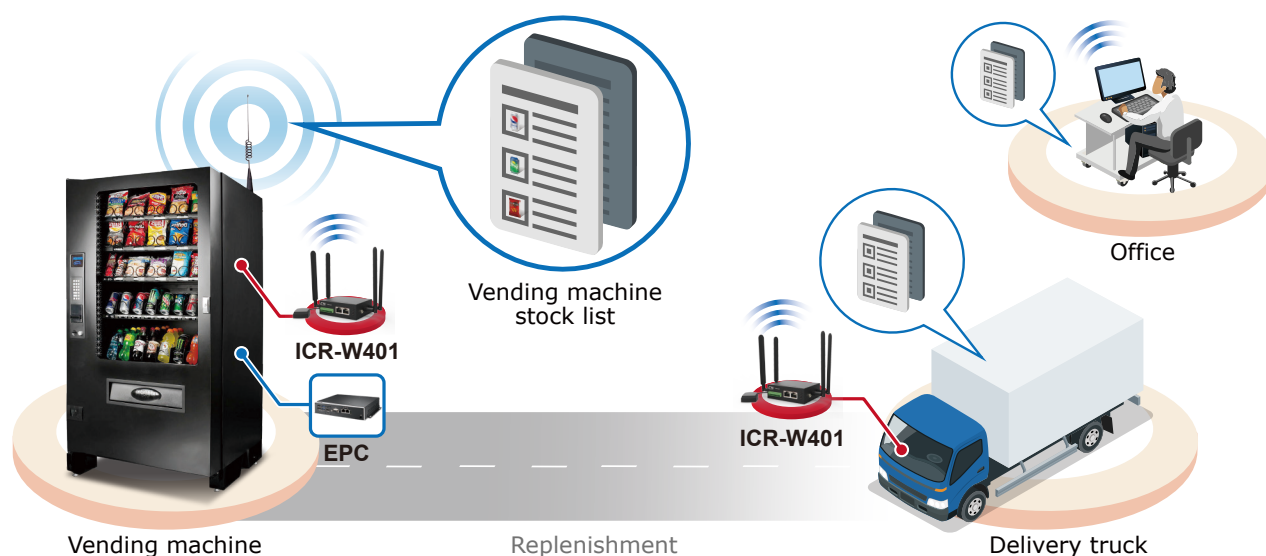
Specifications

Standard	IEEE 802.3 10Base-T 10Mbit/s Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.1Q Virtual LANs (VLAN) 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 (Down load) 50Mbps (up load) 1 x micro SIM Connector (push-push type)
WiFi Interface (ICR-W401)	IEEE 802.11b/g/n WiFi Standards Support AP or Station mode 2 x RP-SMA for WiFi Antenna 2T2R 300Mbps wireless operation rate 2.4GHz radio for wireless
Hardware Interface	1 x Micro SIM Connector (push-push type) 1 x LAN 10/100 Mbps Ethernet port 1 x WAN 10/100 Mbps Ethernet port Reset Button for device reset 1x RS232 for console configuration (TXD/RXD/GND) 1 x DI (Non-Isolated), 1 x DO (Non-Isolated) 2 x SMA connectors for detachable LTE Antenna 2 x RP-SMA for WiFi Antenna 1 x GPS detachable Antenna
Housing	Rugged metal, Fanless, IP30 protection
Dimensions (W x H x D)	30x 92 x 75 mm
Weight	400g

Installation	DIN Rail mounting, or wall mounting (optional)	
LED Display	1 x Power LED 2 x Ethernet LED for each port (LAN/WAN) 1x LTE LED 1 x 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
	EMI	EN301 489, FCC
	EMS	EN301 489
	Radio	EN301511 EN301908-1 EN301908-2 EN301908-13 EN300328 EN303413 EN62311
	Shock	IEC 60068-2-27
	Freefall	IEC 60068-2-32
	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

Application

The vending machine logistics system application

Dimensions

Front View   Side View   Rear View   DIN-Rail Kit View   Wall-Mount Kit View

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	CE	FCC	Shock, Freefall, Vibration
ICR-W401-EU	V	see Region code table EU	1	1	1	1	V	V	V
ICR-W401-A	V	see Region code table A	1	1	1	1	V	V	V
ICR-W401-AU	V	see Region code table AU	1	1	1	1	V	V	V
ICR-W401-J	V	see Region code table J	1	1	1	1	V	V	V

Model Naming Rule

ICR — W 4 01 — EU

Industrial Cellular Router

W: WiFi

4: 4G LTE

01: 1 x LAN

EU, A, AU, J : Region Code (see below table for more detail)

MobilComm Region Code Options

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)
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)	ANZ, South America, Taiwan
J	B1(2100), B3(1800), B8(900), B18(850), B19(850), B26(850)	B41(2500)	B1(2100), B6(850), B8(900), B19(850)		Japan

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)

ICR-4103

4G LTE, 2x SIM, 4x FE + 2x DI/1x DO, 1x RS485, 2x RS232

- Multi-band connectivity with FDD 4G LTE/ TDD 4G LTE/ 3G WCDMA/2G GSM
- 4G LTE/ UTP to configure WAN port for failover redundant
- NAT/Port Forward/Routing/IPv6 are compatible with existing IP networks
- Supports 3x Serial port (1x RS484, 2x RS232) for IoT and automation application, ModBus RTU and ModBus/TCP gateway, MQTT
- Various VPN protocols for security, Firewall & IPS, Authentication to enhance access security

The ICR-4103 is a high-performance, industrial grade, 4G-LTE cellular router which is designed to offer fast connectivity over cellular networks for industrial applications. ICR-4103's Ethernet ports can allow up to 3 Ethernet devices to link to the cellular network. It provides dual SIM card slots and one Ethernet WAN port which can automatically re-connect and auto-switch to offer cellular network redundancy and ensure uninterrupted connectivity. The ICR-4103 cellular router is integrated with WAN, LAN, SIM, VPN, Firewall, built-in DI/DO and Serial port services. In addition, ICR-4103 uses the highest level of industrial grade design for connection in the most demanding environments and is an 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

- Supports multi-band connectivity with FDD 4G LTE/ TDD 4G LTE/ 3G WCDMA/2G GSM/ LTE Cat4
- 2 SIM card slots 4G LTE antenna, 1x WAN (10/100Base-TX) + 3x LAN (10/100Base-TX UTP), 2x DI + 1x DO, 3x Serial COM port (2x RS232, 1x RS485)
- Highly reliable and secure for mission-critical cellular communications
- Provide flexible options to configure LAN/ WAN ports
- Built-in dual SIM for network redundancy / failover/ roaming over/ back up
- Integrated dual detachable antenna against radio interference
- 4G LTE and WAN port for seamless connection and redundancy
- Supports 3x Serial port (1x RS484, 2x RS232) for IoT and automation application, ModBus RTU and ModBus/TCP gateway, MQTT
- Supports Routing/Firewall, NAT, Virtual Server, DMZ, Port filtering, MAC Filter, URL Filter, IP Filter, VLAN, Static Routing and RIP 1 & 2, VRRP, OSPF V2 & V3, BGP
- Supports VPN, OpenVPN, IPSec (3DES, AES128, AES196, AES256, MD5, SHA-1, SHA256)
- IPv6/IPv4 dual stack and all applications are IPv6 ready
- Supports DHCP server and client, PPPoE, Static IP, SNTP, DNS Proxy, DDNS, QoS, Virtual Com, UPnP
- Supports Alarm message : DO, SNMP Trap, E-mail
- Supports SNMP, TR069,Web, Telnet, CLI for management
- Supports dual Image firmware upgrade by Web
- CE, FCC, Rail Traffic EN50121-4 certified
- Safety EN60950-1 certified
- Radio RED ETSI EN301 489-1/-19/-52, EN301 908-1, EN303 413, NCC certified
- Heavy industrial grade EMS, EMI, EN61000-6-2, EN61000-6-4 certified
- Rugged metal, IP30 protection & Fanless design
- Wide operating temperature -20 ~ 75°C

Specifications

Standard	Cellular MobilComm standard: (Please see order information for optional band) 4G LTE: FDD-LTE, TDD-LTE 3G: WCDMA 2G: GSM/EDGE
	IEEE 802.3 — 10Base-T 10Mbit/s Ethernet
	IEEE 802.3u — 100Base-TX Fast Ethernet
	IEEE 802.1Q — Virtual LANs (VLAN)
	IEEE 802.3x — Flow control for Full Duplex
Connector	**Cellular MobilComm and WAN:** Built-in dual SIM card slots for network redundancy / failover/ roaming over/ back up 2 SMA (female) connector for Antenna (Please see ordering information for optional accessories) 1x 10/100Base-TX RJ45 for WAN port **LAN:** 3x 10/100Base-TX RJ45 **Serial:** 1x RS485 and 2x RS232 (one of RS232 could be configured for console) **Programmable DI/DO:** 2xDI and 1x DO
LTE data rate	Cat 4 ,Max download 150Mbps, Max upload 50 Mbps
Removable terminal block	Provides for Power input, DO, DI1, DI2, COM2 (RS232), COM3 (RS485)
Power Supply	Input 10-32VDC removable terminal block
Power consumption	<7W

LED	System status (Green)
	VPN (Green), SIM 1 (Green), SIM 2 (Green)
	Cell signal Strong / Weak: H/L (Green)
DIP SW for RS485 port	DIP 1 Pull Low : OFF: Disable, ON: Enable
	DIP 2 Pull High : OFF: Disable, ON: Enable
	DIP 3 120 ohm terminal resistor : OFF: Disable, ON: Enable
Alarm message	DO for alarm message, with current capacity of 500mA/50VDC maximum SNMP trap, E-mail, SMS, Alarm trigger by DI, VPN or WAN disconnection
Operation Temperature	-20~75°C
Operating Humidity	5% to 95% (Non-condensing)
Storage Temperature	-40 ~ 85°C
Housing	Rugged Metal, Fanless , IP30 grade housing protection
Dimensions (D x W x H)	106 x 62.5 x 135mm
Weight	0.74kg
Installation	Mounting : DIN Rail mounting or Wall mounting (Optional)

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MTBF	296,306 Hours (MIL-HDBK-217)
Warranty	5 years
Certification	
EMC	CE (EN55024, EN55032)
EMI	FCC Part 15 Subpart B Class A, CE
Railway Traffic	EN50121-4
Immunity for Heavy Industrial Environment	EN61000-6-2
Emission for Heavy Industrial Environment	EN61000-6-4
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

EMS (Electromagnetic Susceptibility Protection Level)	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
Safety	EN60950-1
Radio	RED ETSI EN301 908-1
	RED ETSI EN303 413
	RED ETSI EN301 489-1
	RED ETSI EN301 489-19
	RED ETSI EN301 489-52
	NCC
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

Software Specifications

Network Protocols	IPv4, IPv6, IPv4/IPv6 dual stack, DHCP server and client, DNS Proxy, PPPoE, Static IP, SNTP, VRRP, OSPF V2, OSPF V3, BGP, MQTT
Modbus TCP, Modbus RTU	Gatway between Ethernet and COM3 (RS485) port
Routing/Firewall	NAT, Virtual Server, DMZ, Port filtering, MAC Filter, URL Filter, IP Filter, VLAN, Static Routing and RIP 1, RIP 2
VPN	OpenVPN, IPSec (3DES, AES128, AES196, AES256, MD5, SHA-1, SHA256)
MobilComm Connectivity	Two SIM for failover/ roaming over/ back up Seamless multi WAN connections switch (2x SIM and 1x Ethernet WAN)

Others	DDNS, UPnP, QoS
	Virtual COM for serial COM port
Alarm message	Sent by DO, SMS, SNMP Trap, E-mail
Management	Web GUI for remote and local management
	CLI
	Dual Image firmware upgrade by Web GUI
	Syslog monitor
	SNMP
	TR069: TR098 model
	Remote management via Telnet, SSH v2, HTTPS
	Local management via Telnet, SSH v2, HTTP/HTTPS

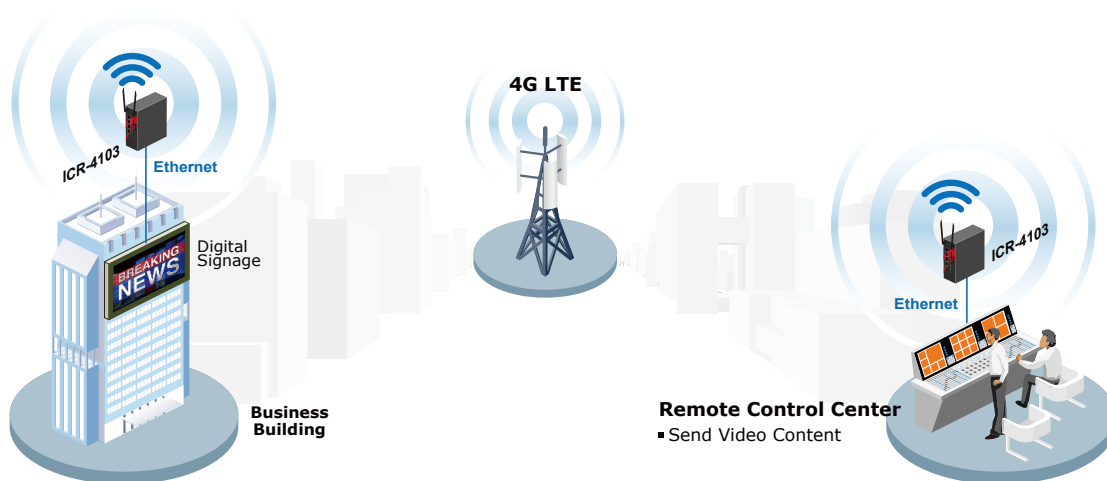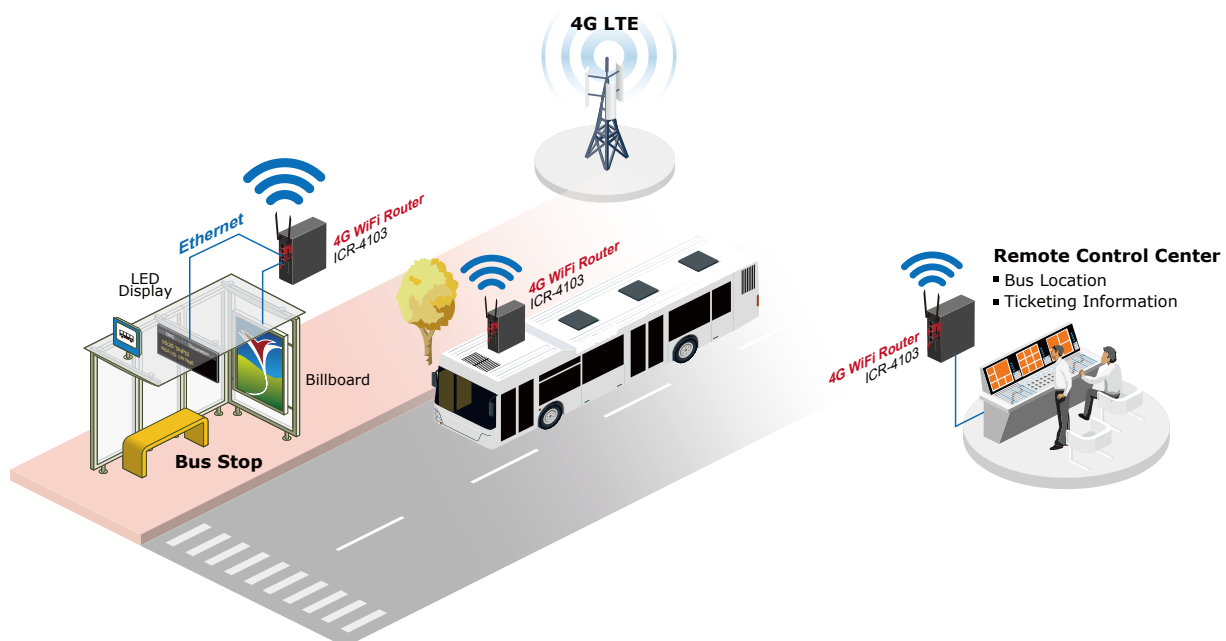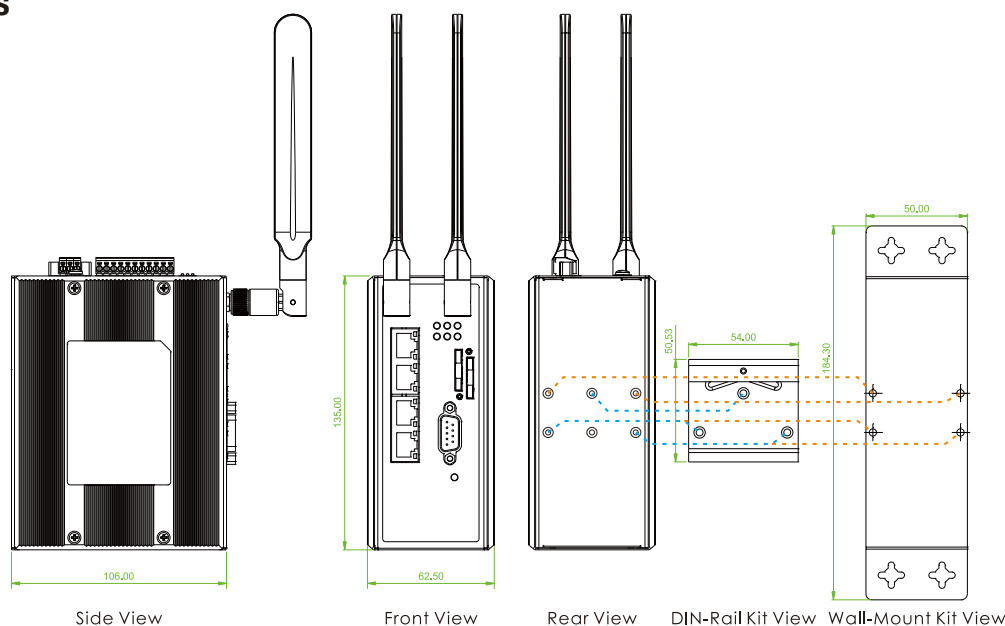## Application

Figure 1 : Application for Outdoor Digital Signage

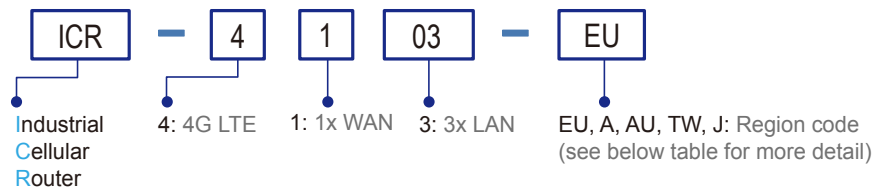**Figure 2 :** Application for Transportation/Bus Communication

4G LTE Router ICR-4103

Dimensions

Side View   Front View   Rear View   DIN-Rail Kit View   Wall-Mount Kit View

Ordering Information

Model Name	Managed	WAN		LAN			Certification			
		Cellular MobilComm band (2 SIM for Redundancy)	10/100Base-TX	10/100Base-TX	RS232	RS485 (ModBus)	Radio	Railway EN50121-4	EN61000-6-2 EN61000-6-4	CE, FCC
ICR-4103-EU	V	see Region code table EU	1	3	2	1	RED	V	V	V
ICR-4103-A	V	see Region code table A	1	3	2	1	RED	V	V	V
ICR-4103-AU	V	see Region code table AU	1	3	2	1	RED	V	V	V
ICR-4103-TW	V	see Region code table TW	1	3	2	1	NCC	V	V	V
ICR-4103-J	V	see Region code table J	1	3	2	1	RED	V	V	V

Model Naming Rule

ICR	−	4	1	03	−	EU

Industrial **C**ellular **R**outer

4: 4G LTE

1: 1x WAN

3: 3x LAN

EU, A, AU, TW, J: Region code (see below table for more detail)

MobilComm Region Code Options

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)
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)	ANZ, South America
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)	Taiwan
J	B1(2100), B3(1800), B8(900), B18(850), B19(850), B26(850)	B41(2500)	B1(2100), B6(850), B8(900), B19(850)		Japan (KDDI, Docomo, Softbank)

Optional Accessories

◼ Antenna accessories

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

◼ Wall mount kit accessories

IND-WMK02	Wall Mount kit for Industrial product (Wide) (184 x 50mm)

ANT-BASE-01

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