InHand Networks

IoT Cloud+Edge Products & Solutions

Everything Connected, the World Is In Your Hand

www.inhandnetworks.com

About Us

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

InHand serves world-class partners and customers with industrial IoT/M2M gateways, 5G routers, 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 Technology Partner in Asia-Pacific and Schneider Electric Technology Partner,InHand Networks defines industrial innovation and reliability.


Smart Grid


Smart Manufacturing


Smart Vending


Business Internet


Security & Transportation


Smart Fleet


Smart Oil & Gas


Smart Agriculture


Smart Building


Public Utility

Contents

EdgeRouter800

Cloud-Managed 5G Edge Router

The EdgeRouter800 is a new generation of cloud-managed SD-WAN edge routers that provide convenient secure network access services for enterprise business networks, with both extensive 5G/4G cellular networks and wired broadband network.

Together with the InCloud Manager SaaS service, it provides customers with high-speed, secure network connection and one-stop network management service. We are here to power your business with unlimited possibilities.

PRODUCT ADVANTAGES

Powerful branch access capability

+ Firewall throughput: 600Mbps
+ VPN throughput: 200Mbps
+ Number of access terminals: 100~150

Build a full Gigabit network

+ 5*Gigabit Ethernet
+ WAN/LAN/VLAN, 2*WAN
+ Gigabit Wi-Fi: 1200Mbps
+ 2.4G+5G Wi-Fi

5G cellular high-speed network access

+ Global 5G network, Maximum 2Gbps
+ Support SA and NSA networking
+ Compatible with 4G network

Multi-dimensional security strategy

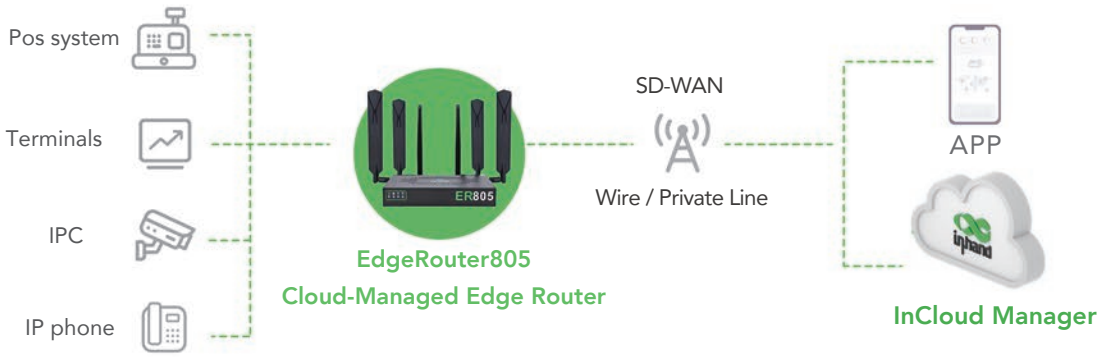
+ Network security: Provide access control and prevent attacks with multiple firewalls
+ Data security: Provide multiple VPNs and digital certificates to protect data security
+ Management security: authority management, identity authentication

Simple InCloud Manager SaaS service

+ Centralized cloud management
+ Supports Zero Touch deployment
+ Multi-dimensional dashboards for efficient management
+ Management anytime anywhere with Mobile APP

SD-WAN

+ Integrate hardware, software and cloud services to realize SD-WAN
+ Provide “always online” high-quality network services and reduce network operating costs

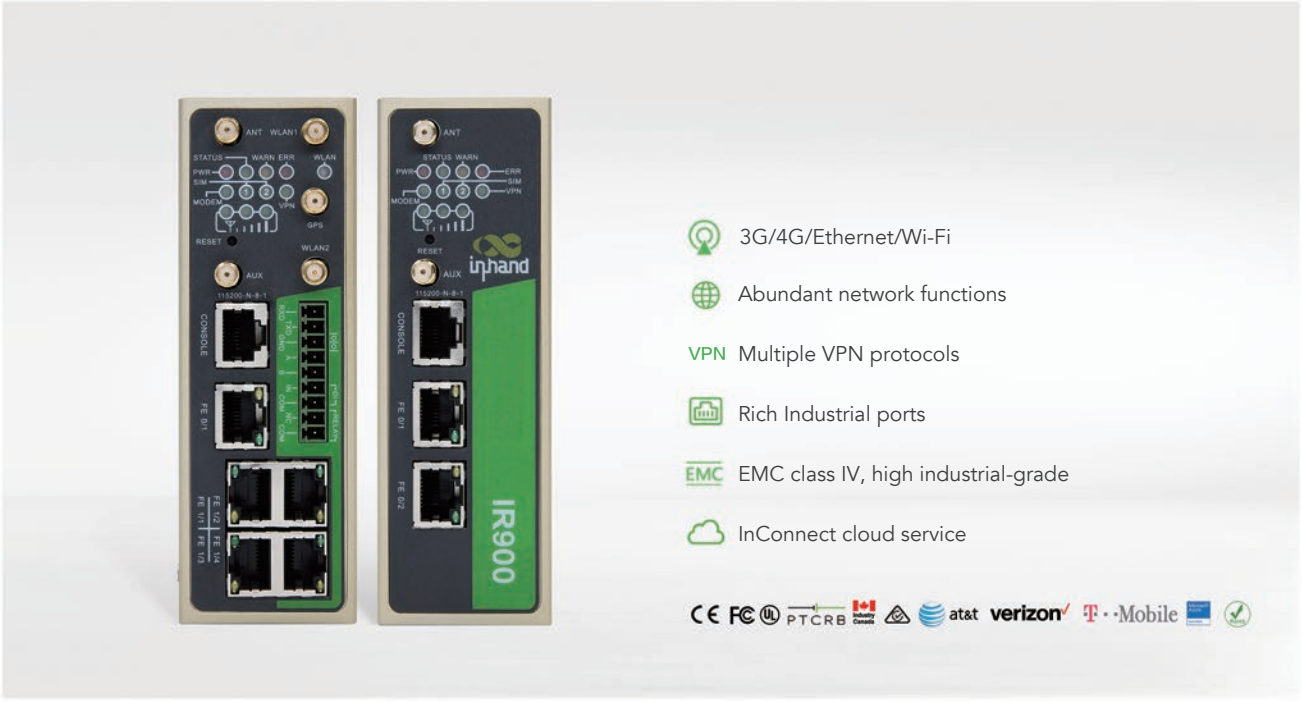


MODEL SELECTION GUIDE

Model	Model Code: ER805-<WMNN>-<WLAN/NA>			
	Region (Operator)	Cellular Network	Band & Frequency	<WLAN/NA>: WLAN
ER805-NRQ0-<WLAN>	APAC	5G	5G NR NSA n41/n77/n78/n79 5G NR SA n1/n2/n3/n5/n7/n8/n12/n20/n25/n28*/n38/n40/n41/n48/n66/n71/n77/n78/n79 LTE-FDD Band 1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/29/30/32/66/71 LTE-TDD Band 34/B38/B39/B40/B41/B42/B43/B48 WCDMA Band 1/B2/B3/B4/B5/B8/B19	WLAN: Wi-Fi <NA>: No Wi-Fi
ER805-NRQ1-<WLAN>	China	5G	5G NR NSA n41/n78/n79 5G NR SA n1/n28/n41/n78/n79 LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 WCDMA Band 1/8	WLAN: Wi-Fi <NA>: No Wi-Fi
ER805-NRQ2-<WLAN>	China	5G	5G NR NSA n41/n78/n79 5G NR SA n1/n28*/n41/n77/n78/n79 LTE FDD Band 1/2/3/5/7/8/20/28 LTE TDD Band 34/38/39/40/41 WCDMA Band 1/2/5/8	WLAN: Wi-Fi <NA>: No Wi-Fi
ER805-NRQ3-<WLAN>	Global (excl. China)	5G	5G NR NSA n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40/n41/n48*/n66/n71/n77/n78/n79 5G NR SA n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40/n41/n48*/n66/n71/n77/n78/n79 LTE-FDD Band 1/2/3/4/5/7/8/12(17)/13/14/18/19/20/25/26/28/29/30/32/66/71 LTE-TDD Band 34/38/39/40/41/42/43/48 LAA Band 46 WCDMA Band 1/2/3/4/5/6/8/19	WLAN: Wi-Fi <NA>: No Wi-Fi
ER805-LQ20-<WLAN>	China	LTE CAT4	LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 TD-SCDMA Band 34/39 WCDMA Band 1/8 CDMA/EVDO BC0 GSM Band 3/8	WLAN: Wi-Fi <NA>: No Wi-Fi
ER805-FQ58-<WLAN>	Europe & APAC	LTE CAT4	LTE-FDD Band 1/3/7/8/20/28A LTE-TDD Band 38/40/41 WCDMA Band 1/8 GSM Band 3/8	WLAN: Wi-Fi <NA>: No Wi-Fi
ER805- FQ39-<WLAN>	North America (T-Mobile, Verizon, AT&T)	LTE CAT6	LTE-FDD 2/4/5/7/12/13/25/26/29/30/66 WCDMA Band 2/4/5	WLAN: Wi-Fi <NA>: No Wi-Fi
ER805- FQ78-<WLAN>	Australia & South America	LTE CAT4	LTE-FDD Band 1/2/3/4/5/7/8/28 LTE-TDD Band 40 WCDMA Band 1/2/5/8 GSM Band 2/3/5/8	WLAN: Wi-Fi <NA>: No Wi-Fi
ER805-EN00-<WLAN>	Global	NA		WLAN: Wi-Fi <NA>: No Wi-Fi

InRouter900 Series

high-performance Industrial Cellular Router



The InRouter900 is a full-featured LTE router designed for mission critical industrial IoT applications in harsh environments.

With comprehensive smart software functions and fully industrial grade hardware platform, the IR900 provides best-in-class reliable, fast and secure network services, helping enterprises achieve large scale deployment and management effortlessly.

The product has fully industrial design, including strong metal housing without cooling fan, IP30 protection rating, with temperature and voltage ranges, EMC class IV, providing stable networking services under harsh environments. It can be used in a wide range of applications, including smart healthcare, industrial automation, smart manufacturing, smart energy, smart grid and so on.

PRODUCT ADVANTAGES

Large-scale deployment

+ Concise and multiple configuration methods
+ Efficient cloud management platform: DeviceManager
+ Multiple router protocols and the DMVPN configuration
+ Supports SNMP V1/V2c/V3 protocols

Complete network functions

+ Multiple functions of VPN configurations
+ Multiple router protocols: RIP, OSPF, BGP, multicast routing
+ Bandwidth management and QoS
+ VLAN

Comprehensive security protection

+ Access control, virtual IP, firewall against DOS attacks
+ GRE, IPSec VPN, OPEN VPN, PPTP, L2TP, DMVPN and other VPNs
+ Certificate Authority (CA)
+ AAA certified, RADIUSA and TACACS+

Rich Industrial ports

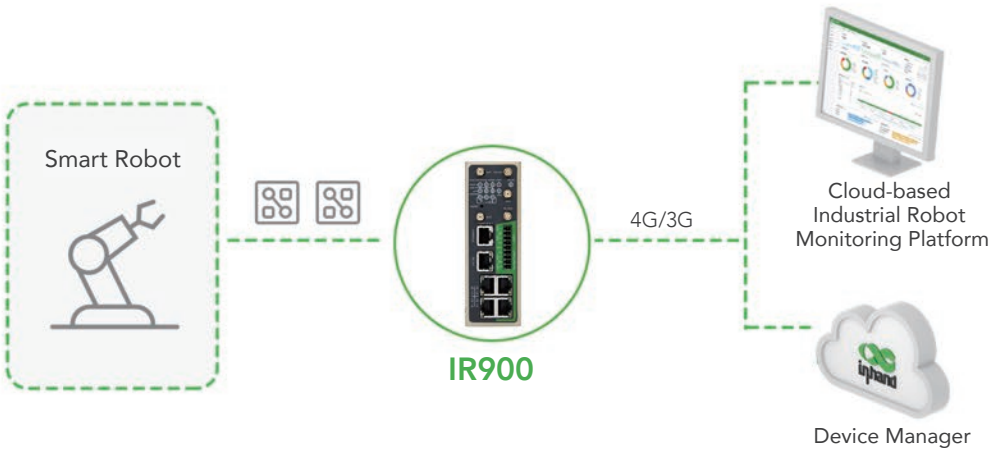
+ 2* 100Mbps port, 5* 100Mbps port
+ 802.11 b/g/n 300 Mbps
+ Industrial serial ports and I/O
+ GPS positioning, TF card expansion

Fully industrial-grade design

+ Fully adopts industrial-grade chip and electronic components
+ High EMC rating
+ Wide temperature and voltage tolerance
+ Industrial standard DIN-rail mounting

InConnect remote access service

+ Quickly builds IoT networks for distributed field sites
+ Through remote access, easily conducts device diagnostics, problem locating and troubleshooting, reducing losses caused by equipment failure



MODEL SELECTION GUIDE

Part Number	Model code: IR91X-<WMNN>-<W>-S-<GPS>					
	<N1>: Module	Region (Operator)	<WMNN>: Cellular Networks	<W/NA>: WLAN (IR915 only)	S: Serial Port (IR915 only)	<G/NA>: GPS (IR915 only)
IR912L-TL01 IR915L-TL01-<W>-S-<GPS>	L: 4G LTE (LTE CAT4)	China	LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 TD-SCDMA Band 34/39 WCDMA Band 1/8 GSM 900/1800MHz	W: Wi-Fi <NA>: No Wi-Fi	S: RS232 RS485	G: GPS <NA>: No GPS
IR912L-FQ39 IR915L-FQ39-<W>-S-<GPS>	L: 4G LTE (LTE CAT6)	North America (T-Mobile, Verizon, AT&T)	LTE-FDD Band 2/4/5/7/12/13/25/26/29/30/66 WCDMA Band 2/4/5	W: Wi-Fi <NA>: No Wi-Fi	S: RS232 RS485	G: GPS <NA>: No GPS
IR912L-FS18 IR915L-FS18-<W>-S-<GPS>	L: 4G LTE (LTE CAT3)	North America (AT&T)	LTE-FDD Band 2/4/5/17 UMTS(HSPA+) Band 2/4/5 EDGE/GPRS/GSM 850/900/1800/1900MHz	W: Wi-Fi <NA>: No Wi-Fi	S: RS232 RS485	G: GPS <NA>: No GPS
IR912L-FQ58 IR915L-FQ58-<W>-S-<GPS>	L: 4G LTE (LTE CAT4)	EMEA & APAC	LTE-FDD Band 1/3/7/8/20/28 LTE-TDD Band 38/40/41 WCDMA Band 1/3/5/8 GSM 850/900/1800/1900MHz	W: Wi-Fi <NA>: No Wi-Fi	S: RS232 RS485	G: GPS <NA>: No GPS
IR912-FQ78 IR915L-FQ78-<W>-S-<GPS>	L: 4G LTE (LTE CAT4)	Australia & South America	LTE-FDD Band 1/2/3/4/5/7/8/28 LTE-TDD Band 40 WCDMA Band 1/2/5/8 GSM 850/900/1800/1900MHz	W: Wi-Fi <NA>: No Wi-Fi	S: RS232 RS485	G: GPS <NA>: No GPS
IR912P-EN00 IR915P-EN00-<W>-S-<GPS>	P: No 3G/4G	Global	No 3G/4G	W: Wi-Fi <NA>: No Wi-Fi	S: RS232 RS485	G: GPS <NA>: No GPS
Example	IR915L-TL01-W-S-G 5-port industrial wireless interface, supporting FDD network, GPS positioning, WLAN, RS232&RS485, I/O interface Note: The device will prompt whether to join the user experience plan when logging in for the first time. After agreeing, it will access the InHand cloud platform by default, and the user can modify it in the device service in user experience plan menu.					

InRouter615-S Series

Enterprise-grade Cellular Router

The IR615-S is a series of enhanced IoT routers equipped with multiple interfaces. Available with 3G/4G, Wi-Fi and five Ethernet ports, it provides uninterrupted Internet access for industrial sites with up to tens of thousands of devices, facilitating digital transformation of enterprises.

With the Device Manager cloud platform, IR615-S can be widely used in smart end-to-end networking, business branching network, smart city, smart manufacturing, smart transportation, smart medical service, smart agriculture, environmental protection, disaster mitigation and other industries.

PRODUCT ADVANTAGES

Accessible Internet service anywhere

+ 3G/4G cellular networks of telecom operators worldwide
+ Network switching between two telecom operators
+ Wired network
+ Wi-Fi

Internet "always online"

+ Multi-link backup
+ Dual SIM, enabling to switch carriers
+ VRRP hot standby
+ Multi-layer link detector

Highly reliable design

+ Fully industrial design
+ EMC class III
+ Wide temperature and voltage tolerance
+ Supports DIN rail mounting, lug mounting, and wall mounting

Multiple security strategies

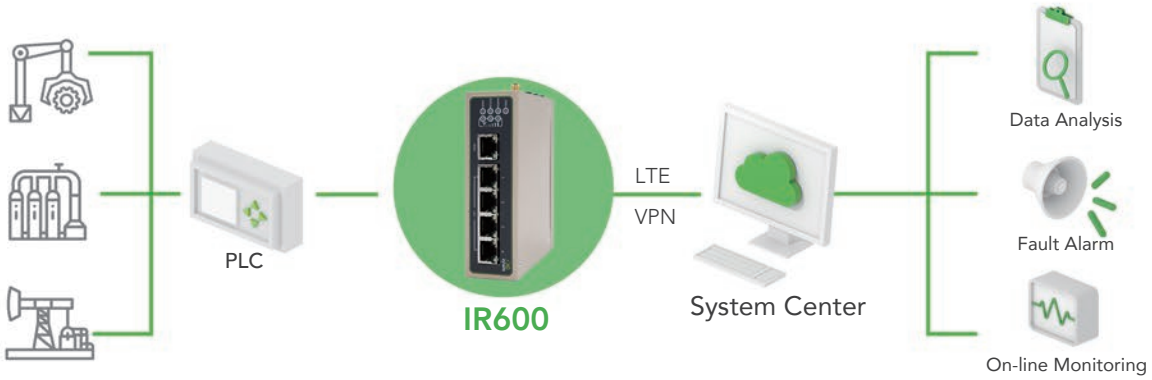
+ Supports IPSEC, L2TP, OPEN VPN, DMVPN
+ Stateful packet inspection, port mapping, access control, MAC address binding
+ VLAN
+ Port control

InConnect remote access service

+ Quickly builds IoT networks for distributed field sites
+ Through remote access, easily conducts device diagnostics, problem locating and troubleshooting, reducing losses caused by equipment failure

Easy to deploy and manage

+ Supports APN auto-adapting, realizing user "zero-config"
+ Supports InHand Device Manager for efficient remote central network management
+ Supports WEB, CLI, telnet and any other configuration methods
+ HTTP API port

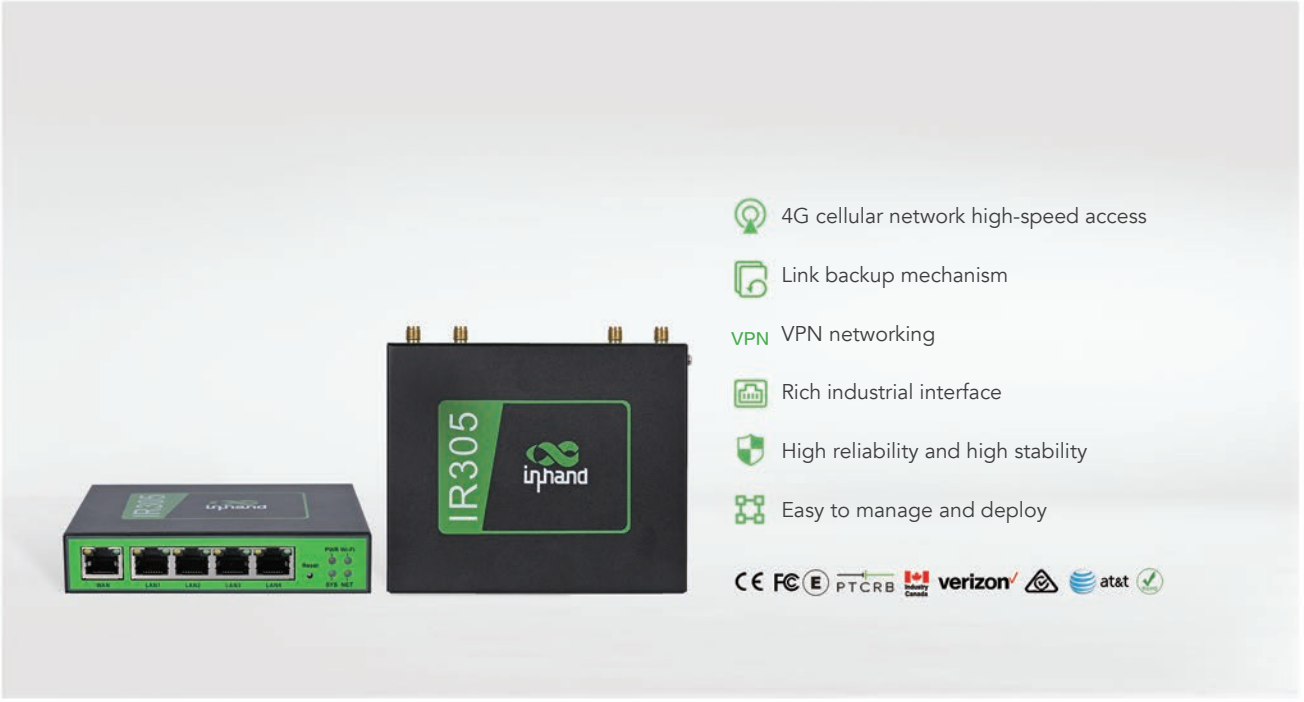


MODEL SELECTION GUIDE

Model	Model code: IR615-S-<WMNN>-<WLAN/NA>-<DS/NA>				
	Region (Operator)	<WMNN>: Cellular Type & Module U-UMTS(HSPA), L-LTE single mode, L3-LTE triple-mode, L5-LTE 5-mode, L7-LTE 7-mode		<WLAN/NA>: WLAN	Dual SIM
IR615-S-L7/(TL01/60522)-<WLAN/NA>	China	LTE CAT4	LTE-FDD Band 1/3/5/8 LTE-TDD Band 38/39/40/41 TD-SCDMA Band 34/39 UMTS（DC-HSPA+） Band 1/8 EVDO 800MHz CDMA-1x 800MHz EDGE/GPRS/GSM 850/900/1800/1900MHz	WLAN: Wi-Fi <NA>: no Wi-Fi	Dual SIM
IR615-S-L3/(FQ58/60726)-<WLAN/NA>	Europe & APAC	LTE CAT4	LTE-FDD Band 1/3/7/8/20/28A LTE-TDD Band 38/40/41 WCDMA Band 1/8 GSM 900/1800MHz	WLAN: Wi-Fi <NA>: no Wi-Fi	Dual SIM
IR615-S-FQ38-<WLAN/NA>	North America (Verizon Wireless)	LTE CAT4	LTE-FDD Band 2/4/5/12/13/14/66/71 UMTS(DC-HSPA+) Band 2/4/5	WLAN: Wi-Fi <NA>: no Wi-Fi	Dual SIM
IR615-S-FQ53-<WLAN/NA>	EMEA	LTE CAT1	LTE-FDD Band 1/3/7/8/20/28 WCDMA Band 1/8 GSM/EDGE 900/1800MHz	WLAN: Wi-Fi <NA>: no Wi-Fi	Dual SIM
IR615-S-FQ78-<WLAN/NA>	Australia & South America	LTE CAT4	LTE- FDD Band 1/2/3/4/5/7/8/28 LTE-TDD Band 40 WCDMA Band 1/2/5/8 GSM 850/900/1800/1900MHz	WLAN: Wi-Fi <NA>: no Wi-Fi	Dual SIM
IR615-S-FQ88-<WLAN/NA>	Japan	LTE CAT4	LTE-FDD Band 1/3/8/18/19/26 LTE-TDD Band 41 WCDMA Band 1/6/8/19 GSM 850/900/1800/1900MHz	WLAN: Wi-Fi <NA>: no Wi-Fi	Dual SIM
IR615-S-FS39-<WLAN/NA>	North America (T-Mobile, Verizon, AT&T)	LTE CAT6	LTE-FDD Band2/4/5/12/13/29 UMTS/HSPA+ Band 2/4/5 GSM/GPRS/EDGE 850/1000/1800/1900Mhz	WLAN: Wi-Fi <NA>: no Wi-Fi	Dual SIM
IR615-S-EN00-<WLAN/NA>	Global		No cellular module	WLAN: Wi-Fi <NA>: no Wi-Fi	Single SIM
Example:	IR615-S-L3-WLAN: Five Ethernet ports IR615-S series cellular router, supports IPSec/PPTP/L2TP/OPEN VPN, 4G LTE CAT4, supports Wi-Fi AP&STA modes, one serial port with RS232 or RS485 mode				

InRouter305 Series

Compact Industrial LTE router



Facing the ever-growing digitalization powered by the Internet of Things, a growing number of IoT application scenarios and terminals are in an urgent need to get connected so that business can be better digitalized. Thus, more economical and efficient networking solutions are required. The IR305 series industrial LTE router, combined with the Device Manager, helps build more convenient, cost-effective and efficient IoT networks for a wide range of industries.

PRODUCT ADVANTAGES

High-speed 4G cellular network access

+ High-speed 4G network access
+ High bandwidth, low latency
+ Supports SA and NSA networking

Complete network functions

+ DMVPN fast networking
+ Dynamic routing OSPF
+ Bandwidth management, QoS, traffic management
+ Virtual network divides VLAN

Multiple security strategies

+ Supports VPN encryption networking such as IPSEC, L2TP, OPEN VPN, DMVPN, etc.
+ Status packet inspection, port mapping, access control, MAC address binding and other security rules
+ Virtual Local Area Network VLAN
+ Port control

Rich industrial interfaces

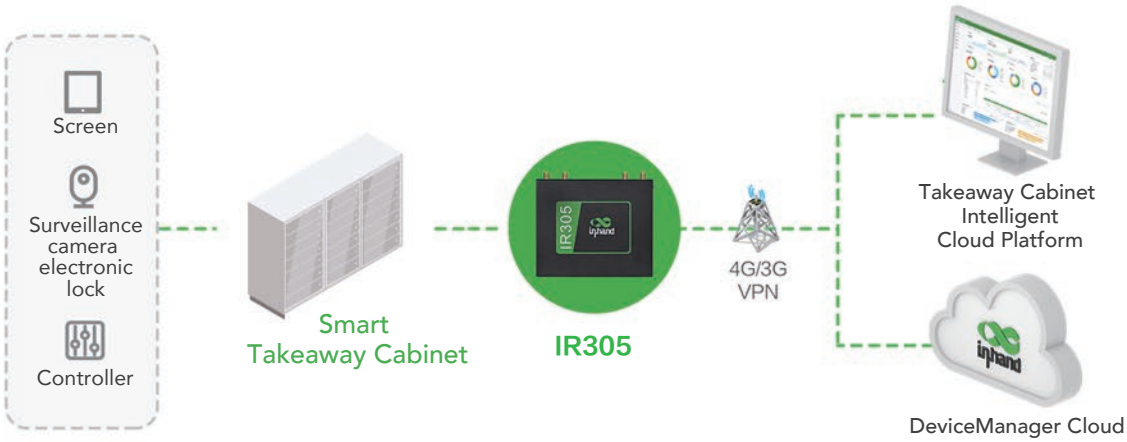
+ 5*100M Ethernet port, WAN/LAN/VLAN
+ 802.11 b/g/n 300Mbps
+ Industrial serial port
+ Industrial IO

"Uninterrupted network" design

+ Mutual backup between wired, cellular and Wi-Fi networks
+ VRRP hot backup mechanism
+ Dual SIM design, dual operator switching
+ Multi-level link detection mechanism to quickly restore the network

Easy and efficient management

+ Efficient remote centralized management with Device Manager cloud platform
+ Support SNMP V1/V2c/V3 protocol
+ Provide HTTP API interface
+ Support multiple configuration methods such as WEB, CLI, telnet, etc.



MODEL SELECTION GUIDE

Model	Model code: IR305-<WMNN>-<WLAN/NA>-<S/NA>				
	Region (Operator)	Network Type	<WMNN>: Cellular Type & Module	<WLAN/NA>: Wi-Fi	<S/NA>: Serial Port/ IO
IR305-NRQ2-<WLAN/NA>-<S/NA>	China	5G	5G NR NSA: n41/n78/n79 5G NR SA: n1/n28*/n41/n77/n78/n79 LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 WCDMA Band 1/5/8	WLAN: Wi-Fi <NA>: no Wi-Fi	S:1*RS232+1*RS485 <NA>: 4*IO
IR305-LQ20-<WLAN/NA>-<S/NA>	China	LTE CAT4	LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 WCDMA Band 1/5/8 GSM 900/1800MHz	WLAN: Wi-Fi <NA>: no Wi-Fi	S:1*RS232+1*RS485 <NA>: 4*IO
IR305-FQ58-<WLAN/NA>-<S/NA>	Europe & APAC	LTE CAT4	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM 900/1800MHz	WLAN: Wi-Fi <NA>: no Wi-Fi	S:1*RS232+1*RS485 <NA>: 4*IO
IR305-FQ39-<WLAN/NA>-<S/NA>	North America (AT&T, VzW, T-Mobile)	LTE CAT6	LTE-FDD Band 2/4/5/7/12/13/25/26/29/30/66 WCDMA Band 2/4/5	WLAN: Wi-Fi <NA>: no Wi-Fi	S:1*RS232+1*RS485 <NA>: 4*IO
IR305-FF38-<WLAN/NA>-<S/NA>	North America (AT&T, VzW)	LTE CAT4	LTE-FDD Band 2/4/5/12/13/17/66/71 WCDMA Band 2/4/5	WLAN: Wi-Fi <NA>: no Wi-Fi	S:1*RS232+1*RS485 <NA>: 4*IO
IR305-FQ78-<WLAN/NA>-<S/NA>	Australia, Latin America	LTE CAT4	LTE-FDD Band 1/2/3/4/5/7/8/28 LTE-TDD Band 40 WCDMA Band 1/2/5/8 GSM 850/900/1800/1900MHz	WLAN: Wi-Fi <NA>: no Wi-Fi	S:1*RS232+1*RS485 <NA>: 4*IO
IR305-FQ33-<WLAN/NA>-<S/NA>	North America (AT&T, VzW)	LTE CAT1	LTE-FDD Band 2/4/5/12/13/25/26 WCDMA Band 2/4/5	WLAN: Wi-Fi <NA>: no Wi-Fi	S:1*RS232+1*RS485 <NA>: 4*IO
IR305-FQ53-<WLAN/NA>-<S/NA>	Europe & APAC	LTE CAT1	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8	WLAN: Wi-Fi <NA>: no Wi-Fi	S:1*RS232+1*RS485 <NA>: 4*IO
IR305-EN00-<WLAN/NA>-<S/NA>			No cellular module	WLAN: Wi-Fi <NA>: no Wi-Fi	S:1*RS232+1*RS485 <NA>: 4*IO
Example	IR305-LQ20-WLAN: Five Ethernet ports IR300 series cellular router, support IPSec / PPTP / L2TP / OPEN VPN, supports FDD, TDD, GSM and WCDMA networks, supports Wi-Fi AP & Client mode				

InRouter302 Series

Economical industrial level LTE router

The InRouter302 (IR302) is an IoT cellular router that integrates 4G LTE, Wi-Fi, and VPN technologies to provide an easy, reliable, and secure Internet connectivity. With technologies such as 4G wireless wide area network and Wi-Fi wireless local area network, it provides uninterrupted multiple network access capabilities, and with its comprehensive security and wireless services, it provides a convenient and high-speed data access for equipment networking.

The IR302 series is widely used in smart terminal networking, commercial networking, smart cities, security and traffic, transportation, smart manufacturing, smart power, medical device networking and other applications, delivering a good balance between cost and performance.

PRODUCT ADVANTAGES

Convenient cellular network access

+ LTE CAT4 high-speed network access
+ LTE CAT1 low-speed network access
+ LTE CATM narrowband network access
+ NB IoT narrowband network access

Network “always online”

+ Multiple link backup mechanism
+ Dual SIM
+ VRRP hot backup mechanism
+ Multi-level link detection mechanism

Easy to deploy and manage

+ Supports APN self-adaption, “zero” configuration networking
+ Efficient remote centralized management with Device Manager cloud platform
+ Support multiple configuration methods such as WEB, CLI, telnet, etc.
+ HTTP API interface

Complete safety features

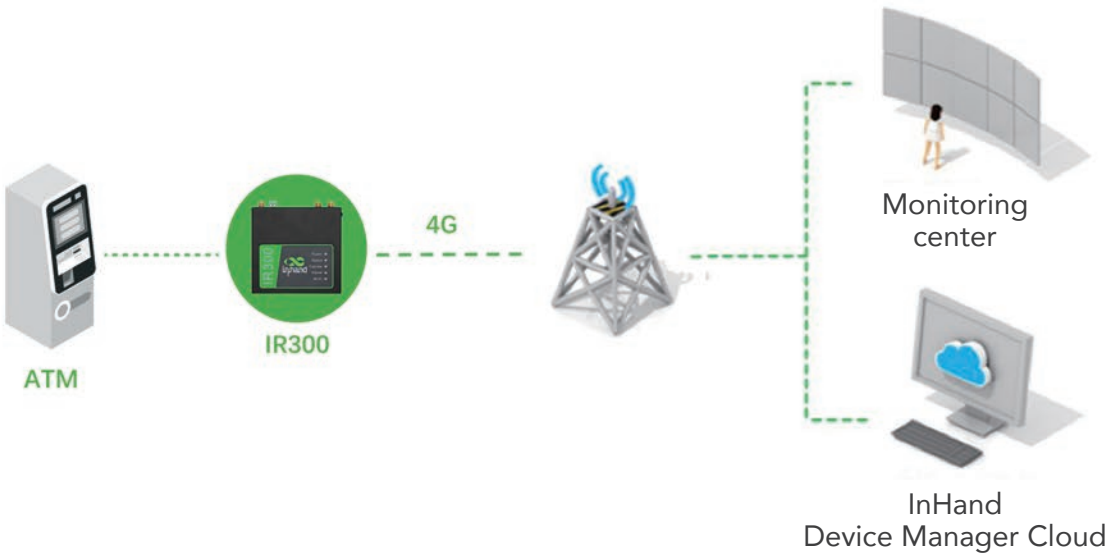
+ Network security: multiple firewall strategies
+ Data security: multiple VPN encryption to protect data security and integrity
+ Device management security: authority management, HTTPS access

InConnect remote access service

+ Quickly builds IoT networks for distributed field sites
+ Through remote access, easily conducts device diagnostics, problem locating and troubleshooting, reducing losses caused by equipment failure

Compact size

+ Full industrial design
+ Compact size and easy to install
+ Rails, mounting and desktop
+ Wide temperature and voltage ranges, EMC level 2



MODEL SELECTION GUIDE

Model	Model code: IR302-<WMNN>-<WLAN/NA>-<IO/S/NA>				
	<WMNN>: Cellular Type & Module	<W/NA>: Wi-Fi	<WMNN>: Cellular Type & Module	<WMNN>: Cellular Type & Module	<WMNN>: Cellular Type & Module
IR302-LQ28-<WLAN/NA>-<IO/S/NA>	China	LTE CAT4	LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 WCDMA Band 1/8 TD-SCDMA Band 34/39 EVDO/CDMA BC0 GSM Band 3/8	WLAN: Wi-Fi <NA>: no Wi-Fi	IO: 2*IO S: 1*RS232 <NA>: no interface
IR302-FQ58-<WLAN/NA>-<IO/S/NA>	Europe & APAC	LTE CAT4	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM Band 3/8	WLAN: Wi-Fi <NA>: no Wi-Fi	IO: 2*IO S: 1*RS232 <NA>: no interface
IR302-FQ38-<WLAN/NA>-<IO/S/NA>	North America AT&T, Verizon	LTE CAT4	LTE-FDD Band 2/4/5/12/13/14/66/71 WCDMA Band 2/4/5	WLAN: Wi-Fi <NA>: no Wi-Fi	IO: 2*IO S: 1*RS232 <NA>: no interface
IR302-FQ78-<WLAN/NA>-<IO/S/NA>	Australia, Latin America	LTE CAT4	LTE-FDD Band 1/2/3/4/5/7/8/28 LTE-TDD Band 40 WCDMA Band 1/2/5/8 GSM Band 2/3/5/8	WLAN: Wi-Fi <NA>: no Wi-Fi	IO: 2*IO S: 1*RS232 <NA>: no interface
IR302-FQ33-<WLAN/NA>-<IO/S/NA>	North America, AT&T, Verizon	LTE CAT1	LTE-FDD Band 2/4/5/12/13/25/26 WCDMA Band 2/4/5	WLAN: Wi-Fi <NA>: no Wi-Fi	IO: 2*IO S: 1*RS232 <NA>: no interface
IR302-FQ53-<WLAN/NA>-<IO/S/NA>	EMEA	LTE CAT1	LTE-FDD Band 1/3/7/8/20/28 WCDMA Band 1/8 GSM/EDGE Band 3/8	WLAN: Wi-Fi <NA>: no Wi-Fi	IO: 2*IO S: 1*RS232 <NA>: no interface
IR302-LQ00-<WLAN/NA>-<IO/S/NA>	China	LTE CAT1	LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 GSM 900/1800MHz	WLAN: Wi-Fi <NA>: no Wi-Fi	IO: 2*IO S: 1*RS232 <NA>: no interface
IR302-FQ02-<WLAN/NA>-<IO/S/NA>	Global	LTE CAT M/NB	CAT M: Band 1/2/3/4/5/8/12/13/14/18/19/20/25/26/27/28/66/85 CAT NB: Band 1/2/3/4/5/8/12/13/18/19/20/25/26/28/66/71/85 GSM/EDGE 850/900/1800/1900 MHz	WLAN: Wi-Fi <NA>: no Wi-Fi	IO: 2*IO S: 1*RS232 NA: no interface
IR302-EN00-<WLAN>-<IO/S/NA>	-	-	No cellular module	WLAN: Wi-Fi <NA>: no Wi-Fi	-
Example	IR302-FQ38-WLAN: CAT 4, AT&T, VzW, Dual Ethernet port IR300 series cellular router, support IPSec / PPTP / L2TP / OPEN VPN, supports FDD, and WCDMA networks, supports Wi-Fi AP & Client mode				

InRouter202 Series

Lite industrial router

With the increasing demand for networking of IoT devices, in order to help enterprises realize digital transformation, InHand launched industrial IR200 Series, which not only effectively solves the demand of networking, but also focuses on reducing the cost of networking deployment and providing the most economical and simplest networking solution.

IR202 is widely used in many fields with excellent cost performance, including smart business, medical care, industry, environmental protection and so on.

PRODUCT ADVANTAGES

Multiple Internet access mode

+ LET CAT4 Cellular network
+ Wired network
+ Wi-Fi

Strong security protection

+ Access control: firewall strategies
+ IPSec VPN encryption
+ Device access: user authorization
+ Device HTTPS for secure logins

Highly reliable design

+ Link detection mechanism, recovers from
+ VPN link detection, timely recovering networking
+ Device auto recovery
+ Embedded software watchdog

Convenient Wi-Fi network configuration

+ 802.11 b/g/n
+ Maximum bandwidth 150Mbps
+ Supports AP/STA mode
+ Wireless network security authentication

Efficient device management, easy to control

+ Device Manager cloud platform enables users to monitor and centrally manage a large number of devices on this platform, improving the efficiency of network deployment and device management and controlling devices easily and efficiently.

Concise design, cost-effective

+ Integrative installation design
+ Metal housing, IP30 protection rating
+ EMC class II
+ Cost-effective design

MODEL SELECTION GUIDE

Model	Model code: IR202-<WMNN>-<WLAN/NA>-<IO/S/NA>			
	Region (Operator)	Network Type	Band & Frequency	<WLAN/NA>: Wi-Fi
IR202-LQ20-<WLAN/NA>	China	LTE CAT4	LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 WCDMA Band 1/5/8 GSM 900/1800MHz	WLAN: Wi-Fi <NA>: no Wi-Fi
IR202-FQ58-<WLAN/NA>	Europe & APAC	LTE CAT4	LTE-FDD Band 1/3/7/8/20/28A LTE-TDD Band 38/40/41 WCDMA Band 1/8 GSM 900/1800MHz	WLAN: Wi-Fi <NA>: no Wi-Fi

InGateway902 Series

High-performance IoT Edge Gateway

The IG902 IoT edge computing gateway provides uninterrupted Internet access for machines over ubiquitous 3G/4G wireless networks and multiple broadband services. With powerful edge computing capabilities, comprehensive security protection, and multiple wireless services, the InGateway902 supports networking of up to tens of thousands of devices, providing high-speed data channel in the true sense of IoT.

Featuring powerful edge computing capabilities, the InGateway902 helps customers quickly pre-process data on the IoT edge, significantly reduce data flow between field sites and data centers, relieving the load in the cloud.

The IG902 edge computing gateway will help customers to optimize network structure and enable more secure, responsive, and intelligent on-site services.

PRODUCT ADVANTAGES

Uninterrupted Internet access anywhere

+ Fast Ethernet, multiple Ethernet and Wi-Fi access
+ Worldwide 3G/4G LTE networks
+ LTE CAT1, CAT4 and CAT6 networks

Multiple data visualization solutions

+ Supports Modbus TCP, Modbus RTU, ISO on TCP, PPI, EtherNet/IP, OPCUA Client, Mitsubishi MC 3C/3E, Mitsubishi MC 3C Over TCP, Mitsubishi (Serial port), FINS UDP, Hostlink
+ Supports Modbus TCP Slave, OPC UA Server, IEC 104 Server
+ Transparent transmission of TCP/UDP
+ Flexible edge data processing

Fully industrial-grade interfaces

+ Supports industrial serial ports
+ Supports 8-channel industrial I/O
+ Supports GPS positioning

Powerful edge computing

+ ARM Cortex-A8 CPU, 1GHz RAM

Major IoT clouds ready

+ Microsoft Azure IoT Edge certified
+ AWS Greengrass qualified
+ Schneider EcoStruxure
+ Continuous development of the industrial cloud ecosystem

Customizable with development platform

+ Python development platform for custom development of applications
+ Software Development Kit (SDK)
+ Provides standardized APP
+ Azure IoT Edge
+ AWS IoT Greengrass

MODEL SELECTION GUIDE

Model	Model code: IG902-<B/H>-<WMNN>-<IO/NA>(H version only)-<W/NA>-<G/NA>						
	<B/H>: Version	Region (Operator)	<WMNN>: Cellular Type & Module		<IO/NA>: I/O Interface (H version only)	<W/NA>: WLAN	<G/NA>: GPS
			UE Category	Band & Frequency			
IG902-B-LQA8	Basic	China	LTE CAT4	LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 TD-SCDMA Band 34/39 WCDMA Band 1/8 CDMA BC0 GSM 900/1800MHz	No	No	No
IG902-B-LQA8-W-G	Basic	China	LTE CAT4	LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 TD-SCDMA Band 34/39 WCDMA Band 1/8 CDMA BC0 GSM 900/1800MHz	No	Wi-Fi	GPS
IG902-H-LQA8-IO	High-config	China	LTE CAT4	LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 TD-SCDMA Band 34/39 WCDMA Band 1/8 CDMA BC0 GSM 900/1800MHz	4*DI, 4*DO	No	No
IG902-H-LQA8-IO-W-G	High-config	China	LTE CAT4	LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 TD-SCDMA Band 34/39 WCDMA Band 1/8 CDMA BC0 GSM 900/1800MHz	4*DI, 4*DO	Wi-Fi	GPS
IG902-B-FQ58	Basic	Europe & APAC	LTE CAT4	LTE-FDD Band 1/2/3/5/7/8/20 LTE-TDD Band 38/40/41 UMTS(DC-HSPA+) Band1/5/8 GSM Band 3/8	No	No	No
IG902-B-FQ58-W-G	Basic	Europe & APAC	LTE CAT4	LTE-FDD Band 1/2/3/5/7/8/20 LTE-TDD Band 38/40/41 UMTS(DC-HSPA+) Band1/5/8 GSM Band 3/8	No	Wi-Fi	GPS
IG902-H-FQ58-IO	High-config	Europe & APAC	LTE CAT4	LTE-FDD Band 1/2/3/5/7/8/20 LTE-TDD Band 38/40/41 UMTS(DC-HSPA+) Band1/5/8 GSM Band 3/8	4*DI, 4*DO	No	No
IG902-H-FQ58-IO-W-G	High-config	Europe & APAC	LTE CAT4	LTE-FDD Band 1/2/3/5/7/8/20 LTE-TDD Band 38/40/41 UMTS(DC-HSPA+) Band1/5/8 GSM Band 3/8	4*DI, 4*DO	Wi-Fi	GPS
IG902-B-FS39	Basic	North America (Verizon, AT&T)	LTE CAT6	LTE-FDD Band 2/4/5/13/17 UMTS(DC-HSPA+) Band 2/5 EDGE/GPRS/GSM 850/900/1800/1900MHz	No	No	No
IG902-B-FS39-W-G	Basic	North America (Verizon, AT&T)	LTE CAT6	LTE-FDD Band 2/4/5/13/17 UMTS(DC-HSPA+) Band 2/5 EDGE/GPRS/GSM 850/900/1800/1900MHz	No	Wi-Fi	GPS
IG902-H-FS39-IO	High-config	North America (Verizon, AT&T)	LTE CAT6	LTE-FDD Band 2/4/5/13/17 UMTS(DC-HSPA+) Band 2/5 EDGE/GPRS/GSM 850/900/1800/1900MHz	4*DI, 4*DO	No	No
IG902-H-FS39-IO-W-G	High-config	North America (Verizon, AT&T)	LTE CAT6	LTE-FDD Band 2/4/5/13/17 UMTS(DC-HSPA+) Band 2/5 EDGE/GPRS/GSM 850/900/1800/1900MHz	4*DI, 4*DO	Wi-Fi	GPS
IG902-B-FQ78	Basic	Australia & Latin America	LTE CAT4	LTE-FDD Band 1/2/3/4/5/7/8/28 LTE-TDD B40 UMTS(DC-HSPA+) Band1/2/5/8 EDGE/GPRS/GSM 850/900/1800/1900MHz	No	No	No
IG902-B-FQ78-W-G	Basic	Australia & Latin America	LTE CAT4	LTE-FDD Band 1/2/3/4/5/7/8/28 LTE-TDD B40 UMTS(DC-HSPA+) Band1/2/5/8 EDGE/GPRS/GSM 850/900/1800/1900MHz	No	Wi-Fi	GPS
IG902-H-FQ78-IO	High-config	Australia & Latin America	LTE CAT4	LTE-FDD Band 1/2/3/4/5/7/8/28 LTE-TDD B40 UMTS(DC-HSPA+) Band1/2/5/8 EDGE/GPRS/GSM 850/900/1800/1900MHz	4*DI, 4*DO	No	No

Model	Model code: IG902-<B/H>-<WMNN>-<IO/NA>(H version only)-<W/NA>-<G/NA>						
	<B/H>: Version	Region (Operator)	<WMNN>: Cellular Type & Module		<IO/NA>: I/O Interface (H version only)	<W/NA>: WLAN	<G/NA>: GPS
			UE Category	Band & Frequency			
IG902-H-FQ78-IO-W-G	High-config	Australia & Latin America	LTE CAT4	LTE-FDD Band 1/2/3/4/5/7/8/28 LTE-TDD B40 UMTS(DC-HSPA+) Band1/2/5/8 EDGE/GPRS/GSM 850/900/1800/1900MHz	4*DI, 4*DO	Wi-Fi	GPS
IG902-H-FQ78-IO-W-G	High-config	Australia & Latin America	LTE CAT4	LTE-FDD Band 1/2/3/4/5/7/8/28 LTE-TDD B40 UMTS(DC-HSPA+) Band1/2/5/8 EDGE/GPRS/GSM 850/900/1800/1900MHz	4*DI, 4*DO	Wi-Fi	GPS
IG902-B-FQ88	Basic	Japan	LTE CAT4	LTE FDD Band 1/3/8/18/19/26 LTE TDD Band 41 WCDMA Band 1/6/8/19	No	No	No
IG902-B-FQ88-W-G	Basic	Japan	LTE CAT4	LTE FDD Band 1/3/8/18/19/26 LTE TDD Band 41 WCDMA Band 1/6/8/19	No	Wi-Fi	GPS
IG902-H-FQ88-IO	High-config	Japan	LTE CAT4	LTE FDD Band 1/3/8/18/19/26 LTE TDD Band 41 WCDMA Band 1/6/8/19	4*DI, 4*DO	No	No
IG902-H-FQ88-IO-W-G	High-config	Japan	LTE CAT4	LTE FDD Band 1/3/8/18/19/26 LTE TDD Band 41 WCDMA Band 1/6/8/19	4*DI, 4*DO	Wi-Fi	GPS
IG902-B-FQ98	Basic	South Korea	LTE CAT4	LTE FDD Band 1/3/5/7/8/20 LTE TDD Band 38/40/41 WCDMA Band 1/5/8 EDGE/GSM Band 3/8	No	No	No
IG902-B-FQ98-W-G	Basic	South Korea	LTE CAT4	LTE FDD Band 1/3/5/7/8/20 LTE TDD Band 38/40/41 WCDMA Band 1/5/8 EDGE/GSM Band 3/8	No	Wi-Fi	GPS
IG902-H-FQ98-IO	High-config	South Korea	LTE CAT4	LTE FDD Band 1/3/5/7/8/20 LTE TDD Band 38/40/41 WCDMA Band 1/5/8 EDGE/GSM Band 3/8	4*DI, 4*DO	No	No
IG902-H-FQ98-IO-W-G	High-config	South Korea	LTE CAT4	LTE FDD Band 1/3/5/7/8/20 LTE TDD Band 38/40/41 WCDMA Band 1/5/8 EDGE/GSM Band 3/8	4*DI, 4*DO	Wi-Fi	GPS
IG902-B-EN00	Basic	Global	-	No 3G/4G communication module	No	No	No
IG902-B-EN00-W-G	Basic	Global	-	No 3G/4G communication module	No	Wi-Fi	GPS
IG902-H-EN00-IO	High-config	Global	-	No 3G/4G communication module	4*DI, 4*DO	No	No
IG902-H-EN00-IO-W-G	High-config	Global	-	No 3G/4G communication module	4*DI, 4*DO	Wi-Fi	GPS
example	IG902-H-FQ58-IO-W-G: IG902 high-config. version for Europe and Asia-Pacific LTE CAT4 networks, available with I/O interfaces, Wi-Fi and GPS						

InGateway502 Series

IoT Edge Gateway

The InGateway502 is a series of IoT edge gateway that features quick and easy configuration for edge-to-cloud data acquisition and extensive interfaces. It provides uninterrupted Internet access for industrial devices over globally ubiquitous 3G/4G cellular networks and broadband services. It supports networking of up to tens of thousands of devices, providing fast and reliable communications and comprehensive security measures for a wide range of industrial scenarios.

Featuring powerful edge computing capabilities, the InGateway502 helps customers quickly pre-process data on the IoT edge, significantly reduce data flow between field sites and data centers, relieving the load in the cloud.

The product also features easy customization. Python programmable, it enables customers to program their own applications as needed.

PRODUCT ADVANTAGES

Highly reliable communications

+ Multi-layer auto link detection mechanism, ensuring continuous data transmission
+ Embedded watchdog to maintain high device availability

Edge computing capabilities

+ ARM Cortex-A8 processor, 512MB RAM, 8GB eMMC
+ Quickly responds to and pre-processes data on the edge, relieving load in the cloud

Multiple data visualization solutions

+ Supports Modbus TCP, Modbus RTU, ISO on TCP, PPI, EtherNet/IP, OPCUA Client, Mitsubishi MC 3C/3E,Mitsubishi MC 3C Over TCP, Mitsubishi (Serial port), FINS UDP, Hostlink
+ Supports Modbus TCP Slave, OPCUA Server, IEC 104 Server
+ Link Edge, AWS IoT clouds, MS Azure and other cloud platforms (eg. MQTT) supported
+ Transparent transmission of TCP/UDP
+ Flexible edge data processing

Python programmable

+ Custom python platform for developers
+ Integrated SDK
+ Provides standardized APP

Easy and flexible to manage

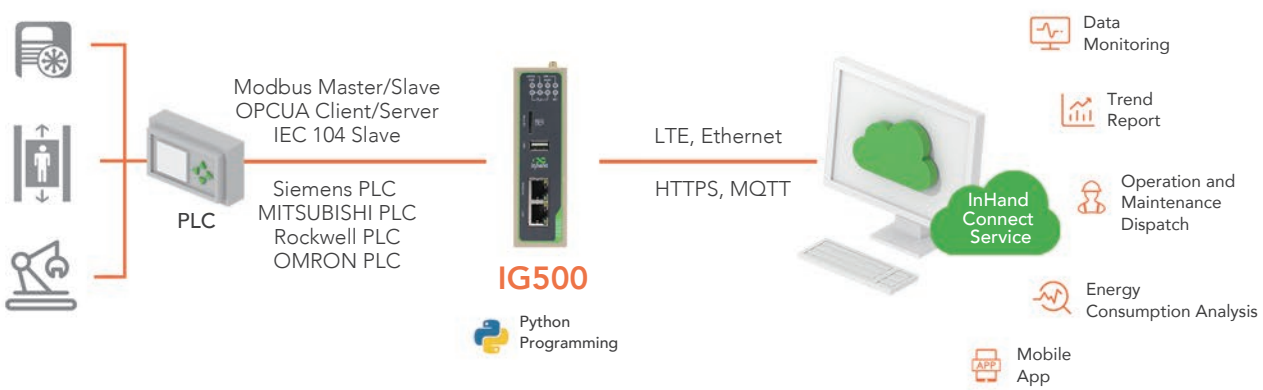
+ WEB configuration method supported
+ SNMP configuration protocol supported

Fully industrial-grade

+ Operating temperatures: -20°C ~ +70 °C
+ 12 ~ 48VDC wide voltage inputs
+ IP30 protection rating

Comprehensive security features

+ Multi-user management certified
+ OpenVPN supported
+ Supports remote management on the platform



MODEL SELECTION GUIDE

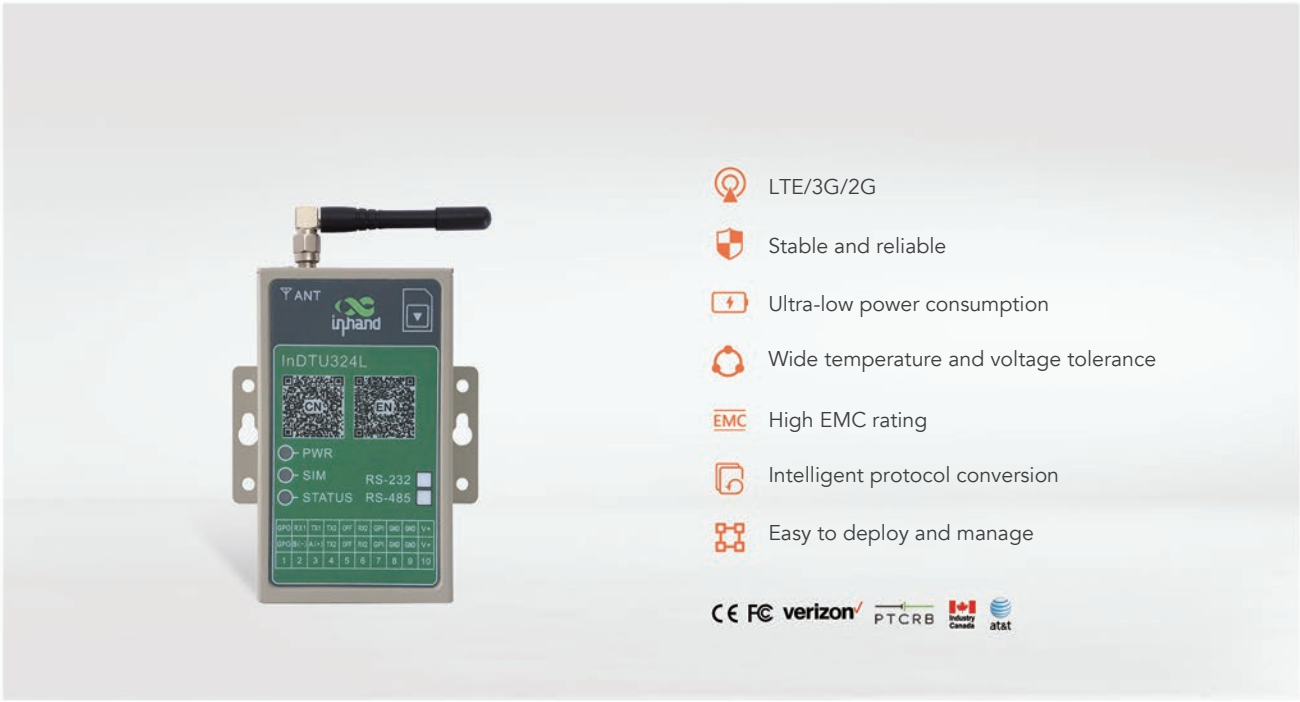
Model	Model code: IG502-<WMNN>-<W/NA>-<G/NA>							
	Region (Operator)	<WMNN>: Cellular Type & Module		Ethernet Port	Serial Port	<IO/NA>: I/O	<W/NA>: WLAN&BLE	<G/NA>: GPS
		UE Category	Band & Frequency					
IG502-LQA3	China	LTE CAT1	LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 GSM 900/1800/MHz	2*10/100 Mbps	1*RS232, 1*RS485	No	No	No
IG502-LQA3-IO	China	LTE CAT1	LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 GSM 900/1800/MHz	2*10/100 Mbps	1*RS232, 1*RS485	4*DI, 4*DO	No	No
IG502-LQA3-W-G	China	LTE CAT1	LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 GSM 900/1800/MHz	2*10/100 Mbps	1*RS232, 1*RS485	No	Wi-Fi & BLE	GPS
IG502-LQA3-IO-W-G	China	LTE CAT1	LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 GSM 900/1800/MHz	2*10/100 Mbps	1*RS232, 1*RS485	4*DI, 4*DO	Wi-Fi & BLE	GPS
IG502-FQ33	North America	LTE CAT1	LTE-FDD Band 2/4/5/12/13/25/26 WCDMA Band 2/4/5	2*10/100 Mbps	1*RS232, 1*RS485	No	No	No
IG502-FQ33-IO	North America	LTE CAT1	LTE-FDD Band 2/4/5/12/13/25/26 WCDMA Band 2/4/5	2*10/100 Mbps	1*RS232, 1*RS485	4*DI, 4*DO	No	No
IG502-FQ33-W-G	North America	LTE CAT1	LTE-FDD Band 2/4/5/12/13/25/26 WCDMA Band 2/4/5	2*10/100 Mbps	1*RS232, 1*RS485	No	Wi-Fi & BLE	GPS
IG502-FQ33-IO-W-G	North America	LTE CAT1	LTE-FDD Band 2/4/5/12/13/25/26 WCDMA Band 2/4/5	2*10/100 Mbps	1*RS232, 1*RS485	4*DI, 4*DO	Wi-Fi & BLE	GPS
IG502-FQ58	Europe & APAC	LTE CAT4	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM Band 3/8	2*10/100 Mbps	1*RS232, 1*RS485	No	No	No
IG502-FQ58-IO	Europe & APAC	LTE CAT4	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM Band 3/8	2*10/100 Mbps	1*RS232, 1*RS485	4*DI, 4*DO	No	No
IG502-FQ58-W-G	Europe & APAC	LTE CAT4	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM Band 3/8	2*10/100 Mbps	1*RS232, 1*RS485	No	Wi-Fi & BLE	GPS
IG502-FQ58-IO-W-G	Europe & APAC	LTE CAT4	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM Band 3/8	2*10/100 Mbps	1*RS232, 1*RS485	4*DI, 4*DO	Wi-Fi & BLE	GPS
IG502-FQ58-TH	Thailand	LTE CAT4	LTE-FDD Band 1/3/7/8/20 WCDMA Band 1/8 GSM Band 3/8	2*10/100 Mbps	1*RS232, 1*RS485	No	No	No
IG502-FQ58-TH-IO	Thailand	LTE CAT4	LTE-FDD Band 1/3/7/8/20 WCDMA Band 1/8 GSM Band 3/8	2*10/100 Mbps	1*RS232, 1*RS485	4*DI, 4*DO	No	No
IG502-FQ58-W-G-TH	Thailand	LTE CAT4	LTE-FDD Band 1/3/7/8/20 WCDMA Band 1/8 GSM Band 3/8	2*10/100 Mbps	1*RS232, 1*RS485	No	Wi-Fi & BLE	GPS
IG502-FQ58-IO-W-G-TH	Thailand	LTE CAT4	LTE-FDD Band 1/3/7/8/20 WCDMA Band 1/8 GSM Band 3/8	2*10/100 Mbps	1*RS232, 1*RS485	4*DI, 4*DO	Wi-Fi & BLE	GPS
IG502-FQ78	Australia & Latin America	LTE CAT4	LTE-FDD Band 1/2/3/4/5/7/8/28 LTE-TDD Band 40 UMTS(DC-HSPA+) Band1/2/5/8 EDGE/GPRS/GSM 850/900/1800/1900MHz	2*10/100 Mbps	1*RS232, 1*RS485	No	No	No

MODEL SELECTION GUIDE

Model	Model code: IG502-<WMNN>-<W/NA>-<G/NA>							
	Region (Operator)	<WMNN>: Cellular Type & Module		Ethernet Port	Serial Port	<IO/NA>: I/O	<W/NA>: WLAN&BLE	<G/NA>: GPS
		UE Category	Band & Frequency					
IG502-FQ78-IO	Australia & Latin America	LTE CAT4	LTE-FDD Band 1/2/3/4/5/7/8/28 LTE-TDD Band 40 UMTS(DC-HSPA+) Band1/2/5/8 EDGE/GPRS/GSM 850/900/1800/1900MHz	2*10/100 Mbps	1*RS232, 1*RS485	4*DI, 4*DO	No	No
IG502-FQ78-W-G	Australia & Latin America	LTE CAT4	LTE-FDD Band 1/2/3/4/5/7/8/28 LTE-TDD Band 40 UMTS(DC-HSPA+) Band1/2/5/8 EDGE/GPRS/GSM 850/900/1800/1900MHz	2*10/100 Mbps	1*RS232, 1*RS485	No	Wi-Fi & BLE	GPS
IG502-FQ78-IO-W-G	Australia & Latin America	LTE CAT4	LTE-FDD Band 1/2/3/4/5/7/8/28 LTE-TDD Band 40 UMTS(DC-HSPA+) Band1/2/5/8 EDGE/GPRS/GSM 850/900/1800/1900MHz	2*10/100 Mbps	1*RS232, 1*RS485	4*DI, 4*DO	Wi-Fi & BLE	GPS
IG502-EN00	Global	-	No module	2*10/100 Mbps	1*RS232, 1*RS485	No	No	No
IG502-EN00-IO	Global	-	No module	2*10/100 Mbps	1*RS232, 1*RS485	4*DI, 4*DO	No	No
IG502-EN00-W-G	Global	-	No module	2*10/100 Mbps	1*RS232, 1*RS485	No	Wi-Fi & BLE	GPS
IG502-EN00-IO-W-G	Global	-	No module	2*10/100 Mbps	1*RS232, 1*RS485	4*DI, 4*DO	Wi-Fi & BLE	GPS
Example:	IG502-FQ58-IO-W-G: IG502 model for Europe and Asia-Pacific LTE CAT4 networks, available with I/O interfaces, Wi-Fi and GPS.							

InDTU324 Series

Industrial Cellular Modem



The InDTU324 series industrial cellular modem uses cellular network as the bearer network to provide wireless data transmission channel over TCP/ IP. It functionally completes wireless data communications between remote control station serial devices and the central control system, to enable remote control of industrial field sites.

The InDTU324 series is small in size, operates between -40℃ ~ 70℃ and supports +5 ~ 35V DC wide voltage input, can provide stable data transmission channels for unattended industrial sites.

The product supports various configuration and management methods including PC configuration tool, RTool remote management tool and InHand Device Manager cloud, simplifying on-site deployment and maintenance work, greatly improving deployment efficiency and reducing overall system operation cost, so that customers can really experience the convenience of wireless communication.

PRODUCT ADVANTAGES

Industrial design

+ Small form factor
+ Wide operating temperature: -40°C~70°C
+ Wide voltage input: 5~35VDC
+ Metal housing, IP30 protection
+ Compact-sized, easy to fit and integrate
+ CE, FCC certified

Easy and flexible to manage

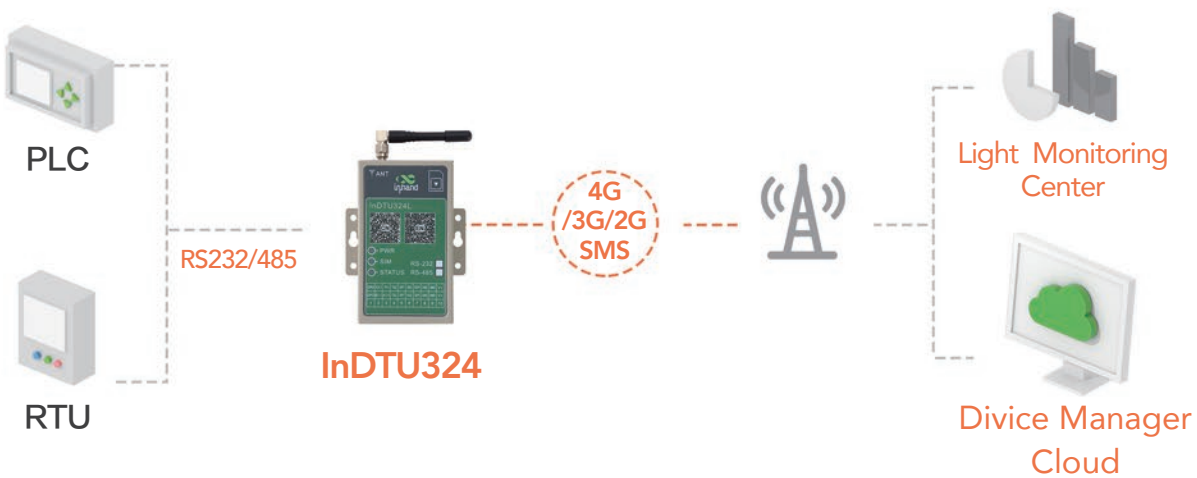
+ Supports configuration software login via local serial port
+ Supports RTOOL remote configuration over TCP/IP
+ Supports remote batch management via InHand Device Manager cloud
+ Supports SMS configuration

Highly-reliable wireless communications

+ Self-recovery: embedded watchdog, self recover from faults, ensuring normal operation of the device
+ Link redundancy: SMS and 4G/3G/GPRS link mutual backup to ensure continuous data transmission
+ Link detection: multi-layer link detection mechanisms including PPP layer heartbeat, ICMP detection, TCP Keepalive and application layer heartbeat, keeping wireless connection "always on"

Rich functions for smart solutions

+ Modbus RTU/Modbus TCP protocol conversion for industrial SCADA systems and field devices
+ Supports IEC101/IEC104 conversion (coming soon)
+ Supports transparent TCP/UDP protocol
+ Supports InHand DC protocol
+ Supports user-defined TCP/UDP hearbeat and login data
+ Supports multi-center, 1-5 centers



MODEL SELECTION GUIDE

Model	Model code: InDTU324<WMNN>-<232/485>-<A/NA>					
	Region (Operator)	Network Type	Band & Frequency	<S>: Serial Port Type	<A/NA>: AT/DATA	<D>: SIM Card
InDTU324LQ25-232	Europe & APAC	LTE CAT4	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM Band 3/8	RS232	DATA MODE	Single
InDTU324LQ25-232-A	Europe & APAC	LTE CAT4	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM Band 3/8	RS232	AT MODE	Single
InDTU324LQ25-485	Europe & APAC	LTE CAT4	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM Band 3/8	RS485	DATA MODE	Single
InDTU324LQ25-485-A	Europe & APAC	LTE CAT4	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM Band 3/8	RS485	AT MODE	Single
InDTU324NQ96-232	Europe & APAC	CAT M1/CAT NB1/EGPRS	LTE-FDD Band 1/2/3/4/5/8/12/13/18/19/20/26/28 LTE-TDD Band 39 (for CAT M1 only) EGPRS 850/900/1800/1900MHz	RS232	DATA MODE	Single
InDTU324NQ96-232-A	Europe & APAC	CAT M1/CAT NB1/EGPRS	LTE-FDD Band 1/2/3/4/5/8/12/13/18/19/20/26/28 LTE-TDD Band 39 (for CAT M1 only) EGPRS 850/900/1800/1900MHz	RS232	AT MODE	Single
InDTU324NQ96-485	Europe & APAC	CAT M1/CAT NB1/EGPRS	LTE-FDD Band 1/2/3/4/5/8/12/13/18/19/20/26/28 LTE-TDD Band 39 (for CAT M1 only) EGPRS 850/900/1800/1900MHz	RS485	DATA MODE	Single
InDTU324NQ96-485-A	Europe & APAC	CAT M1/CAT NB1/EGPRS	LTE-FDD Band 1/2/3/4/5/8/12/13/18/19/20/26/28 LTE-TDD Band 39 (for CAT M1 only) EGPRS 850/900/1800/1900MHz	RS485	AT MODE	Single
InDTU324-FQ78-232	Latin America	LTE CAT4	LTE-FDD Band 1/2/3/4/5/7/8/28 LTE-TDD Band 40 WCDMA Band 1/2/4/5/8 GSM/EDGE Band 2/3/5/8	RS232	DATA MODE	Single
InDTU324-FQ78-485	Latin America	LTE CAT4	LTE-FDD Band 1/2/3/4/5/7/8/28 LTE-TDD Band 40 WCDMA Band 1/2/4/5/8 GSM/EDGE Band 2/3/5/8	RS485	DATA MODE	Single

InVehicle G810 Series

All-in-one Vehicle Gateway for Public Transport

The InVehicle G810 is a series of high-performance cellular gateway that delivers high-speed and secure network access customers in public transportation.

The VG810 series offers 5G and high-speed 4G network access, Wi-Fi 5 and Gigabit Ethernet. It is available with CAN Bus interfaces for real-time collection of vehicle diagnostic data, as well as extensive interfaces for a wide range of devices on board. The gateway is equipped with powerful edge computing capabilities. With support for Python and Docker, it allows users to program their own applications based on their needs. It also supports integration to major IoT clouds such as Microsoft Azure and AWS IoT.

The VG810, which is ITxPT compliant, comes with two models. The one for road transport, which is built with FAKRA RF connectors and M12 connectors for Ethernet ports, is designed for buses and coaches, while the model for railway applications, equipped with TNC RF connectors and M12 connectors, is a perfect match for trams, metros, light rail and trains.

PRODUCT ADVANTAGES

High-speed in-vehicle networks

+ Supports 5G NSA/SA eMBB, uRLLC
+ Available with LTE CAT6/CAT4
+ Dual-concurrent Gigabit Wi-Fi
+ Gigabit Ethernet

Comprehensive security mechanisms

+ Encryption tunnels via VPN
+ Remote centralized user verification
+ Access control
+ HTTPS/SSH secure management protocols
+ Firewalls

Real-time monitoring of vehicle status

+ Integrated dual CAN Bus collect vehicle diagnostic data and upload to the platform in real time
+ Real-time monitoring of dangerous driving behavior

Developer features

+ Open platform for users to program their own applications
+ Supports Python 3.0 + Docker

Global satellite positioning (GNSS)

+ High precision, high sensitivity global satellite positioning system
+ Real-time vehicle location tracking
+ Inertial navigation
+ Supports GPS, BeiDou, Galileo and GLONASS

Access to fleet management platform

+ Fleet management functions including task distribution, routing, vehicle tracking, real-time update, geofencing, etc.
+ Centralized management of vehicle gateways

Multiple interfaces for communications

+ Multiple I/Os
+ RS232, RS485
+ USB 3.0
+ FARKA/TNC connectors
+ Vehicle diagnostic interfaces

Purposely built for vehicles

+ Industrial-grade processor, communication modules and electronic components
+ IP40 protection rating
+ Compliant with vehicle standards that resist pressure, vibration, humidity, heat and low temperature
+ Compliant with technical standards of vehicle electronic devices

MODEL SELECTION GUIDE

Model	Model code: VG814-<WMNN>-<W>-<G>-<R/V>							
	Region	<WMNN>: Cellular Type & Module		CAN bus	Antenna Connector	<W>: WLAN	<G/NA>: GNSS	<R/V>: Railway/ Road
		UE Category	Band & Frequency					
VG814-NRQ0-W-G-R	Global (excl. North America)		G NR NSA n38*/n41/n71/n77/n78/n79 5G NR SA n1/n2/n3/n5/n7/n8/n12/n20/n25/n28*/ n38/n40/n41/n48/n66/n71/n77/n78/n79 LTE-FDD Band 1/2/3/4/5/7/8/12/13/14 /17/18/19/20/25/26/28/29/30/32/66/71 LTE-TDD Band 34/38/39/40/41/42/43/ 48 WCDMA Band 1/2/3/4/5/8/19	2	TNC	Wi-Fi 5	√	For Railway
VG814-FS59-W-G-R	Europe Africa APAC Oceania	LTE CAT6	LTE-FDD Band 1/3/5/7/8/18/19/20/26/28A/28B LTE-TDD Band 38/39/40/41 UMTS/HSPA+ Band1/3/5/6/8 TD-SCDMA Band34/39 GSM/GPRS/EDGE 900/1800MHz	2	TNC	Wi-Fi 5	√	For Railway
VG814-NRQ0-W-G-V	Global (excl. North America)		5G NR NSA n38*/n41/n71/n77/n78/n79 5G NR SA n1/n2/n3/n5/n7/n8/n12/n20/n25/n28*/ n38/n40/n41/n48/n66/n71/n77/n78/n79 LTE-FDD Band 1/2/3/4/5/7/8/12/13/14 /17/18/19/20/25/26/28/29/30/32/66/71 LTE-TDD Band 34/38/39/40/41/42/43/48 WCDMA Band 1/2/3/4/5/8/19	2	FAKRA	Wi-Fi 5	√	For Road
VG814-2FS59-2W-G-V	Europe Africa APAC Oceania	2*LTE CAT6	LTE-FDD Band 1/3/5/7/8/18/19/20/26/28A/28B LTE-TDD Band 38/39/40/41 UMTS/HSPA+Band1/3/5/6/8 TD-SCDMA Band 34/39 GSM/GPRS/EDGE 900/1800MHz	2	FAKRA	2*Wi-Fi 5	√	For Road
VG814-FS59-W-G-V	Europe Africa APAC Oceania		LTE-FDD Band 2/4/5/12/13/17/29 UMTS/HSPA+ Band 2/4/5 GSM/GPRS/EDGE 850/900/1800/1900MHz	2	FAKRA	Wi-Fi 5	√	For Road
Example:	VG814-FS59-W-G-R Vehicle Gateway VG814 Wi-Fi 5, 4GE-M12, 1FMS, EXT:2*RS232, 1*RS485, 6*DO 1*CAN2.0B AUX :11*DI 1*DO, ITxPT, TNC Antenna Connector							

InVehicle G710 Series

Smart Vehicle Gateway

The InVehicle G710 is a series of high-performance vehicle gateways that provides high-speed and highly-reliable network access for data demanding mobile scenarios, such as first responder operations, school buses, special-purpose vehicles, engineering vehicles, logistics and hazardous materials transport. Working with a cloud-based management platform, it allows efficient operations including logistics management, asset tracking, mobile officing and safety surveillance.

The transport grade gateway provides in-vehicle network access, including high-speed 5G/4G network to allow fast and secure communications for vehicles and vehicle-mounted devices. It supports CAN Bus for real-time collection of vehicle diagnostic data, and advanced satellite navigation for accurate vehicle positioning. Through a remote analysis platform, it supports driving behaviors monitoring to enforce safety on the road.

The open development platform makes it easy for users to program their own applications. Powerful edge computing capabilities facilitate quick implementation of custom applications. With support for Azure IoT edge, Wialon, Smart Fleet and FlexAPI that works for third-party platforms, the product is designed for an open IoT ecosystem with more choices for developers.

PRODUCT ADVANTAGES

High-speed network on-the-go

+ High-speed 4G LTE, compatible with 5G
+ Dual-concurrent Gigabit Wi-Fi, Gigabit Ethernet
+ Supports secure VPN encrypted transmission

Purposely built for vehicles

+ Transport grade chip, communication module, and electronic components
+ Complies with standards for vehicle-mounted electronic devices on resistance to shock and vibration, high temperatures and humidity
+ IP64 protection
+ Stable power supply

Developer features

+ Supports Python and Docker
+ Integrated development environment (IDE) and software development kit (SDK)
+ Open FlexAPI over MQTT/HTTP/TCP for system integration
+ Supports MS Azure IoT Edge, AWS IoT, etc.

In-vehicle OTA upgrade service

+ Quickly repairs system defects
+ Quick and easy product upgrade

Global satellite positioning (GNSS)

+ Supports GPS, GLONASS, GALILEO and BeiDou satellite systems
+ Inertial navigation

Powerful edge computing

+ ARM Cortex-A7 (quad-core) processor
+ Up to 1GB DDR3 RAM
+ 8GB eMMC

Rich expansion

+ Rich AI/DI/DO interfaces to connect a wide range of sensors
+ Industrial-grade RS232/RS485 serial port, built-in USB Type B port
+ Integrated OBD-II/J1939 vehicle diagnostic interface
+ Standard CAN Bus
+ Built-in 3D accelerometer and gyroscope for driving behavior monitoring

MODEL SELECTION GUIDE

Model	Model code: VG710-<H/L/NA>-<WMNN>							
	Region	<WMNN>: Cellular Type & Module		RAM	CAN bus	GNSS	Wi-Fi	Bluetooth
		UE Category	Band & Frequency					
VG710-H-NRQ0	Global (excl. North America)		5G NR NSA: n38*/n41/n71/n77/n78/n79 5G NR SA: n1/n2/n3/n5/n7/n8/n12/n20/n25/n28*/n38/n40/n41/n48/n66/n71/ n77/n78/n79 LTE-FDD Band 1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/29/30/32/66/71 LTE-TDD Band 34/38/39/40/41/42/43/48 WCDMA: B1/B2/B3/B4/B5/B8/B19	1GB	√	√	√	√
VG710-H-NRQ3	North America		5G NR NSA: n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40/n41/n48*/n66/n71/ n77/n78/n79 5G NR SA: n1/n2/n3/n5n7/n8/n12/n20/n25/n28/n38/n40/n41/n48*/n66/n71/ n77/n78/n79 LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B9/B12(B17)/B13/B14/B18/B19/B20/B25/ B26/B28/B29/B30/B32/B66/B71 LTE-TDD: B34/B38/B39/B40/B41/B42/B43/B48 LTE Category: DL CAT20/UL CAT18 LAA: B46 WCDMA Bands: B1/B2/B3/B4/B5/B6/B8/B19	1GB	√	√	√	√
VG710-L-FS39	NorthAmerica LatinAmerica CaribbeanCoast	LTE CAT6	LTE-FDD Band 2/4/5/12/13/17/29 UMTS/HSPA+ Band2/4/5 GSM/GPRS/EDGE 850/900/1800/1900MHz	1GB	√	√	√	√
VG710-L-FS59	Europe、Africa Asia、Oceania	LTE CAT6	LTE-FDD Band 1/3/5/7/8/1819/20/26/28A/28B LTE-TDD Band 38/39/40/41 UMTS/HSPA+ Band 1/3/5/6/8 TD-SCDMA Band 34/39 GSM/GPRS/EDGE 900/1800MHz	1GB	√	√	√	√
VG710-L-FQ78	LatinAmerica Australia、NewZealand	LTE CAT4	LTE-FDD Band 1/2/3/4/5/7/8/28 LTE-TDD Band 40 WCDMA Band 1/2/5/8 GSM/EDGE Band 2/3/5/8	1GB	√	√	√	√
VG710-L-LQ20	China	LTE CAT4	LTE-FDD Band 1/3/5/8 LTE-TDD Band 38/39/40/41 TD-SCDMA Band 34/39 UMTS (DC-HSPA+) Band 1/8 EVDO800MHzCDMA-1x800MHz EDGE/GPRS/GSM 850/900/1800/1900MHz	1GB	√	√	√	√
VG710-FS39	NorthAmerica LatinAmerica CaribbeanCoast	LTE CAT6	LTE-FDD Band 2/4/5/12/13/17/29 UMTS/HSPA+ Band 2/4/5 GSM/GPRS/EDGE 850/900/1800/1900MHz	512MB	√	√	√	√
VG710-FS59	Europe、Africa Asia、Oceania China	LTE CAT6	LTE-FDD Band 1/3/5/7/8/18/19/20/26/28A/28B LTE-TDD Band 38/39/40/41 UMTS/HSPA+ Band 1/3/5/6/8 TD-SCDMA Band 34/39 GSM/GPRS/EDGE 900/1800MHz	512MB	√	√	√	√
VG710-LQ20	China	LTE CAT4	LTE-FDD Band 1/3/5/8 LTE-TDD Band 38/39/40/41 TD-SCDMA Band 34/39 UMTS (DC-HSPA+) Band1/8 EVDO800MHzCDMA-1x800MHz EDGE/GPRS/GSM 850/900/1800/1900MHz	512MB	√	√	√	√
VG710-FQ78	LatinAmerica Australia、NewZealand	LTE CAT4	LTE-FDD Band 1/2/3/4/5/7/8/28 LTE-TDD Band 40 WCDMA Band 1/2/5/8 GSM/EDGE Band 2/3/5/8	512MB	√	√	√	√
Example：	VG710-FS59 vehicle-mounted gateway, 4 Ethernet interfaces, one DB-9 RS232 serial port, RS485 serial port, MicroUSB2.0 serial port, supports DC-HSPA+ networks, supports CANBUS, GNNS global satellite positioning, WLAN dual-band Gigabit wireless LAN, and bluetooth, can be used in Europe, Asia Pacific, and China.							

Antenna	Order Code	Specifications
LTE 4G Antenna	AANT090025	LTE/GSM/CDMA/DCS/PCS/WCDMA/UMTS/HSDPA/GPRS/EDGE 824-960MHz, 1710-2700Mhz 1M RG-174 cable with SMA-J1.5 connector, dimensions: 2000±20mm
GNSS Antenna	AANT040005	GPS/GALILEO: 27±2 dB@1575.42MHz GLONASS: 27±2 dB@1602MHz, dimensions: 55.6x50.5mm
Wi-Fi Antenna (Rubber Ducky)	AANT060016	2400~2500MHz / 4900~5850MHz, peak gain 5±0.5dBi,
Wi-Fi Antenna (Antenna Adhesive)	AANT060018	2400~2500MHz / 4900~5850MHz, peak gain ≤ 3dBi, dimensions: 2000±20mm
Bluetooth Antenna (Rubber Ducky)	AANT060017	2.4GHz, peak gain ≤ 2dBi

Cable	Order Code	Specifications
Power Cable	SCAB000216	The cable has A and B ends: A is 4PIN end to connect to VG710; B is open end, suitable for field engineering projects. To perform indoor testing, a power adapter needs to be prepared separately.
20 PIN Extension Cord	SCAB000219	The cable has A and B ends: A is 20PIN end to connect to VG710; B is open end, suitable for field engineering projects and testing.
OBD-II Power Cable	SCAB000235	P1 is 20PIN; P2 is 4PIN power terminal; P3 is OBD-II male; P4 is I/O open end, suitable for engineering projects; P5 is ignition signal cable, please connect to the ignition signal of the vehicle before use. Suitable for field engineering projects.
J1939 9PIN Power Cable	SCAB000234	P1 is 20PIN; P2 is 4PIN power terminal; P3 is J1939 9PIN female; P4 is I/O open end, suitable for engineering projects; P5 is ignition signal cable, please connect to the ignition signal of the vehicle before use. Suitable for field engineering projects.
J1939 6PIN Power Cable	SCAB000233	P1 is 20PIN; P2 is 4PIN power terminal; P3 is J1939 6PIN female; P4 is I/O open end, suitable for engineering projects; P5 is ignition signal cable, please connect to the ignition signal of the vehicle before use. Suitable for field engineering projects.
20 PIN to OBD-II	SCAB000215	This cable has A, B, C and D ends: A is 20PIN female; B is OBD female; C is A duplicate but male; D is OBD male, suitable for field engineering projects and testing.

InVehicle T300 Series

Vehicle Telematics Gateway

The InVehicle T300 (also VT300) is a series of rugged and functionally capable vehicle telematics gateway. Integrating extensive interfaces, multiple diagnostic protocols and major IoT clouds, it delivers reliable vehicle data in some of the most challenging environments that involve severe cold or scorching heat, and/or water immersion, while remaining budget friendly.

Fleet managers can rely on the VT300 to track and manage fleet vehicles with accuracy and efficiency.

PRODUCT ADVANTAGES

Extensive interfaces

+ Rich I/O interfaces
+ Dual CAN Bus interfaces
+ 1-Wire
+ RS232 serial port
+ Low-consumption Bluetooth

High-precision location

+ GNSS
+ 6-axis inertial sensor

Support for major IoT clouds

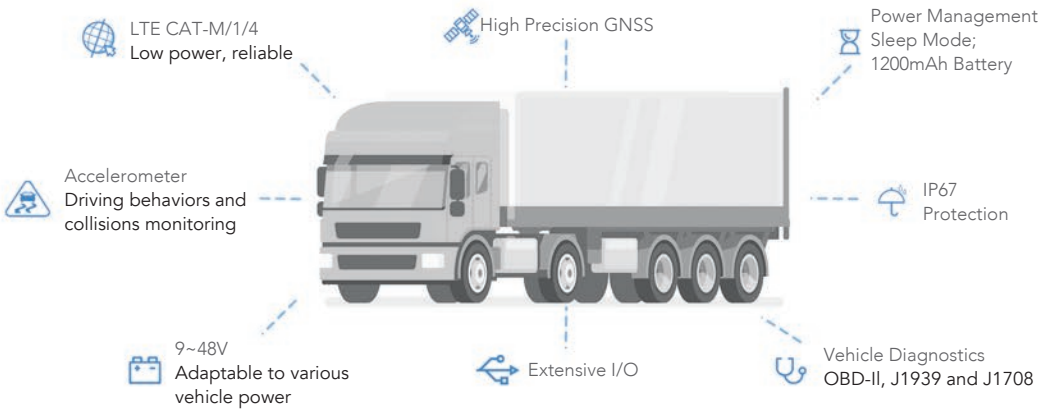
+ Azure IoT Hub, Smart Fleet, Wialon, ThingsBoard
+ Integration to private clouds via TCP, UDP and MQTT

Real-time monitoring of vehicle status

+ OBD-II, J1939, J1708
+ Supports major IoT clouds

Industrial design with ultra-low power consumption

+ 1200mAh battery, continuous power supply
+ IP67 protection rating
+ Low power consumption sleep and wakeup



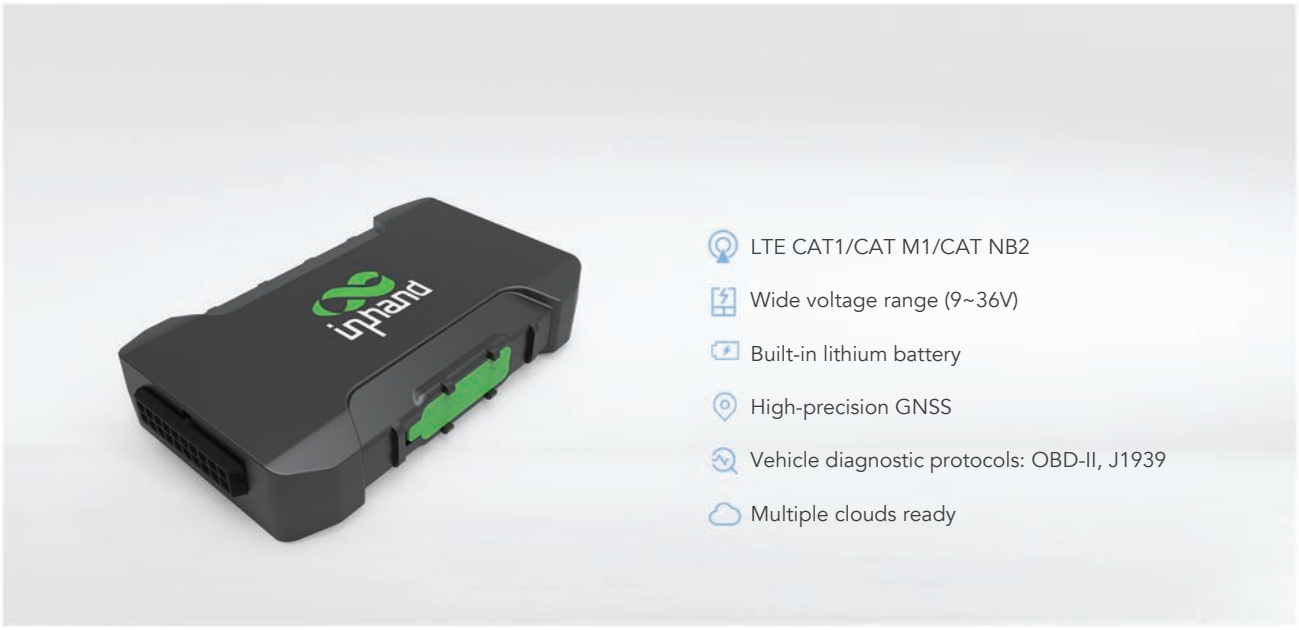
MODEL SELECTION GUIDE

Model	UE Category	Cellular Type	Serial Port/ CAN	I/O	Bluetooth	GNSS	Region
VT320-FQ33	CAT1	LTE-FDD Band 2/4/5/12/13 WCDMA Band 2/4/5	1*RS232 2*CAN J1708	4*DI 1*AI 3*DO	BLE 4.0	√	North America
VT320-FQ02	CAT M1 NB-IoT	LTE Cat M1: LTE-FDD Band 1/2/3/4/5/8/12/13/14/18/19/20/25/26/27/28/66/85 LTE Cat NB2: LTE-FDD Band 1/2/3/4/5/8/12/13/18/19/20/25/26/28/66/71/85 EGPRS 850/900/1800/1900 MHz	1*RS232 2*CAN J1708	4*DI 1*AI 3*DO	BLE 4.0	√	Global
VT310-FS31	CAT M1	LTE Band 2/4/12/13	1*RS232 2*CAN J1708	4*DI 1*AI 3*DO	BLE 4.0	√	North America
VT310-FS52	CAT1	LTE Band 1/3/8/20/28 UMTS/HSPA+ Band 1/8 GSM/GPRS/EDGE 900/1800MHz	1*RS232 2*CAN J1708	4*DI 1*AI 3*DO	BLE 4.0	√	Europe, Middle East and Africa, Asia Pacific
VT310-FQ58	CAT4	LTE FDD Band 1/3/5/8 LTE TDD Band 34/38/39/40/41 WCDMA Band 1/8 GSM 900/1800MHz	1*RS232 2*CAN J1708	4*DI 1*AI 3*DO	BLE 4.0	√	China, India
Example	V310-FS52: supports LTE CAT 1, can be used in Europe, Middle East, Africa and Asia Pacific.						

Cable	Picture	Order Code	Specifications
26 PIN All-in-one Test Cable		SCAB000229	The cable has P1 and P2 ends: P1 is 26PIN female, connected to VT310; P2 is open end, which requires a 9-48V adaptor. Suitable for engineering environments and indoor tests.
OBD-II 7 PIN All-in-one Cable		SCAB000231	The cable has P1, P2 and P3 ends: P1 is 26PIN female connected to VT310; P2 is OBD-II male connected to the vehicle; P3 is ignition signal terminal connected to the ignition on/off. Suitable for heavy trucks with OBD-II vehicle diagnostic interfaces, and powers VT310 through interfaces.
OBD-II 26 PIN All-in-one Cable		SCAB000232	This cable has P1, P2, P3 and P4 ends: P1 is 26PIN female connected to VT310; P2 is OBD-II male connected to the vehicle; P3 is open end that includes I/O, RS232-1 and 1-Wire; P4 is ignition signal terminal connected to the ignition on/off. Suitable for heavy trucks with OBD-II vehicle diagnostic interfaces, and powers VT310 through interfaces. Recommended for customers who need DI, DO, AI, 1-Wire devices or vehicle-mounted controllers.

InVehicle T200 Series

Asset Tracker



The InVehicle T200 is a series of rugged asset tracker that is capable of reliable operation in harsh environments even when the vehicle is power off. Integrating LTE, GNSS, gyroscope and inertia sensor, equipped with powerful computing capabilities and a multitask system, the VT200 precisely locates vehicle positions in real time, records mileage, monitors hard braking, acceleration, collision and other accidents, maintains transport safety, records and analyzes driving behavior. Multiple I/O interfaces remotely monitor various vehicle peripherals such as alarms, sensors, switches, ignition status, controllers, etc. With standard vehicle protocols such as OBD-II, J1939 supported, the VT200 tracks vehicle operation starts and delivers preventive maintenance.

Major fleet managers can rely on the VT200 to track and manage fleet vehicles and drivers with accuracy and

PRODUCT ADVANTAGES

High performance asset tracking gateway

+ Available with LTE CAT M1, CAT 1 and CAT 4, continuously delivers reliable connectivity while being power-saving
+ Built-in GNSS module and inertial navigation, high-precision real-time location tracking
+ Gyroscope, continuous driving behavior monitoring

Continuous and reliable operation

+ Continuous and reliable operation

Extensive interfaces, better integration with vehicles

+ Dual CAN Bus, OBD-II J1939 supported, perfect for heavy equipment
+ Extensive interfaces including serial ports, I/O, Bluetooth, 1-Wire

Multiple IoT clouds supported

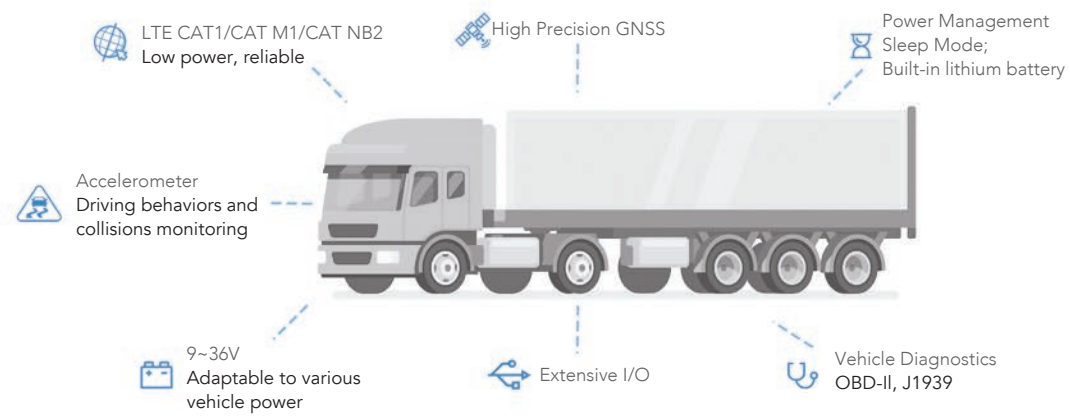
+ AWS, Azure, Wialon, ThingsBoard, MQTT cloud, customer private cloud, etc.

Purposely designed for vehicles

+ Wide voltage range: 9~36V
+ Built-in lithium battery, continues working when machine turned off
+ Operating temperature: 0~45°C (connected to battery), -20~60°C (connected to main power)

Easy for installation

+ Built-in cellular and GPS antennas, easy for installation and deployment on the road



MODEL SELECTION GUIDE

Model	UE Category	Band & Frequency	Region
VT200-FQ33	LTE CAT1	LTE-FDD Band 2/4/5/12/13 WCDMA Band 2/4/5	North America
VT200-FQ02	LTE CAT M1 LTE CAT NB2	LTE Cat M1: LTE-FDD Band 1/2/3/4/5/8/12/13/ 14/18/19/20/25/26/27/ 28/66/85 LTE Cat NB2: LTE-FDD Band 1/2/3/4/5/8/12/13/ 18/19/20/25/26/28/66/71/85 EGPRS 850/900/1800/1900 MHz	Global
VT200-LQ00	LTE CAT1	FDD Band 1/3/5/B TDD Band 34/38/39/40/41 GSM 900/1800MHz	China

ISM Series

Managed Industrial Ethernet Switch

The ISM is a series of managed industrial Ethernet switch specially designed to withstand challenging industrial conditions in electric power, transportation, industrial automation, etc. It features -40°C~85°C temperature range, convenient security management, wire-speed forwarding, rugged shell and protected industrial circuit. With support for STP/RSTP/MSTP/ERPS/EAPS ring network protocols and augmented network management protocols, the ISM serves the need for reliability in harsh environments.

PRODUCT ADVANTAGES

Advanced and highly reliable industrial Ethernet communications

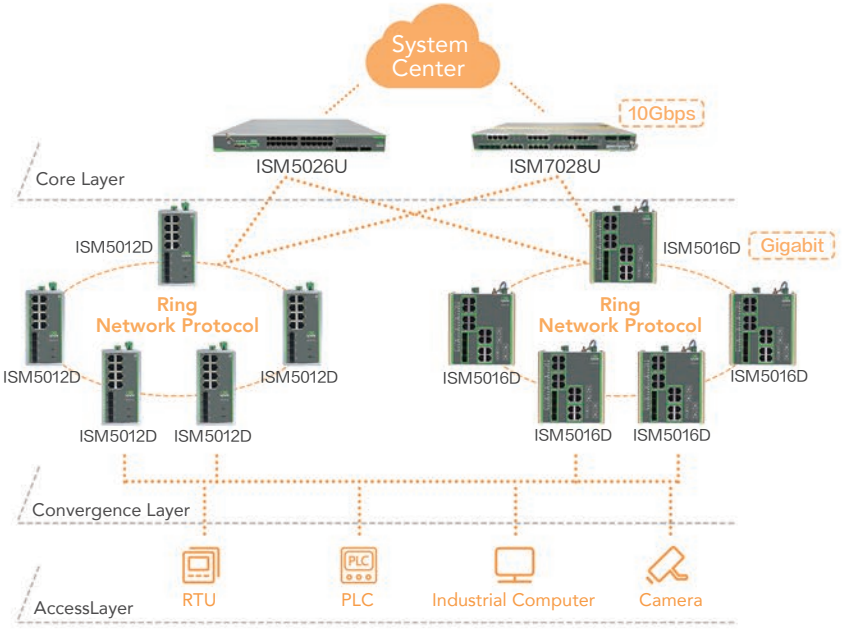
+ Ruggedized metal housing with protective coating, compression and corrosion resistant
+ Fanless cooling, IP40 protection, dust and dirt proof, wide temperature range
+ EMC level 4
+ Industrial-grade redundant power supply, wide range of voltage input, reliable communications on harsh industrial sites
+ Support IEEE 802.3af/at compliant PoE
+ MTBF > 35 years

Efficient & easy deployment and network management

+ FCC, CE and RoHS certified, serves needs for electric power, transportation, industrial automation, etc.

Complete network security features

+ DIN-rail and rack mounting,, compact size, ideal for compact space like cabinets, plug & play, quick deployment
+ Multiple ports for rackmount switches, ideal for various application scenarios



MODEL SELECTION GUIDE

ISM Sub-series Selection


ISM5306D


ISM5310D


ISM5012D


ISM5020D


ISM5026U


ISM7028U

Model	Optoelectronic Combo Port	100/1000 BaseX SFP Port	10/100/1000 Base-T(X) Adaptive RJ45	Installation
ISM5306D-P-2GSFP-4T-24 (PoE)	-	2	4*10/100/1000 Base-T(X) adaptive RJ45 PoE port	DIN-rail mounting
ISM5310D-P-2GSFP-8T-24 (PoE)	-	2	8*10/100/1000 Base-T(X) adaptive RJ45 PoE port	DIN-rail mounting
ISM5012D-P-4GSFP-8GT-24	-	4	8*10/100/1000 Base-T(X) adaptive RJ45 port	DIN-rail mounting
ISM5020D-P-4GSFP-16GT-24	-	4	16*10/100/1000 Base-T(X) adaptive RJ45 port	DIN-rail mounting
ISM5026U-P-4GC-2GSFP-20GT-HV-HV	4	2	20*10/100/1000 Base-T(X) adaptive RJ45 port	Rack mounting
ISM7028U-P-8GC-4GSFP-16GT-HV-HV	8	4	16*10/100/1000 Base-T(X) adaptive RJ45 port	Rack mounting

ISE Series

Unmanaged Industrial Ethernet Switch

The ISE unmanaged industrial Ethernet switch is specially designed for demanding industrial environments in electric power, transportation, industrial automation, etc. Integrating wide temperature and voltage ranges, enterprise-class wire-speed forwarding feature, rugged shell and protected industrial circuit, and plug and play, it serves the need for reliability in harsh scenarios.

PRODUCT ADVANTAGES

Reliable industrial quality

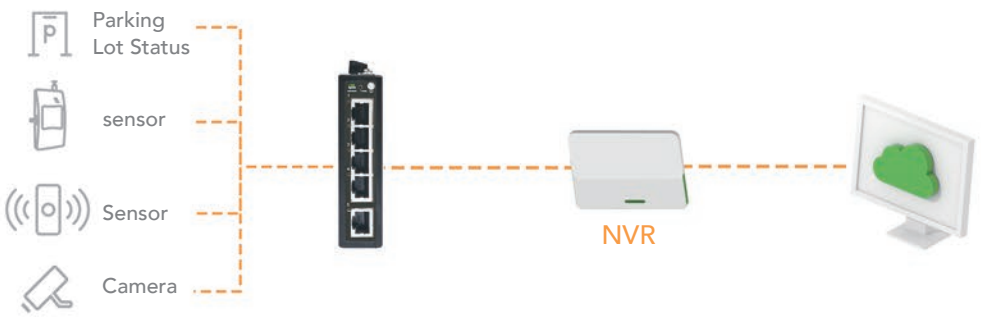
+ Ruggedized metal housing with protective coating
+ Fanless cooling, IP30 protection, dust and dirt proof, wide range of operating temperature
+ EMC level 3
+ Industrial-grade redundant power supply, wide range of voltage input, reliable communications on harsh industrial sites
+ Support IEEE 802.3af/at compliant PoE
+ MTBF > 35 years

Easy use and management

+ DIN-rail mounting, small size, ideal for compact space like cabinets, plug & play, quick deployment
+ Enable/disable QoS and BSP (broadcast storm protection) with DIP switch
+ 12/24/48 VDC or 24 VAC single power supply input (18~60 VDC redundant power supply for ISE5010)

Compliant with international standards

+ FCC, CE, RoHS certified, satisfies need for electric power, transportation, industrial automation, etc.



MODEL SELECTION GUIDE

ISE Sub-series Selection

 ISE2003D	 ISE2005D	 ISE2008D	 ISE5005D
 ISE5008D	 ISE5010D	 ISE5306D	 ISE5310D

Model	Optical Port	Electrical Port
ISE2003D-P-M3-2T-SC-24	1 Optical module (multi-mode dual-fiber, 2km, 1310 send-receive, SC)	2*10/100 Base-T(X) adaptive RJ45 port
ISE2003D-P-S203-2T-SC-24	1 Optical module (single-mode dual-fiber, 20km, 1310 send-receive, SC)	2*10/100 Base-T(X) adaptive RJ45 port
ISE2005D-P-5T-24	None	5*10/100 Base-T(X) adaptive RJ45 port
ISE2008D-P-8T-24	None	8*10/100 Base-T(X) adaptive RJ45 port
ISE5005D-P-5GT-24	None	5*10/100/1000 Base-T(X) adaptive RJ45 port
ISE5008D-P-8GT-24	None	8*10/100/1000 Base-T(X) adaptive RJ45 port
ISE5010D-P-2GSFP-8GT-24	2*100/1000 BaseX SFP slot	8*10/100/1000 Base-T(X) adaptive RJ45 port
ISE5306D-P-2GSFP-4GT-48	2*100/1000 BaseX SFP slot	4*10/100/1000 Base-T(X) adaptive RJ45 PoE port
ISE5310D-P-2GSFP-8GT-48	2*100/1000 BaseX SFP slot	8*10/100/1000 Base-T(X) adaptive RJ45 PoE port

InBOX720 5G Industrial Computer

The InBOX720 series 5G industrial computer carries the RK3399 chip of Rockchips Electronics, also supports multiple AI application scenario development. With 5G Internet and high-speed connection, the InBOX720 is suitable

for 5G application scenarios. The industrial design and various interfaces are particularly applied for vending business such as smart freezer, smart express, smart charger, etc. And the vending software developed by InHand Networks can build a continued reliable web connection and ideal mobile purchase experience.

PRODUCT ADVANTAGES

Faster & more reliable 5G connection

+ High speed, low latency, 5G internet connection
+ 5G NSASA mode
+ Global major carries supported
+ Four 5G antenna interfaces

Expansibility for various scenarios

+ RK3399 chip of Rockchips Electronics to provide leading computing capabilities
+ LVDS/HDMI screen supported for customized choice
+ Multiple interfaces for various applications
+ Dual network ports, CAN BUS, 485 ports supported
+ 7 USB interfaces for more requirements

Special designed software

+ InHand vending software for better purchase experience
+ InHand vending operation platform for easy management
+ Customized UI for various application scenarios
+ Customer friendly platform

Industrial design, 7*24 operation

+ Industrial housing design, hit protection, IP40
+ Fanless design, slow heating, low power consumption
+ Industrial design suitable for hash environments
+ Secure and reliable communication

Facial recognition payment

+ Non-stop digital payment more than 10 thousand times
+ Facial recognition for easy revenue control
+ Multiple AI application scenarios

MODEL SELECTION GUIDE

Model	Model code: InBOX720-<WMNN><STD/PLAT/LU>-<XX>		
	<WMNN>:wireless communication type & module	<STD/PLAT/LU>: version	<L/A>: special version
InBOX720-NRQ3-STD	5G NR NSA n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40/n41/n48*/n66/n71/n77/n78/n79 5G NR SA n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40/n41/n48*/n66/n71/n77/n78/n79 LTE-FDD Band 1/2/3/4/5/7/8/12(17)/13/14/18/19/20/25/26/28/29/30/32/66/71 LTE-TDD Band 34/38/39/40/41/42/43/48 LAA Band 46 WCDMA Band 1/2/3/4/5/6/8/19	STD: standard Android version	-
InBOX720-NRQ3-LU	5G NR NSA n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40/n41/n48*/n66/n71/n77/n78/n79 5G NR SA n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40/n41/n48*/n66/n71/n77/n78/n79 LTE-FDD Band 1/2/3/4/5/7/8/12(17)/13/14/18/19/20/25/26/28/29/30/32/66/71 LTE-TDD Band 34/38/39/40/41/42/43/48 LAA Band 46 WCDMA Band 1/2/3/4/5/6/8/19	LU: Linux (debian) version	-

InBOX710 Industrial Computer

The InBOX710 series is an industrial-grade edge computer powered by a high-performance CPU, which enables artificial intelligence at the edge. Featuring HDMI 2.0 (dual HDMI for InBOX712), it supports 4K high-resolution video display. Extensive interfaces like USB2.0/3.0 and RS-232/485 enable connection to multiple peripherals. Available with high-speed LTE connectivity, the InBOX710 is the engine of unattended retail solutions including digital signage, self-service kiosks, micro markets and smart vending.

PRODUCT ADVANTAGES

+ Powerful computing capabilities with high-performance ARM processor
+ Dual HDMI interfaces support dual-window display with different contents
+ 4K video coding engine, enabling superior video experience
+ 4G/3G cellular and Wi-Fi ensure reliable connectivity
+ Driving 3D cameras and other peripherals to enable facial/voice recognition powered by AI
+ Available with Android 7.1 and Linux(base on debian9)

MODEL SELECTION GUIDE

Model	Model code: InBOX710-<WMNN>-<STD/PLAT/L>-<A>-<S>					
	Region (Operator)	<WMNN>: Cellular Networks	CPU	Memory Flash	<STD/PLAT/L>: OS	<S>: Serial port type
InBOX710-FQ58-PLAT	EMEA, South Korea Thailand, India	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM/EDGE Band 3/8	Six-core	2+16GB	PLAT: Supports InVending SaaS	<NA>: RS232*3
InBOX710-FQ58-STD	EMEA, South Korea Thailand, India	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM/EDGE Band 3/8	Six-core	2+16GB	STD: Android 7.1	<NA>: RS232*3
InBOX710-FQ58-STD-A	EMEA, South Korea Thailand, India	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM/EDGE Band 3/8	Six-core	4+64GB	STD: Android 7.1	<NA>: RS232*3
InBOX710-FQ58-L	EMEA, South Korea Thailand, India	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM/EDGE Band 3/8	Six-core	2+16GB	L: Linux Debian9	<NA>: RS232*3
InBOX710-FQ58-L-485	EMEA, South Korea Thailand,India	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM/EDGE Band 3/8	Six-core	2+16GB	L: Linux Debian9	485: RS485*1, RS232*2
InBOX710-FQ88-STD	Japan	LTE-FDD Band 1/3/8/18/19/26 LTE-TDD Band 41 WCDMA Band 1/6/8/19	Six-core	2+16GB	STD: Android 7.1	<NA>: RS232*3
InBOX710-FQ39-STD	North America	LTE-FDD Band 2/4/5/7/12/13/25/26/29/30/66 2×CA Band 2+Band 2/5/12/13/29 Band 4+Band 4/5/12/13/29 Band 7+Band 5/7/12/26 Band 25+Band 5/12/25/26 Band 30+Band 5/12/29 Band 66+Band 5/12/13/29/66 WCDMA Band 2/4/5	Six-core	2+16GB	STD: Android 7.1	<NA>: RS232*3
InBOX710-FQ58-STD-485	EMEA, South Korea Thailand, India	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM/EDGE Band 3/8	Six-core	2+16GB	STD: Android 7.1	485: RS485*1, RS232*2

Model	Model code: InBOX712-<WMNN>-<STD/PLAT/L><S>			
	Region (Operator)	<WMNN>: Cellular Type & Module	<STD/PLAT>: Version	<S>: Serial Port
InBOX712-DQ25-STD	EMEA, South Korea Thailand, India	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM/EDGE Band 3/8	STD: Android 7.1	RS232×3
InBOX712-DQ25-PLAT	EMEA, South Korea Thailand, India	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM/EDGE Band 3/8	PLAT: Supports InVending SaaS	RS232×3
InBOX712-FQ88-STD	Japan	LTE-FDD Band 1/ 3/ 8/18/19/26 LTE-TDD Band 41 WCDMA Band 1/6/8/19	STD: Android 7.1	RS232×3
InBOX712-FQ39-STD	North America	LTE-FDD Band 2/4/5/7/12/13/25/26/29/30/6 2×CA Band 2+Band 2/5/12/13/29 Band 4+Band 4/5/12/13/29 Band 7+Band 5/7/12/26 Band 25+Band 5/12/25/26 Band 30+Band 5/12/29 Band 66+Band 5/12/13/29/66 WCDMA Band 2/4/5	STD：Android 7.1	RS232×3
InBOX712-FQ58-STD-485	EMEA, South Korea Thailand, India	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM/EDGE Band 3/8	STD: Android 7.1	RS232×2, RS485×1

7-inch Android All-in-one

InPAD070S Series

Industrial Embedded Computing Platform

InPAD070S is a series of 4G intelligent terminal by Inhand Network for smart business field. It is equipped with the RK3288 processor. With 3G/4G, Wi-Fi, Wired and other multiple networking modes, it provides uninterrupted Internet access. InPAD070S supports real-time updated data to the cloud management platform and enables remote monitoring and management and other functions on the cloud platform. InPAD070S provides higher performance, lower power consumption and more stable software and hardware configuration, which makes the data transmission process smoother and more stable.

InPAD070S machine is featured with wide temperature characteristics, IP65 Protection rating on one side of the screen, which are all are designed for industrial applications.

PRODUCT ADVANTAGES

Abundant peripheral interfaces, ready for multiple application scenarios

+ RS-232 serial (3pin industrial serial port)
+ RS-485 serial (5pin industrial serial port)
+ 4-port USB 2.0
+ 2-port SPK Loudspeaker
+ 7-inch touchscreen

Optimized networking, uninterrupted Internet access anywhere

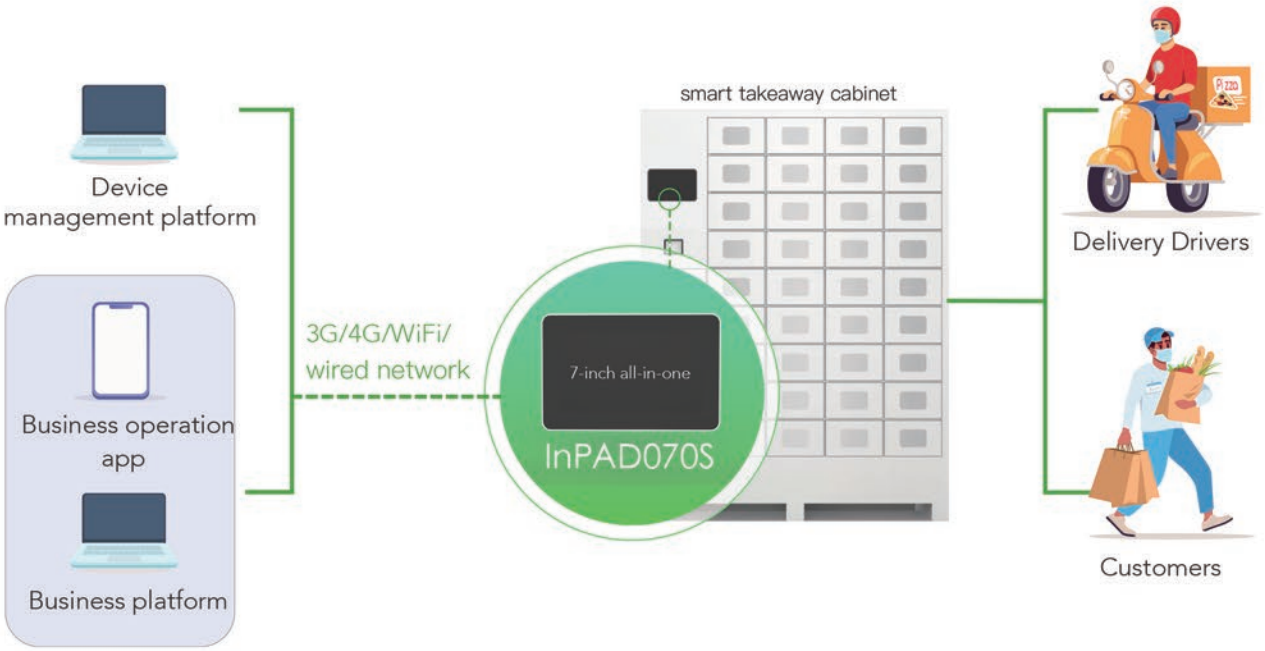
+ Rich experience in networking, providing safe and reliable networking service
+ Supports 3G/4G networks
+ Large-scale deployment
+ 4G/Wi-Fi/Ethernet access

Fully industrial-grade design, handle well in unmanned scenarios

+ Plastic housing, anti-corruption, crush-resistant, antioxidant
+ IP65 protection for the front panel of screen
+ Operating temperatures: -10℃~60℃
+ Supports high EMC grade

Multiple basic software services to realize rapid development

+ Available with Android 7.1
+ The underlying sealed with API, which can be directly used by developers
+ Deeply optimized system, guaranteeing stability
+ High performance and cost-effective
+ Provides standardized APP and out-of-the-box functions.



MODEL SELECTION GUIDE

Model	Model code: InPAD070S-<WMNN>-<STD/PLAT>-<NA>			
	Region (Operator)	<WMNN>: Cellular Networks	<STD/PLAT/NA>: OS	<NA>: Special Version
InPAD070S-DQ20-PLAT	China	LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 WCDMA Band 1/8 TD-SCDMA Band 34/39 CDMA/EVDO BC0 GSM/EDGE 900/1800MHz	PLAT: Supports InVending SaaS	NA
InPAD070S-DQ20-STD	China	LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 WCDMA Band 1/8 TD-SCDMA Band 34/39 CDMA/EVDO BC0 GSM/EDGE 900/1800MHz	STD: Standard Android	NA
InPAD070S-FQ58-PLAT	Europe & APAC	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM/EDGE Band 3/8	PLAT: Supports InVending SaaS	NA
InPAD070S-FQ58-STD	Europe & APAC	LTE-FDD Band 1/3/7/8/20/28A WCDMA Band 1/8 GSM/EDGE Band 3/8	STD: Standard Android	NA
InPAD070S-FQ39-PLAT	North America	LTE-FDD Band 2/4/5/7/12/13/25/26/29/30/66 2 x CA Band 2+Band 2/5/12/13/29 Band 4+Band 4/5/12/13/29 Band 7+Band 5/7/12/26 Band 25+Band 5/12/25/26 Band 30+Band 5/12/29 Band 66+Band 5/12/13/29/66 WCDMA Band 2/4/5	PLAT: Supports InVending SaaS	NA
InPAD070S-FQ39-STD	North America	LTE-FDD Band 2/4/5/7/12/13/25/26/29/30/66 2 x CA Band 2+Band 2/5/12/13/29 Band 4+Band 4/5/12/13/29 Band 7+Band 5/7/12/26 Band 25+Band 5/12/25/26 Band 30+Band 5/12/29 Band 66+Band 5/12/13/29/66 WCDMA Band 2/4/5	STD: Standard Android	NA

InHand Cloud-Managed Networking Solution

Cloud Managed
Centralized cloud management makes networking simple, standardized and scalable

SD-WAN
Integrating hardware, software and cloud services, the solution delivers SD-WAN that keeps devices "always online"

Security
Multi-dimensional security measures protect your sensitive data from attacks.

5G
Build a high-speed Internet of everything and speed up your growth.

InHand Cloud-Managed Networking Solution, which consists of the cloud-managed edge router ER800 series and the InCloud Manager SaaS, offers global customers high-speed, secure and easy-to-use networking service, bringing unlimited possibilities to business growth.

SOLUTION PORTFOLIO

InCloud Manager

- Centralized cloud management
- Efficient zero-touch deployment
- Simplified & quick configuration
- Multi-dimensional security mechanisms

Cloud-Managed Edge Router

- High-speed 5G cellular network
- Gigabit Wi-Fi
- Gigabit Ethernet
- SD-WAN, worry-free
- Completely cloud managed

Mobile APP

- Configuration via QR code scan
- Data flow monitoring
- Alarms & diagnostics
- Multi-dimensional data analysis
- Management anytime anywhere

SOLUTION ADVANTAGES

"Zero touch" deployment

"Cloud + edge" integration makes deployment easier and faster -- in a few steps.

- Plug & play, cloud-managed
- Configuration through QR code scan via mobile app
- Configuration via InCloud Manager

Centralized cloud management

Stay connected with thousands of distributed sites anytime anywhere.

- Unified platform
- Easy-to-use interface
- Batch configuration & upgrading

Easy and fast configuration

Easy configuration, visualized interfaces and batch operation simplify IT work and frees you from travel.

- Web GUI configuration, no complex commands
- Group configuration
- Batch configuration

Multi-dimensional security

Highly secure network environment and data transmission tunnels protect your networks from attacks and threats.

- Firewall for access control and content filtering
- Multiple VPNs, digital certificate
- Roll-based Access Control, MFA

Network visibility

Easily draw business insights from data, quickly solve problems, improve strategies and ensure growth.

- Multi-dimensional dashboards
- Analysis of dataflow, applications, devices, networks, users, etc.
- Business overview

Alarms & diagnostics

Comprehensive network monitoring and quick troubleshooting ensure stable network environment and reduce losses caused by network failures.

- Alarm setting
- Timely notification
- Network diagnostic tools

HARDWARE

The cloud-managed edge router ER805 works as the network access bearer on site. Equipped with 5G, IPv6, 802.11ac, SD-WAN and Gigabit networks, it helps build a stronger and more efficient next-gen network for business.

- **Branch access**
  + Firewall capacity: 600Mbps
  + VPN capacity: 200Mbps
  + No. of terminals connected: 100~150

- **Cellular network access**
  + 5G network
  + Downlink up to 2Gbps
  + SA/NSA networking
  + 4G fallback

- **Wired Internet access**
  + 5*Gigabit Ethernet port
  + Dual WAN link
  + WAN/LAN
  + VLAN

- **Wi-Fi access**
  + Secure Gigabit Wi-Fi network
  + 802.11.ac/a/b/g/n, 2.4G+5G Wi-Fi concurrency
  + Bandwidth up to 1200Mbps
  + AP/STA mode

HARDWARE

- **Chain Convenience Stores**

  InHand Cloud-Managed Networking Solution delivers simple and fast deployment and a centralized management platform to convenience stores, enhances your network management efficiency with lower costs, boosting your business expansion.

- **Enterprise Branches**

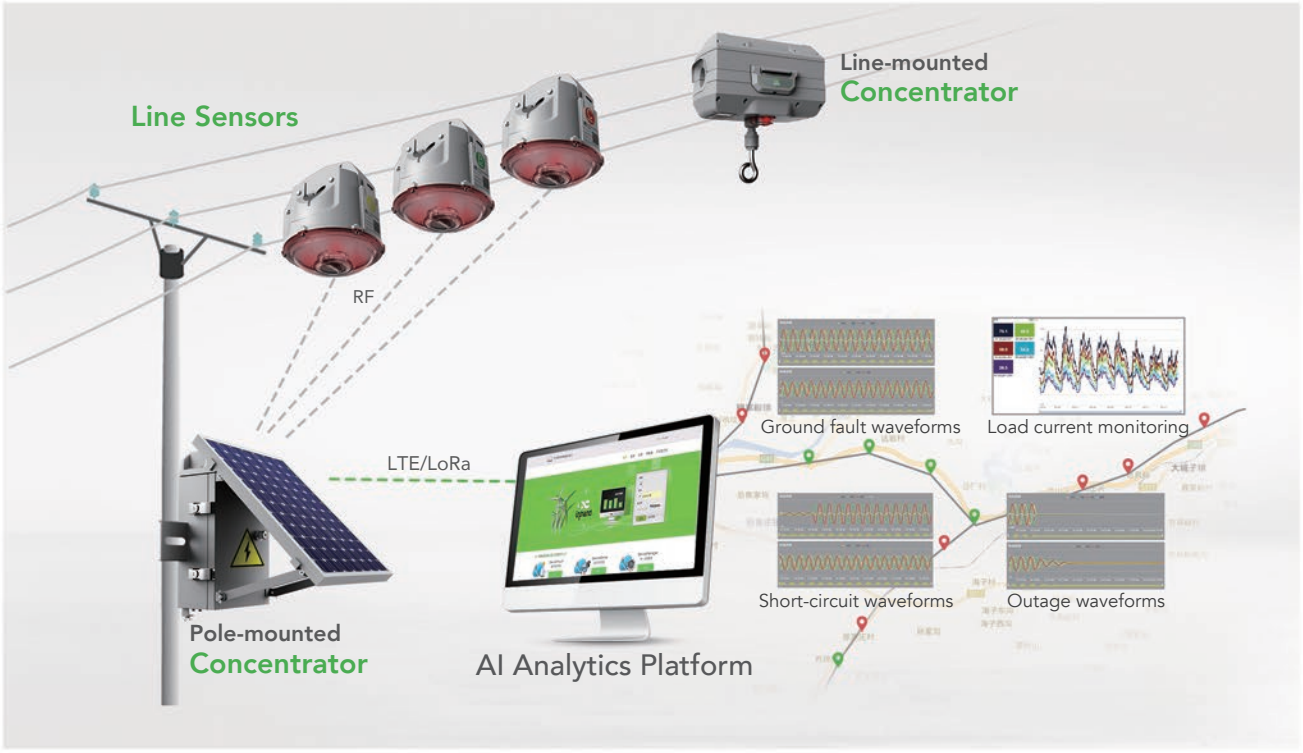
  Enterprise branches seek rapid expansion while facing new networking demands from employees. InHand Cloud-Managed Networking Solution offers business branches reliable and stable SD-WAN services, delivering new networking experience.

- **5G + Smart Healthcare**

  With 5G access, the cloud-managed edge router ER805 offers high-speed and low-latency networks. Accompanied by the InCloud Manager, the solution delivers multi-dimensional security measures that protect your healthcare data.

Website: https://star.inhandcloud.cn

Intelligent Wireless Observing System (IWOS)



WORLD LEADING INNOVATIVE TECHNOLOGY IN LOW CURRENT GROUND FAULT MONITORING

Precision Measurement of Line Current

Precise current measurement

±0.5%

Synchronized Synthesis of Zero-sequence Current

Precision three-phase synchronization

<10μs

Real-time Online Efficient and Long-lasting

Low current sensing power-harvesting

1A
(basic version is 3A)

Precise Capturing of Faults Waveforms

High-frequency current/electric field wave recording

12.8KHz

Local Faults Determination

Edge intelligence

Ground & Short-circuit

SYSTEM DESCRIPTION AND COMPONENTS

With strong R&D capabilities and years of experience serving the electric power industry, InHand Networks launched IWOS, a smart distribution lines monitoring system. The system integrates intelligent sensing, signal processing, artificial intelligence, and information communication technologies to achieve high precision and real-time monitoring of line currents and line-to-ground electric fields of medium voltage distribution networks. The IWOS auto triggers high sample rate wave-recordings when abnormal changes of line status occur. Based on the recorded wave data, the system can provide accurate location of ground faults of low-current grounding systems, backtrack and retrace complex fault processes, and give advanced warnings of abnormal line status to effectively shorten fault recovery periods, and change from "passive repairing" to "active monitoring". The IWOS system will help utilities effectively improve the operation and maintenance level of distribution networks, and upgrade cost-efficiency!

The IWOS system consists of transient wave-recording fault indicators at the field end and a big data intelligent analysis platform at the center end. Each set of transient wave-recording fault indicators contain 3 line sensors and 1 concentrator.

Line Sensors and Concentrator:

Line Sensors:

+ **Advanced electronic current transformer, line current measurement accuracy reaching ±0.5%**
+ Intelligently trigger **12.8kHz high rate wave-recording** of line current and line-to-ground electric field, capture the momentary transient waveforms of ground faults
+ **1A** low current power harvesting, **IP67** protection, live installation and removal, remote upgrade and maintenance

Concentrator (solar powered):

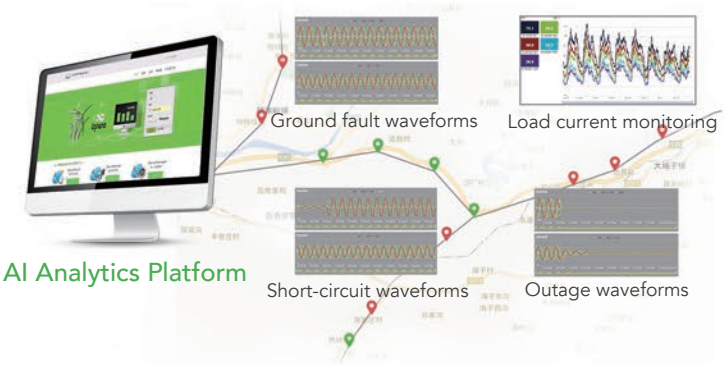
+ **Main and backup** power supply by solar panel and accumulator, **hybrid networking** of short-range and long-distance wireless communications
+ **High precision (<10μs)** three-phase synchronization, real-time synthesis of **zero-sequence current**, supports local fault determination
+ Precise **GPS** timing, providing accurate absolute timescale
+ **4G LTE/LoRa** remote transmission, for remote upgrade and maintenance
+ Maintenance free design, **IP55** protection, live installation and removal

Concentrator (Line mounted):

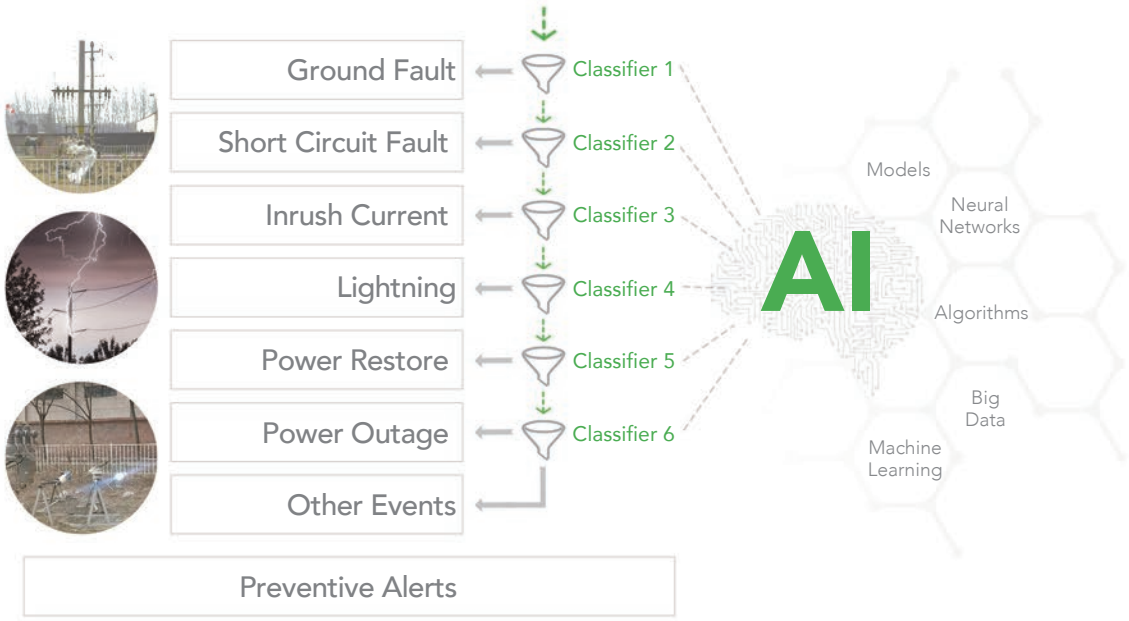
+ **Main and backup** power supply by CT on-line power harvesting and super capacitor
+ **High precision (<10μs)** three-phase synchronization, real-time synthesis of **zero-sequence current**, supports local fault determination
+ Precise **GPS** timing, providing accurate absolute timescale
+ **4G LTE/LoRa** remote transmission, for remote upgrade and maintenance
+ Maintenance free design, **IP67** protection, live installation and removal

Big-data Analytics Platform:

+ Real-time display of line status
+ Fault alarms with locations
+ Real-time display of power quality
+ Line health status evaluation
+ deduction of historical faults
+ historical line status
+ statistic analysis reports
+ Alert of line fault risks



INNOVATION + AI: PREVENTIVE MAINTENANCE



+ Big data comprehensive analysis model based on neural network
+ Condition recognition based on artificial intelligence algorithm
+ Accurately identify line faults, locate faulty sections
+ Preventive maintenance of grid lines, and advanced warnings of faults

Smart Vending System

Consisting of InBOX/InPAD hardware and InVending Cloud software, the InHand Smart Vending System is able to meet the specific requirements for your vending business.

APPLICATIONS:

Vending Telemetry

The InBOX700 vending gateway connects the scattered machines (MDB/DEX/VTS) to the InVending Cloud, allowing operators to monitor machines remotely, view real-time inventory & cash/cashless (including POS & mobile payments) reports, conduct route planning and receive alerts.

Multimedia Services

With the powerful processor, the InBOX700 supports HD video display on touchscreen machines. The multimedia contents including videos and images can be easily updated remotely via the InVending Cloud. It helps operators to deliver the interactive vending experience to engage with consumers, and thus to increase sales.

Quick Retrofit

The InPAD070S is ideal for retrofitting traditional machines that do not have screens or multimedia capabilities. Combining an easy-to-install 7" touchscreen and a telemetry gateway, the InPAD070S all-in-one provides an easy and cost-effective solution for operators and machine makers to upgrade new features of their existing machines.

PRODUCT ADVANTAGES

Hardware

Powerful CPU
Industrial-grade design
Easy installation
Reliable communications via 4G/3G/Wi-Fi

InBOX700

InPAD070S

Software (InVending Cloud)

Optimize Vending Operations

+ Real-time inventory status and dynamic refill alerts
+ Route planning and optimization
+ Machines, products, and price management

Multimedia Contents Management

+ Remotely update videos and images without onsite visits required
+ Sets up interactive games, promotions and loyalty programs

Detailed Reports

+ Sales report by machine, time and payment methods
+ Analysis of popular products and locations

Big Data Analytics

+ Advanced vending data analytics powered by AI
+ Recommends better planograms, product assortment and price

InConnect

One-stop Remote Access Service

InHand Connect Service, referred to as InConnect, quickly builds network connections for distributed IoT sites to make your device networking much easier. InConnect features easy deployment, easy connection, easy expansion, and secure transmission.

InConnect service enables multiple devices to connect the same network, where on-site terminal devices, including IPCs, servers, cameras, PLC, HMI, RTU and controllers, can be selected.

The InConnect helps users quickly build IoT networks to enable remote maintenance and remote monitoring of field devices through the cloud service. Customers can remotely locate faults through the network connection and reduce losses caused by equipment failures. At the same time, it can also provide reliable, convenient, and secure data connection service for IoT big data collection, transmission, and product lifecycle management.

PRODUCT ADVANTAGES

Fast building of low-cost connections

Customers do not need to purchase public network IP line and hardware firewall.The connections can be constructed by using InHand devices to connect 4G LTE or wired network.

Automatic configuration

The InConnect provides automatic configuration. With one click on the cloud, the InRouters, InGateways, Vehicle Gateways, etc. are automatically registered to the platform. With smart IP mapping, there is no need to change local network setting, no IT/OT expertise required. IP communication is supported.

Multiple types of terminal access, agile expansion

Multiple clients are supported, including Windows, Linux, Android and iOS, as well as terminal access devices, such as PLC, HMI and cameras. There is no need to rebuild network while at the stage of business expansion. In this sense, adding or reducing branches can accord to the business needs.

Secure data transmission

InConnect has high secure cloud servers. User clients and InRouters need to access InConnect through advanced access control, and data trans mission processes are protected by encryption algorithms.

Multiple interconnected and strategic controlled access

The remote access and control to the on-site devices is supported; the secure mechanisms of gateway can restrict the interconnections between devices, realizing users to fully control the network.

One-stop service

Reliable networking devices with an integrated platform provide one-stop service, saving the costs of selecting devices and platforms.

APPLICATION SCENARIOS

The communications of remote devices

No.	Type	Instruction
1	Users & Devices	Users can access all site devices within their permissions
2	Sites & Sites	Each site can access each other
3	Devices & Devices	Devices at each site can access each other
4	Multi-sites	Multi-sites can access each other

The connections of telecommuting

Accessing to service recources from the company Lan network while users staying at home or working away from home

SYSTEM ARCHITECTURE

InConnect	
Site Management	
Router	Gateway serial number, model, firmware version, configuration time, signal value, IMSI, IMEI, ICCID
Terminal Device	Centralized management and maintenance for terminal devices: PLC/HMI; remote access to terminal devices
Configuration Update	Batch configuration dispatch, dispatch task management
Firmware Update	Batch firmware upgrade, upgrade task management
Web Management	Remote access to devices, remote modification of local configuration
Operation Analysis	Traffic and connection statistics of carriers
Task Tracking	Manage tasks of all devices, track task status and progress online
Network Management	
The Client Access	Multi-client access is supported; user login & access duration control; Mac address for restricting access
Peer-to-peer Network	For the scenario of remote equipment maintenance, remote maintaining on-site PLC/HMI devices; virtual IP and physical IP is supported
Star Network	For the telecommuting scenario, access to service resources from the company LAN network while users staying at home or working away from home
Network Permission	Separate networking groups, control access to sites and administrative authority to data
Traffic Statistics	Statistics of traffic consumption to remote connections
Network Access	
Router	Maximum access points are up to 4k per registered account
Terminal Device	Maximum accessing to terminal devices is up to 254 per on-site device node
Supported InHand Products	
Products	Supports series of InHand products, including InRouter300, InRouter600, InRouter900, InGateway500, InGateway900, InVehicle G710, InVehicle G810
AWS Cloud Deployment	

Device Manager

Remote Management & Maintenance Platform

With a visualization user interface and simple operation steps, the Device Manager platform enables you to manage and monitor InHand's hardware devices, such as routers and gateways with convenience. It can quickly integrate devices and manage them with one-click control. The cloud deployment delivers easy-to-use experience, allowing you to focus on your core business and empowering your growth.

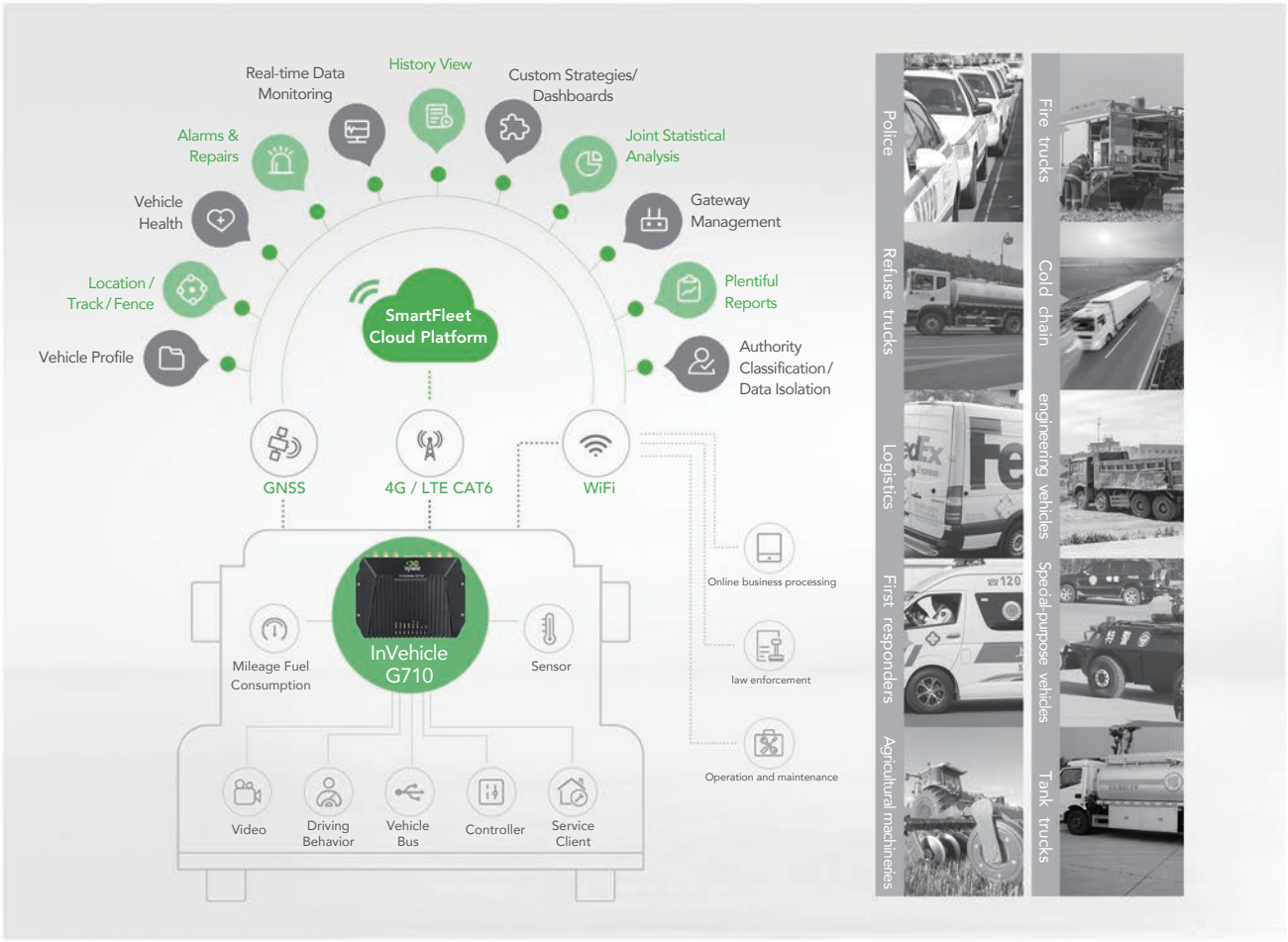
PRODUCT ADVANTAGES

+ Device Manager having rich device management capabilities, is suitable for application scenarios in various industries
+ Supports access and management of tens of thousands of sites from all over the world, saving time and improving efficiency
+ Multi-role access to data enables IT and OT staff to collaborate efficiently anywhere
+ Technical architecture supports MQTT protocol
+ Suits a low bandwidth, high latency network, supports the access of massive devices, as well as managing them in the cloud
+ Provides Restful API for secondary development interface, facilitating to dock other service systems rapidly
+ The Platform and devices have integrated a variety of safety control technologies, including CA certificate, data encryption, user verification and access control. All these ensure the high security of network and data transmission

SYSTEM ARCHITECTURE

Device Manager	
Device Management	
Information Management	Device serial number, model, firmware version, configuration time, signal value, IMSI, IMEI, ICCID
Configuration Update	Batch configuration dispatch, dispatch task management
Firmware Upgrade	Batch firmware upgrade, upgrade task management
Web Management	Remote access to devices, remote modification of local configuration
Edge Computing	SDK, APP management in the cloud and centralized deployment
View Logs	View device logs
Device Monitoring	
Dashboards	View device data usage amount and online status
Alarms	Device online/offline, traffic alarm, dual SIM cards switching, link-backup, pushing alerts for reporting port status
GIS Map	Manage and track device locations
Task Tracking	Manage tasks of all devices, track task status and progress online
Grouping	Manage devices in groups
System Management	
User	Manage system user accounts, multi-user device management
Authorization	Customize user permissions, securely manage devices
System Information	Maintain account information
System Setting	Personal information setting
Log	Track system logs online
Supported InHand Products	
Products	InRouter200, InRouter300, InRouter600, InRouter900, InGateway500, InGateway900, InVehicle G710, InVehicle G810

Smart Fleet Cloud Management



InHand Smart Fleet cloud platform, or the Smart Fleet, is a business platform that offers vehicle monitoring and management services. Featuring friendly user interfaces and easy operations, and accompanied by globally recognized InHand vehicle-mounted terminals, the Smart Fleet helps enterprises manage their vehicles in a smart and efficient manner. Through breaking down the data barriers between vehicles, it enables joint data analysis, vehicle lifecycle management and control, smart operation and maintenance, assisting in digital transformation of engineering vehicles.

PRODUCT ADVANTAGES

+ One-stop service

Eight modules provide life cycle monitoring of vehicles.

Multi-dimensional data collection:
Vehicle profiles, real-time status data, vehicle location tracking.

Joint analysis of massive data:
Breaks down data barriers of vehicles, greater accuracy of analysis.

Life cycle management:
Control of vehicle assets, life cycle monitoring and management of vehicles.

Smart operation and maintenance:
Smart warning, lower risks, fault location, reduced loss.

Centralized management:
Centralized management of gateways, batch allocation of configuration, mass upgrading of firmware.

Authority classification:
Multiple accounts and roles supported, authority classification, ensures data security.

Flexible custom strategies:
Meets users' individual demands, custom monitoring strategies.

Multi-layered development system:
Provides data communication and platform connection via Open API.

+ Efficiency

With years of accumulation in the field of IoT, InHand responds to customer needs efficiently while ensures the reliability and safety of services.

- Fast large-scale deployment
- Fast service docking, and short deployment cycle
- Multiple access methods
- Supports secondary development by customers

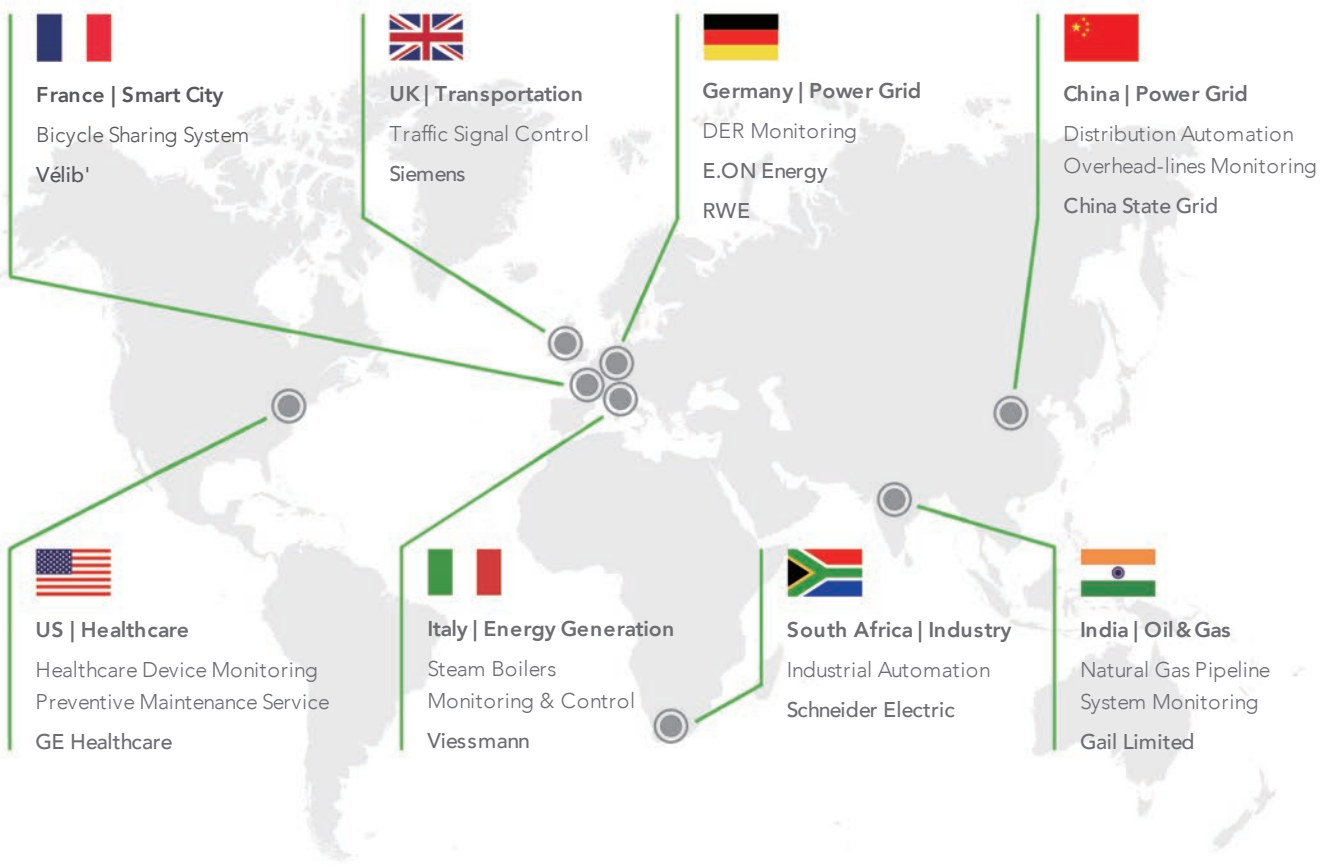
+ Intelligence

Smart and efficient analytics, fast location of abnormal nodes, changes monitoring and management from passive coping to active prevention, avoiding hidden risks and reducing users' losses.

+ Developer features

- Provides standard API message interface docking
- Adopts the same access system as MS Azure and AWS, seamlessly accesses the two major clouds' PaaS layer system
- Integrates big data cloud computing and machine learning technologies to create a comprehensive, decentralized cloud ecosystem that deploys AI computing to the edges

Used worldwide. Proven worldwide.



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