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Products & Services

Digitalization of Industry



About Us

InHand Networks is a leading IoT solutions provider founded in 2001, dedicated to driving digital transformation across industries and empowering customers to unlock their full potential and achieve accelerated growth.

We specialize in delivering industrial-grade connectivity solutions for diverse sectors, such as enterprise networks, industrial and building IoT, digital energy, smart commerce, and mobility. Our comprehensive product portfolio and services cater to various applications worldwide, including smart manufacturing, smart grid, intelligent transportation, smart retail, etc. With a global footprint spanning over 60 countries, we serve customers in China, the United States, France, Germany, the United Kingdom, Italy, and beyond.





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Predictive Maintenance

Be Prepared and Win from Afar

Industries are recovering from the global pandemic. As we look forward to accelerated growth, we must also reflect on the insights the pandemic has offered us, i.e. the adoption of remote work through IoT technologies. Predictive maintenance for industrial and electrical equipment is a remote maintenance approach based on data analysis and machine learning. It aims to monitor and maintain equipment before failures occur, reducing downtime and repair costs, and enhancing equipment reliability and production efficiency.

Our Solution



InHand Networks offers a “cloud+edge” solution for preventive maintenance. With support for multiple industrial protocols and powerful edge computing capabilities, the IG edge gateways and EC edge computers easily acquire data from various onsite devices, validate data and then upload them to the cloud.

Our Capabilities



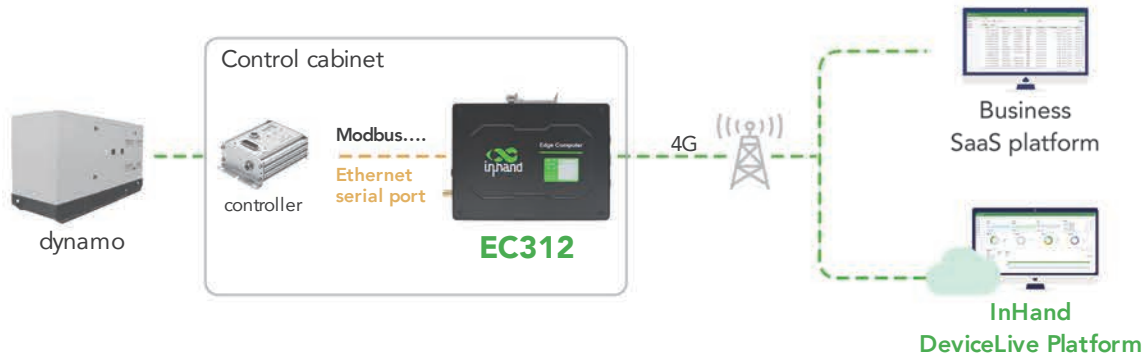
Remote Monitoring Solution for Industrial Generators

Customer Requirements

- **Real-time Monitoring:** Real-time monitoring of generator parameters through the sensor network, including temperature, vibration, voltage, current, etc.
- **Local Fault Diagnosis:** Accurate local fault diagnosis for timely response during abnormalities to reduce transmission delay.
- **Predictive Maintenance:** Leverage historical data and machine learning to predict equipment issues, enabling proactive maintenance and reducing downtime and costs.
- **Remote Control:** Ensure safe remote control of generators via the cloud, including start, stop, and power adjustment functions.

InHand Solution

The EC312 edge computer enables advanced remote monitoring of industrial generators. Integrating seamlessly with sensors, generator controllers, a generator monitoring platform and the InHand DeviceLive cloud, it facilitates real-time status tracking and data preprocessing. Via cellular networks, it reports to the monitoring platform for remote parameter adjustments, enhancing generator reliability. The DeviceLive offers remote management, allowing for efficient batch deployment and upgrades, thus optimizing management efficiency and reducing operational costs for distributed generator systems.



Benefits

Easy for Customization

The EC312, running Debian 11 Linux distribution, supports languages like C/C++, Java, Python, .Net, and JavaScript, enabling customized application development for diverse needs.

Extensive Interfaces for Varying

The EC312, with diverse interfaces including serial, Ethernet, DI/DO, CAN and GPS, meets diverse industrial generator data needs, reducing management costs.

Multiple Connection Options with Reliability

The EC312 offers Ethernet, Wi-Fi, and cellular connections with network backup, ensuring reliable, uninterrupted Internet access for generators in any location.

Remote Management Made Easy

The DeviceLive cloud enables remote edge app management, upgrades, and deployment, significantly reducing project delivery times and operational costs.

Remote Maintenance of Medical Equipment

Customer Requirements

- **Reliable and Uninterrupted Networking:** Reliable networking is very important for medical equipment with large amounts of data continuously transferred.
- **Comprehensive Data Security Mechanisms:** Medical data are sensitive and require strict protection. Data should be encrypted during transmission.
- **Easy Centralized Management:** With many devices deployed across locations, manufacturers expect easy remote management for better maintenance.

InHand Solution

The IR315 industrial LTE router establishes a high-speed, secure LAN for medical devices via Ethernet or Wi-Fi, transmitting data with robust firewall and VPN encryption for optimal security and integrity. Remote centers gain access to multi-dimensional device status data, facilitating immediate response to any equipment issues and ensuring uninterrupted, stable operation. The Device Manager offers a streamlined interface for easy management of numerous medical devices, enhancing efficiency with comprehensive data insights and effective batch operations for superior network control.



Benefits

New Network Experience

The IR315 offers fast network access with high bandwidth and low latency, supporting both SA and NSA modes, enabling efficient network construction for IoT devices on-site.

Comprehensive Security Strategies

Multi-level security strategies, including various VPNs, firewalls, and device permission management, safeguard sensitive data and core service networks against attacks and threats.

Comprehensive Network Functions

With its versatile networking capabilities, the IR315 excels in both simple and complex, large-scale network environments.

Easy-to-use Cloud Management

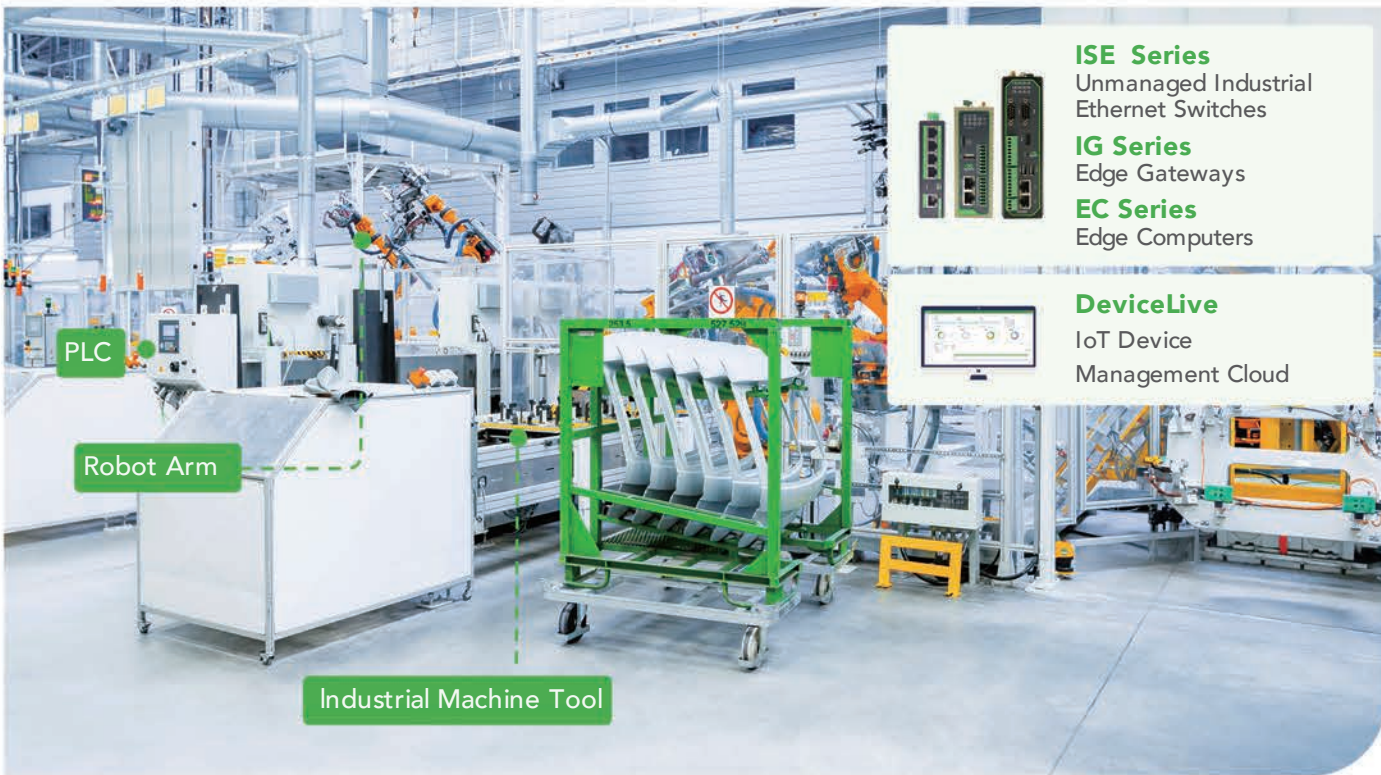
The Device Manager's centralized cloud platform allows for simple, efficient, and cost-effective monitoring and management of thousands of devices across distributed sites, accessible anytime and anywhere.

Digital Factory

Empowering Businesses with Competitive Advantage

Leveraging advanced technologies like AI, Big Data, and the Internet of Things (IoT), we empower industrial enterprises to achieve unprecedented levels of productivity, efficiency, and innovation. Our solutions aim to help improve product quality, meet personalized customer demands, and ensure production safety. With the power of digital technology, unlock the full potential of your digital factory and gain a significant competitive edge.

Our Solution



InHand Networks offers a "cloud+edge" solution for digital factory. With support for multiple industrial protocols and powerful edge computing capabilities, the solution keeps track everything in the factory, enables real-time view of machine status and remote management.

Our Capabilities



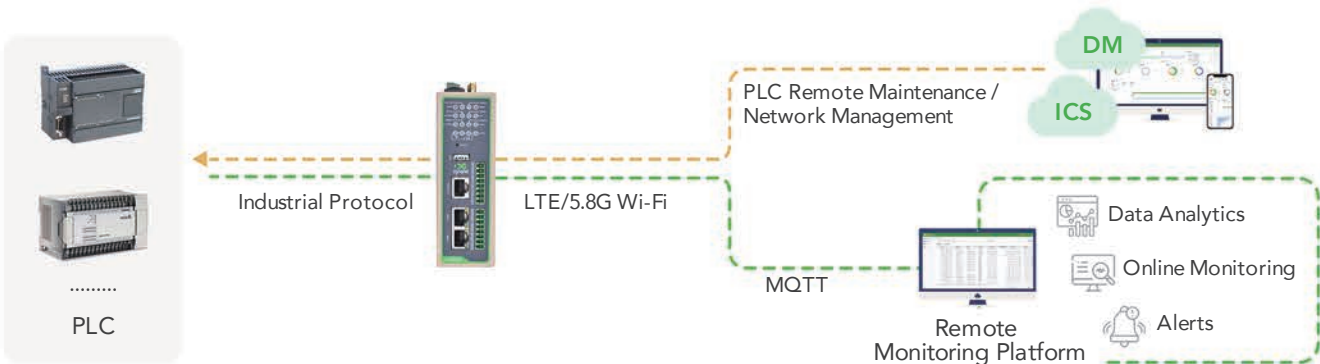
Remote Monitoring Solution for Digital Factory

Customer Requirements

- **Visualizing and Remote Managing in Real Time:** Access to equipment status, production metrics and KPIs anytime anywhere to enable timely decision-making and adjustments.
- **Fault Warning and Predictive Maintenance:** Early detection of issues and preventive maintenance reduce downtime, cut costs, and boost equipment reliability and productivity.
- **Data-driven Decision-making and Optimization:** Capture factory equipment data, enabling queries and exports to optimize resource use and support intelligent decisions with timely insights.

InHand Solution

InHand's remote monitoring solution for digital factories enables seamless IoT transformation, cost-effective maintenance, and improved productivity. The IG902 edge gateway captures real-time data from the PLCs, filters it, and transmits it over 4G networks with proprietary protocols to the remote management platform for analysis. The InConnect remote access service enables remotely configuration, debugging and upgrading of field PLCs. The Device Manager Cloud ensures unified management and remote maintenance of gateways, optimizing operational efficiency and extending device lifespan.



Benefits

High Performance Connectivity

Available with LTE, Wi-Fi, and wired connections, along with various link redundancy technologies, the IG902 ensures continuous and reliable network transmission for uninterrupted device operation.

Simplified Edge-to-Cloud Integration

The IG902 supports major industrial protocols and IoT clouds, making it easy to send device data to the cloud for remote monitoring and preventive maintenance, reducing operational costs.

Built for Developers

The IG902, with Python programmability and Docker support, empowers developers to easily customize business specific applications and streamline app deployment, enhancing efficiency and scalability.

Easy Remote Management

The IG902 comes with the InConnect remote access service, enabling remote maintenance of PLCs. Device Manager offers efficient centralized management for distributed gateways.

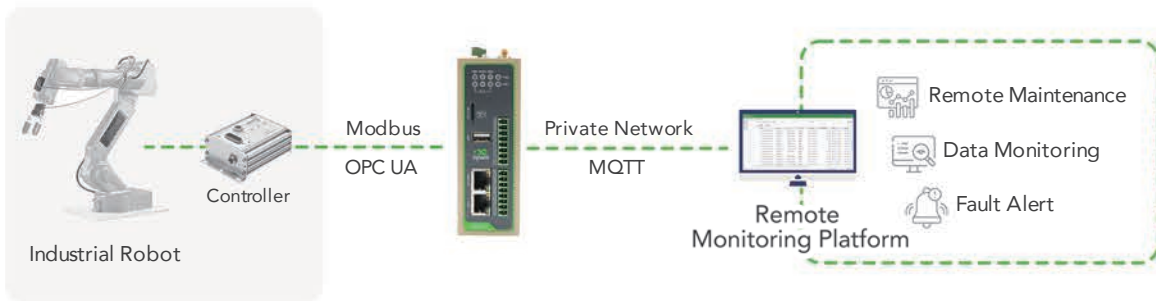
Remote Monitoring Solution for Robots

Customer Requirements

- **Real-time Operational Insights:** Instantly monitor industrial robots' status and manage remotely for real-time production insights, enhancing planning and scheduling efficiency.
- **Fault Prediction and Early Warning:** Collect data from industrial robots to identify fault patterns and anomalies, issuing early warnings for prompt action, reducing downtime, and extending lifespan.
- **Safety and Reliability:** Prioritize system security and integrity to protect industrial robots and data, ensuring confidentiality and uninterrupted production line continuity.

InHand Solution

InHand's Smart Robot Remote Monitoring Solution boosts efficiency with networking and intelligent management for industrial robots. It integrates the IG502 edge computing gateway with robot controllers and a monitoring platform, facilitating data collection and transmission. The IG502's edge computing prowess, supporting numerous industrial protocols and IoT clouds, accelerates project delivery while cutting costs. It pre-processes data to lighten cloud burden and enable swift onsite responses. The platform offers real-time analytics, fault prediction, and remote maintenance, ensuring robust, efficient robot operations.



Benefits

Uninterrupted Connectivity

The IG902 ensures always-online devices via 4G LTE, Wi-Fi, and wired connections with redundancy for continuous, reliable network transmission.

Streamlined Integration

With support for major industrial protocols, the IG902 facilitates easy cloud data transmission and remote monitoring, reducing operational costs.

Advanced Computing & Customization

The IG902 features powerful ARM Cortex-A8 processor and Python programming, enabling intelligent data processing and tailored functionalities.

Efficient Management at Scale

With the Device Manager, the solution simplifies large-scale device deployment and monitoring with web interface configuration and centralized management for system integrity.

Digitalization of Utilities

Injecting “Digital Intelligence” into Public Utilities

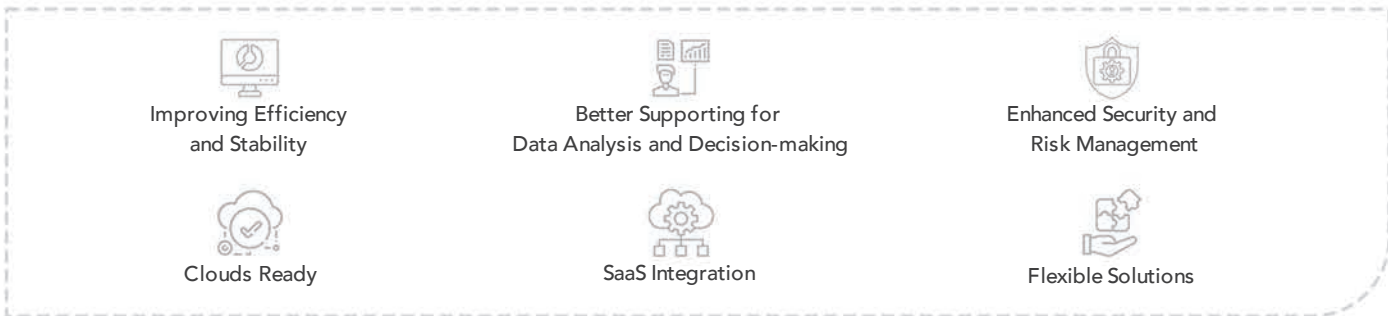
The future of utilities is inextricably linked to digitalization. We harness the power of IoT and cloud computing to empower power, natural gas, water, and heating companies to achieve greater efficiency and service quality, unlocking a path for sustainable growth.

Our Solution



Through monitoring, control and diagnostics using IoT technologies and devices, we can achieve intelligent management and operation of public utility facilities, making them more reliable and secure with greater service quality. These improvements contribute to better user experience, greater satisfaction and loyalty, and ultimately facilitate sustainability of public utility service providers.

Our Capabilities



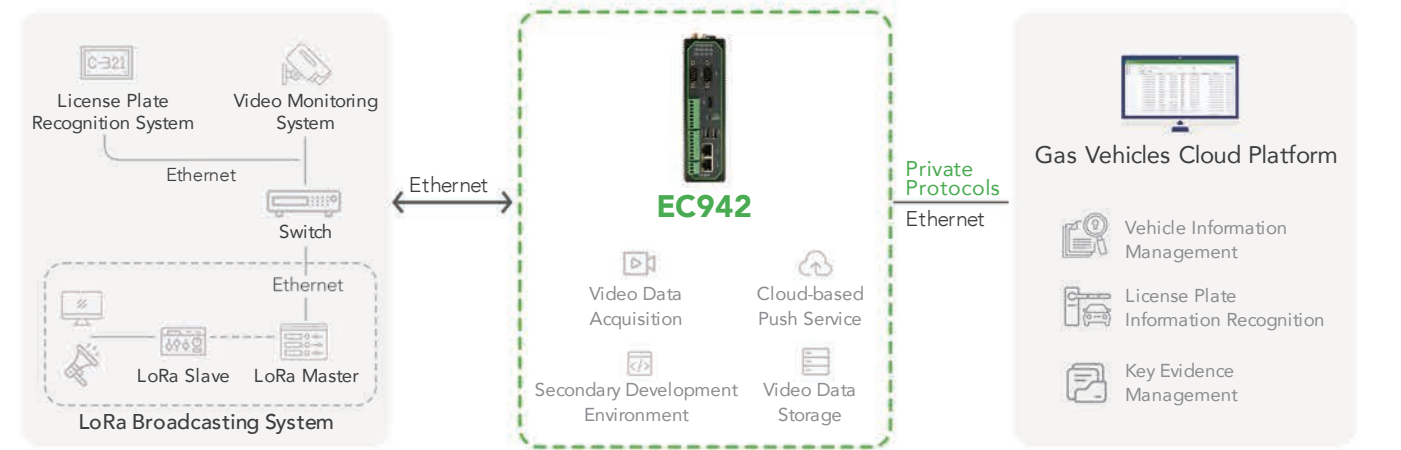
Safety Monitoring Solution for Vehicle Gas Cylinders

Customer Requirements

- **Reliable and Uninterrupted Networking:** Stable and reliable LTE network, with multiple interfaces to connect to different field devices.
- **AI Computing Power:** Recognition of license plate information of gas cylinder vehicles.
- **Support for Guest Applications:** A Linux distribution designed to facilitate the running of guest applications
- **Cloud Integration:** An API interface for seamless data exchange with the cloud.

InHand Solution

The EC942 edge computer automates vehicle gas cylinder safety monitoring at charging stations, reducing labor costs. This integrated system combines license plate recognition, video surveillance, and voice broadcasting of cylinder data, connected via a field switch to a cloud big data platform. The EC942 processes and uploads vehicle information, ensuring compliance and safety in gas refills. If issues arise, it captures and stores video evidence, supported by expandable mSATA storage, streamlining safety operations efficiently.



Benefits

Easy for Customization

The EC942, with Debian Linux 10, supports languages such as C/C++, Java, Python, .Net, and JavaScript, enabling tailored application development for various needs.

Large Capacity for Data Storage & Transmission

The EC942, featuring 16GB eMMC FLASH and an mSATA extension interface, is ideal for the substantial video data storage and transmission needs of charging stations.

Powerful AI Computing Capabilities

The EC942 offers 1 TOPS AI computing, allowing edge-based AI algorithm execution for license plate extraction from video, reducing the need for AI cameras and cutting project costs.

Reliable & Uninterrupted Internet Connectivity

The EC942 offers Gigabit Ethernet, Wi-Fi, and cellular connectivity with redundancy, ensuring continuous Internet access at remote charging stations.

Remote Metering of Water Utilities

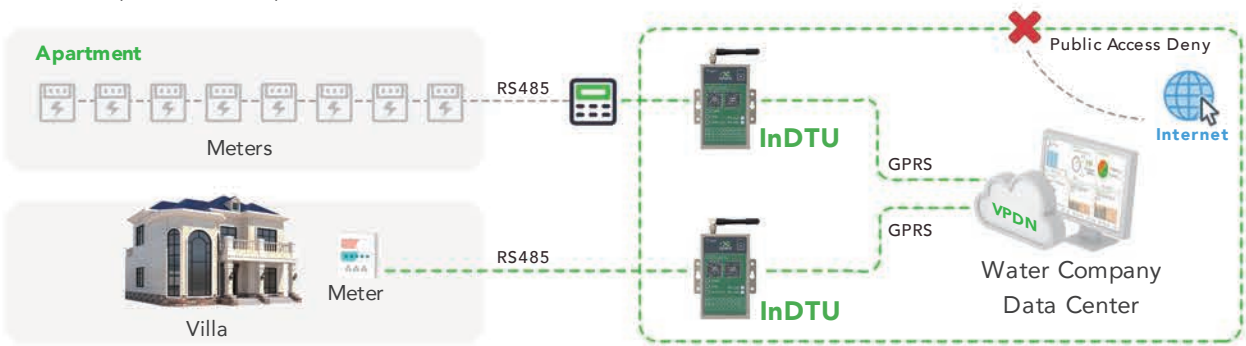
Customer Requirements

- **Real-time Meter Reading:** On-time and accurate water meters reading in various regions of the city, closely tracking and optimizing water usage, to improve water resource management efficiency.
- **Secure and reliable communication between meters and monitoring center:** Robust communication with redundancy mechanisms ensures uninterrupted data transmission to the central monitoring center.
- **Reliable operation for long periods of unattended environments:** Design durable hardware resistant to environmental factors, coupled with energy-efficient components, for consistent, long-term operation in unattended or challenging settings.

InHand Solution

The water company provides water supply for both downtown and suburban areas. In the downtown area, water meters were installed in every resident's house; in suburban areas, meters were installed separately at each villa, and usually, the distance between two villas was 500m to 5km.

Based on the requirements of water meter automatic reading, we provided GPRS based solution. For the downtown areas, we used InDTU324 industrial GPRS modem to connected with the concentrator by RS485 bus in each apartment; for suburban areas, we used InDTU324 to connect directly to the meter of each villa. In each GPRS modem, embedded a SIM card provided by local mobile operator. These SIM cards could provide private APN (Private Access Point Network) service which prevented access from public internet and also enabled the access from the water company's data center to a certain remote meter. (You can consult your local mobile operator about private APN and SIM card).



Benefits

Easy Deployment

Wireless service makes it easy to build up network and can ensure the network cover all the meters in the specific area.

Secure and reliable data transmission

The reliable network guarantees data to be transmitted safely from meters to monitoring center.

Robust design for long-time reliable operation in various environments

The InDTU324 features industrial-grade design, with a temperature range of -40~70°C (-40~158°F), proving quite resilient in harsh unattended sites. Compact size makes installation easy.

Built for the multiple scenarios

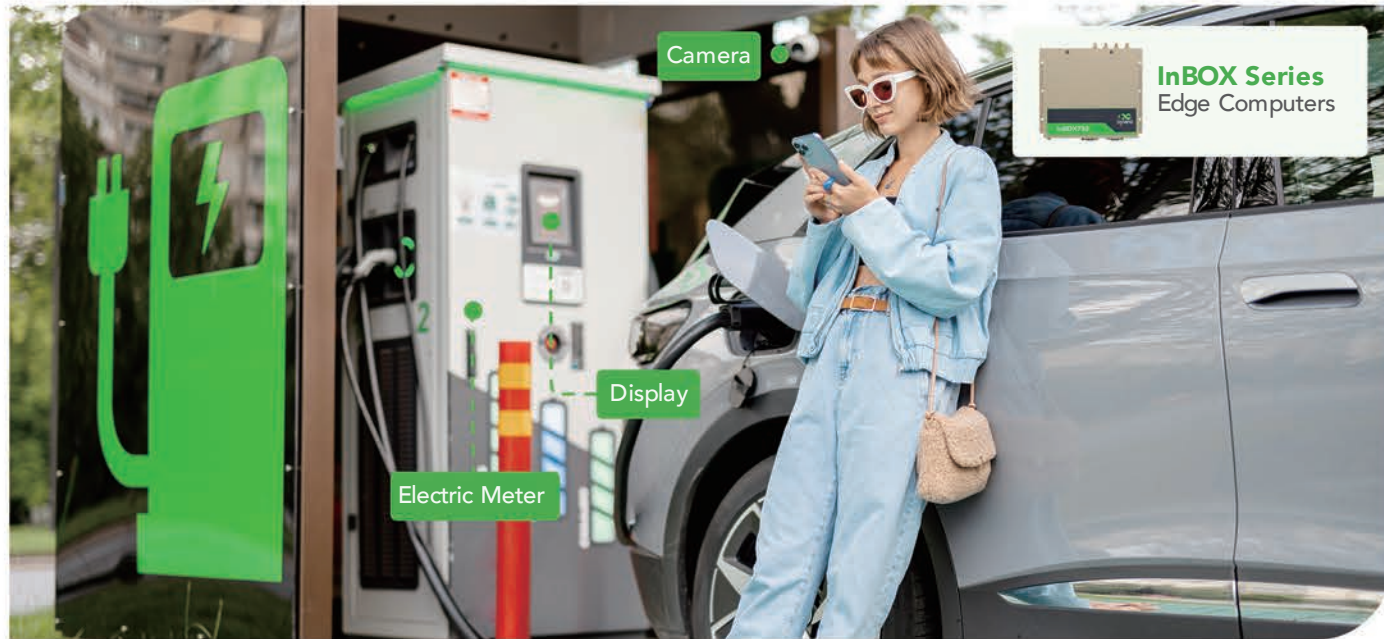
The InDTU324 supports several industrial data protocols including Modbus RTU/Modbus TCP, Transparent TCP, IEC 101 to 104, etc., and also supports customization for customers' requirements.

IoT Connectivity of Clean Energy

Driving Energy Transformation

It is our commitment to help customers meet globally growing demand for energy while transitioning to a more sustainable world. We are driving this transformation by leveraging technologies like IoT, big data analytics, and artificial intelligence. From solar power generation to energy storage, from wind turbines to EV charging, digitalization is pervasive.

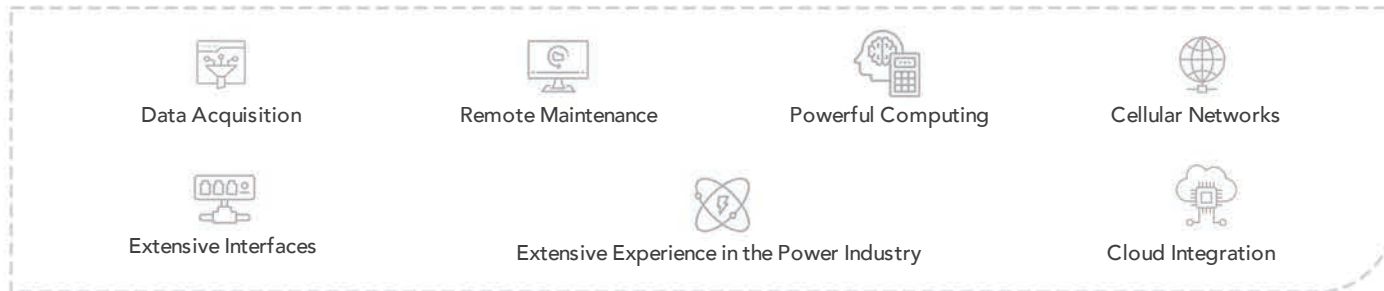
Our Solution



We offer a wide range of digital solutions for clean energy, including:

- Interconnection solution for urban microgrids, including PV power generation, smart PV grid-connected circuit breaker solution;
- Solutions of interconnectivity and data collection for battery energy storage cabinets, connecting PCS with control and operation platforms for charging and discharging management;
- Networking, billing, and control solution for EV charging stations;
- Predictive maintenance for wind power generation equipment.

Our Capabilities



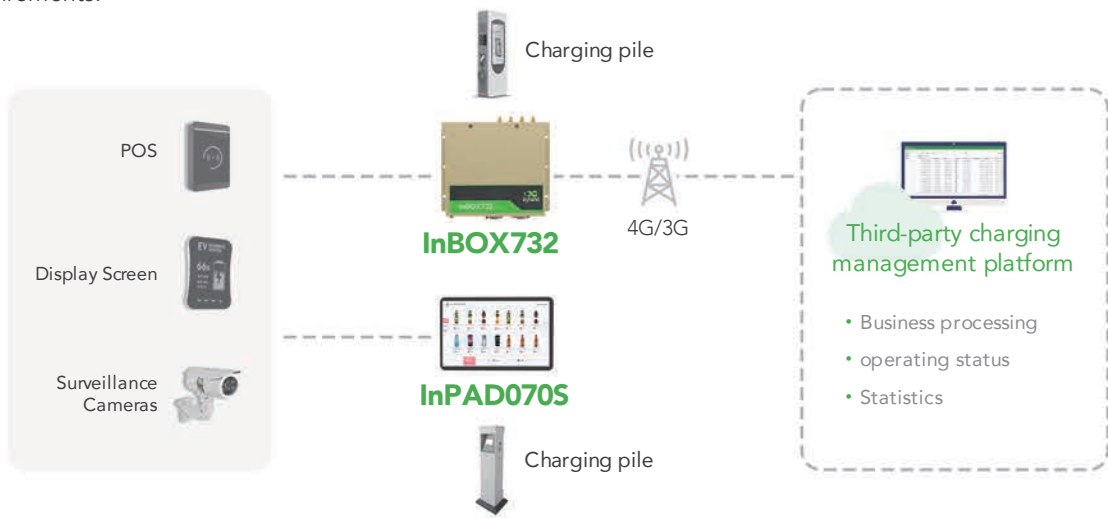
Smart EV Charging Kiosk

Customer Requirements

- **Multiple Networks and Stable Transmission:** Supports 4G, Wi-Fi, wired networks for charging piles across areas, offering real-time status and fault data for prompt maintenance response.
- **System and Cost Optimization:** High-capacity, low-cost equipment with strong compatibility, minimal software adaptation, system-level support, and replaces traditional X86+router solutions.
- **Robust Industrial Design:** Engineered for charging piles, it endures harsh EMC and extreme temperatures, ensuring reliability, minimizing downtime, and enhancing user experience.
- **Rich Interfaces:** A robust data system with multiple interfaces for peripherals like screens and cameras, aiding in custom solution development.

InHand Solution

InHand Networks offers cost-optimizing hardware and network solutions with efficient management. Our devices, compatible with Android and Linux, feature user-friendly interaction and industrial-grade design for EMC protection and wide temperature ranges, ensuring durability in harsh environments. With HDMI, USB, RS485/232, CAN, GPIO, SPK, and MIC interfaces, they meet diverse on-site requirements.



Benefits

Stable Connection Ensures Cloud Integration

The InBOX and InPAD devices support 4G/5G, Wi-Fi and wired connections, excelling in tough environments with seamless network connectivity.

Compatibility with Multiple Operating Systems

The InBOX computers and InPAD tablets run on optimized Android/Linux for app stability, offering a flexible platform for versatile application development.

Resilience in Harsh Environments

The InBOX and InPAD provide Level 4 EMC protection, ensuring prolonged and steady operation of charging piles even in harsh environments, delivering consistent value to customers.

High Performance for Complex Tasks

The InBOX and InPAD boast high-performance processors for complex computations and offer numerous interfaces for expansion, unlocking limitless possibilities.

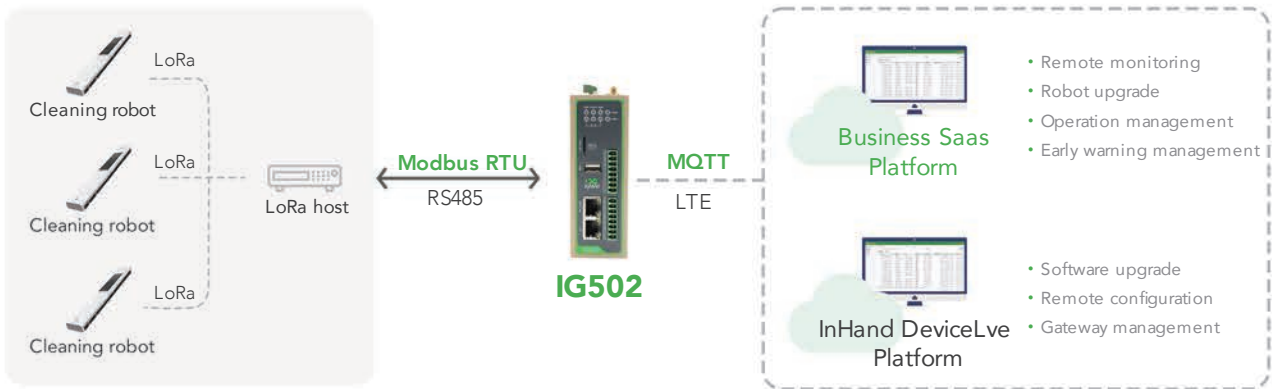
Photovoltaic Cleaning Robots

Customer Requirements

- **Remote Operation and Control:** Remotely start, stop, and direct robot cleaning paths with centralized management and multi-robot control.
- **Fault Monitoring and Remote Diagnostics:** Monitor robots' status and performance in real time, with instant alerts for malfunctions, enabling prompt diagnostics and repairs.
- **Data driven Learning and Analysis:** Collect and analyze robot data, e.g. working hours, cleaning efficiency, energy use, etc. to optimize cleaning strategies and enhance support services.
- **Remote Upgrades and Maintenance:** Remotely upgrade firmware, configure robots, and adjust parameters to boost maintenance efficiency, reduce staff workload, and cut costs.

InHand Solution

InHand Networks offers an integrated solution featuring the IG502 IoT edge gateway and Device Manager cloud, seamlessly integrated with existing robot management platforms for centralized robot monitoring and management. This enables access to real-time operational data, performance metrics, and cleaning progress. By analyzing this data, customers can quickly address malfunctions, refine cleaning tactics, and streamline maintenance schedules, boosting overall efficiency. The Device Manager allows for unified IG502 management, supporting remote batch upgrades and diagnostics, thus minimizing maintenance efforts post-deployment.



Benefits

Cost-effective Communication Solution

The IG502 delivers powerful processing and cost-effective performance, connecting to multiple robots for efficient data management and monitoring.

Flexible Edge Data Processing

The IG502 offers adaptable edge data processing, with customizable functionalities tailored to specific needs and diverse application scenarios.

Efficient Integration with Devices and Clouds

The IG502 supports multiple industrial protocols and major IoT clouds like AWS and Microsoft, addressing diverse data acquisition needs.

Ensured Data Reliability and Integrity

8GB eMMC storage and expandable Micro SD card offer ample data storage. Offline data caching helps ensure data integrity and continuity.



InHand Edge Intelligence Solution

InHand Edge Intelligence Solution

Designed for industrial IoT, the InHand Edge Intelligent Solution empowers industrial enterprises to rapidly establish an intelligent edge network tailored to their business needs, enabling more flexible, efficient, and secure data processing and transmission.

Trends and Challenges of Industrial Digitalization

Industrial digitization is the process of transforming traditional industrial production and operations through the adoption of digital technologies and information and communication technologies (ICTs). Industrial digitalization can not only improve the efficiency and quality of the manufacturing industry, but also create more business opportunities for enterprises, bring higher competitiveness and sustainability. Hence, it is an inevitable choice for the current development of industrial enterprises.

Trends of Industrial Digitalization



Penetration of the Internet of Things

The widespread application of Internet of Things (IoT) technology enables industrial equipment and sensors to be connected to each other, enabling real-time monitoring and data exchange, improving production efficiency and quality.



Rise of Edge Computing

Edge computing enables data processing capabilities to be closer to the data source, reduces latency, adapts to real-time requirements, and plays a positive role in industrial digitalization.



Application of Artificial Intelligence and Machine Learning

Artificial intelligence (AI) and machine learning (ML) algorithms are increasingly used in industrial digitalization for predictive maintenance, quality control, production optimization, etc., improving the intelligence and efficiency of the system. Adaptability.



Application of 5G Technology

5G technology provides higher bandwidth and lower latency, enabling industrial equipment to better communicate in real time, supporting large-scale device connections and high-speed data transmission.

Challenges Facing Industrial Digitalization



Security and Privacy Issues

As digitization expands, industrial systems face more cybersecurity threats. In addition, the collection and sharing of large amounts of data also raises concerns about privacy protection



Talent Shortage

Implementing industrial digitalization requires professional technical talents, including Internet of Things experts, data analysts, artificial intelligence engineers, etc. The talent shortage in this area is a challenge



Technical Standards and Interoperability

Industrial digitalization involves multiple technical fields. Different equipment and systems use different standards and protocols, and interoperability issues have become a constraint



Data Governance

Processing and managing large-scale data, including storage, cleaning, and analysis, requires effective data governance strategies to ensure data quality and consistency

InHand Edge Intelligence Solution

In order to better meet the requirements of real-time, privacy and reliability, artificial intelligence applications can be closer to data sources, so as to better adapt to various actual scenarios. InHand edge intelligent solution is designed for the field of industrial Internet of things. InHand edge intelligent hardware and innovative IoT cloud management platform help industrial enterprises to quickly build an intelligent edge network and achieve more flexible, efficient and secure data processing and transmission.

Solution Architecture



Why InHand Networks?

Optimized Network Bandwidth

By processing data at the edge, you can reduce the need for network bandwidth and improve data transmission efficiency and cost-effectiveness



Real-time Decision-making

By moving computing tasks to the edge of the network, data transmission latency can be reduced to millisecond level for critical services, such as fault detection and predictive maintenance.



Enhanced Privacy and Security

Data localization preprocessing reduces the risk of transferring sensitive data to the cloud and improves data security.



Flexible and Scalable

The solution provides a more flexible and scalable computing mode, and can perform customized computing tasks on different devices according to specific requirements.



Features of the Solution

1. With InHand DeviceLive Platform, Remote Management is Really Worry-free



Zero-Touch Deployment

With plug-and-play devices, you can implement remote deployment with DeviceLive



Easy Configuration

WEB GUI configuration
Intuitive and simple



Unified Management

Batch device configuration
Scheduled firmware upgrade



Alert & Remote Diagnosis

Multiple alarm rules to monitor business, Remote diagnosis to save effort



Multiple Security Strategy

Data security encryption
Multi-role access control and multi-factor identity authentication



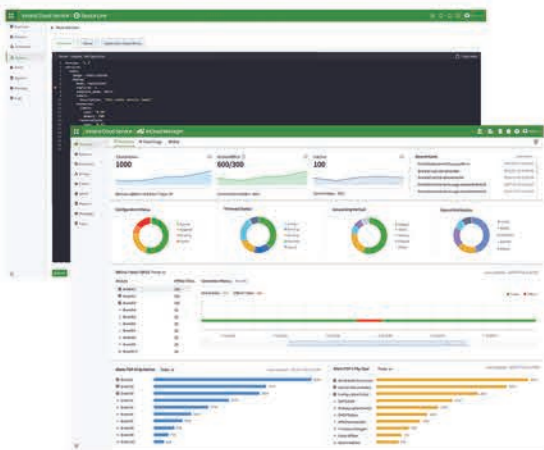
Visual Monitoring

Comprehensive insight into device running status, network quality



DeviceLive Cloud Service

Edge Computing APP Management



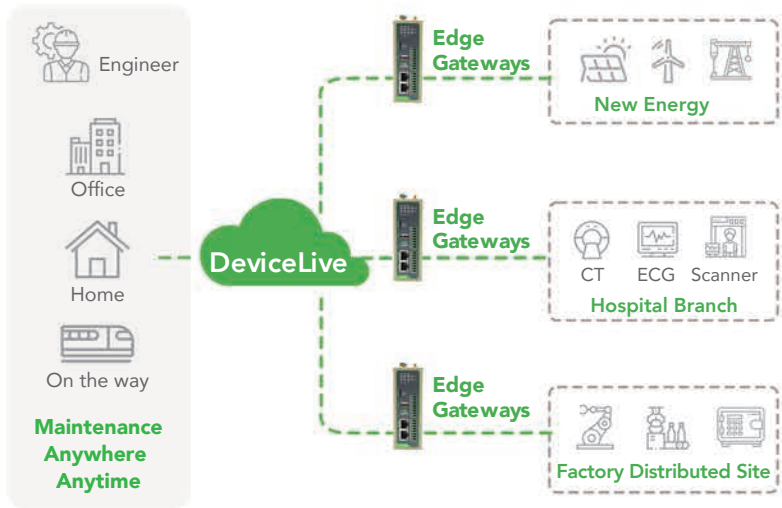
For edge intelligent hardware products, DeviceLive provides management and deployment of edge computing container applications, native applications, etc., without the need for users to build OTA services, providing a one-stop solution.



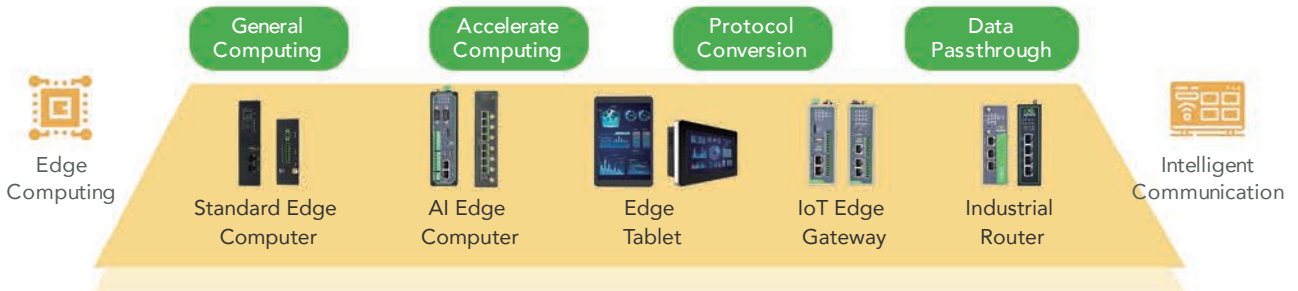
DeviceLive can centrally configure parameters of edge intelligent hardware, manage containers, upgrade edge computing apps, and support unified deployment package policy setting, define deployment rules, and realize centralized upgrade and control of distributed intelligent onsite.

Remote Control Over Remote Machines

DeviceLive can enable engineers to remotely access the terminal equipment connected to the gateway, achieve remote terminal maintenance, program download, and establish a transmission channel for the terminal data to be continuously reported to the data service center. It is suitable for distributed terminal access in various iot scenarios, and supports the access of industrial computers, servers, cameras, PLCs, HMIs, controllers and other Ethernet terminal devices.



2. Multifunctional Edge Intelligence Hardware, Adaptable to Various IIoT Application Scenarios



Multiple CPU Options

from single-core to multi-core ARM processors;



Multiple Protocols

from simple transparent transmission to industrial protocols to various industry protocols;



Multiple AI Performance

from 1 to 26 TOPS, suitable for various edge AI scenarios, such as facial recognition, speech recognition, image recognition, etc.;




Multiple Interface Options

Ethernet, serial port, USB, IO, CAN, HDMI, LVDS, etc.;

3. DeviceSupervisor™ Agent service


DeviceSupervisor Agent is self-developed by InHand and runs in IG&EC to help customers "zero code" to achieve data acquisition, processing and cloud edge intelligence software.

- + "Zero code/low code" easily realizes data collection on the cloud
- + Integrate 100+ mainstream data collection protocols
- + Support data preprocessing
- + Integrated data publishing service, seamless access to public cloud, private cloud, local SCADA, etc.




Data Acquisition

- 80+ mainstream protocol driver
- Convenient collection configuration
- Concurrent collection from multiple devices
- Massive collection points
- Multiple polling cycles are set




Edge Computing

- Data visualization preprocessing
- Python data preprocessing
- Data edge storage analysis



Protocol Conversion

- More than 10 protocol conversions
- Support concurrent conversion



Data Cloud

- Customize MQTT themes and payloads
- Connect to multiple MQTT pl atforms simultaneously

Data Collection

DSA supports **more than 80** mainstream protocol drivers

- **Standard industrial protocols:** Modbus , OPC UA , BACnet , etc.
- **Industrial equipment:** PLC , smart instruments, sensors
- **Energy equipment:** power regulations, meters, inverters, building agreements

DSA supports custom collection cycles

- Can Set different polling cycles for different controllers
- Can set different polling periods for the various data in controller
- Support millisecond collection of key data, with collection frequency up to 100ms
- Properly utilize the performance resources of gateways and controllers

DSA supports editing and configuring collection strategies

- Support Excel import / export
- Support device template function to quickly add devices

Standard industrial protocols

ModbusOPC UABACnetEUROMP

Industrial equipment

SIEMENSRockwell AutomationMITSUBISHI ELECTRICSchneider ElectricDELTA INOVANCE FATEK® ABBOMRON KEYENCE BECKHOFFGEYASKAWA Panasonic Honeywell

Energy equipment

IECIECIECDNP3DLT

Application scenarios

InHand's edge intelligence solution integrates a variety of advanced technologies such as 5G , AI , and the Internet of Things, and can be widely used in multiple fields. The following are some application scenarios for the edge intelligence solution .

Smart Manufacturing: In industrial production, edge intelligence solutions can be used to monitor and optimize manufacturing processes in real time, perform equipment health monitoring and predictive maintenance to improve production efficiency and reduce downtime.

Smart Retail: Edge intelligence can be used in the retail industry, such as using cameras and sensors in stores for real-time monitoring, customer analytics, and inventory management to provide a smarter shopping experience.

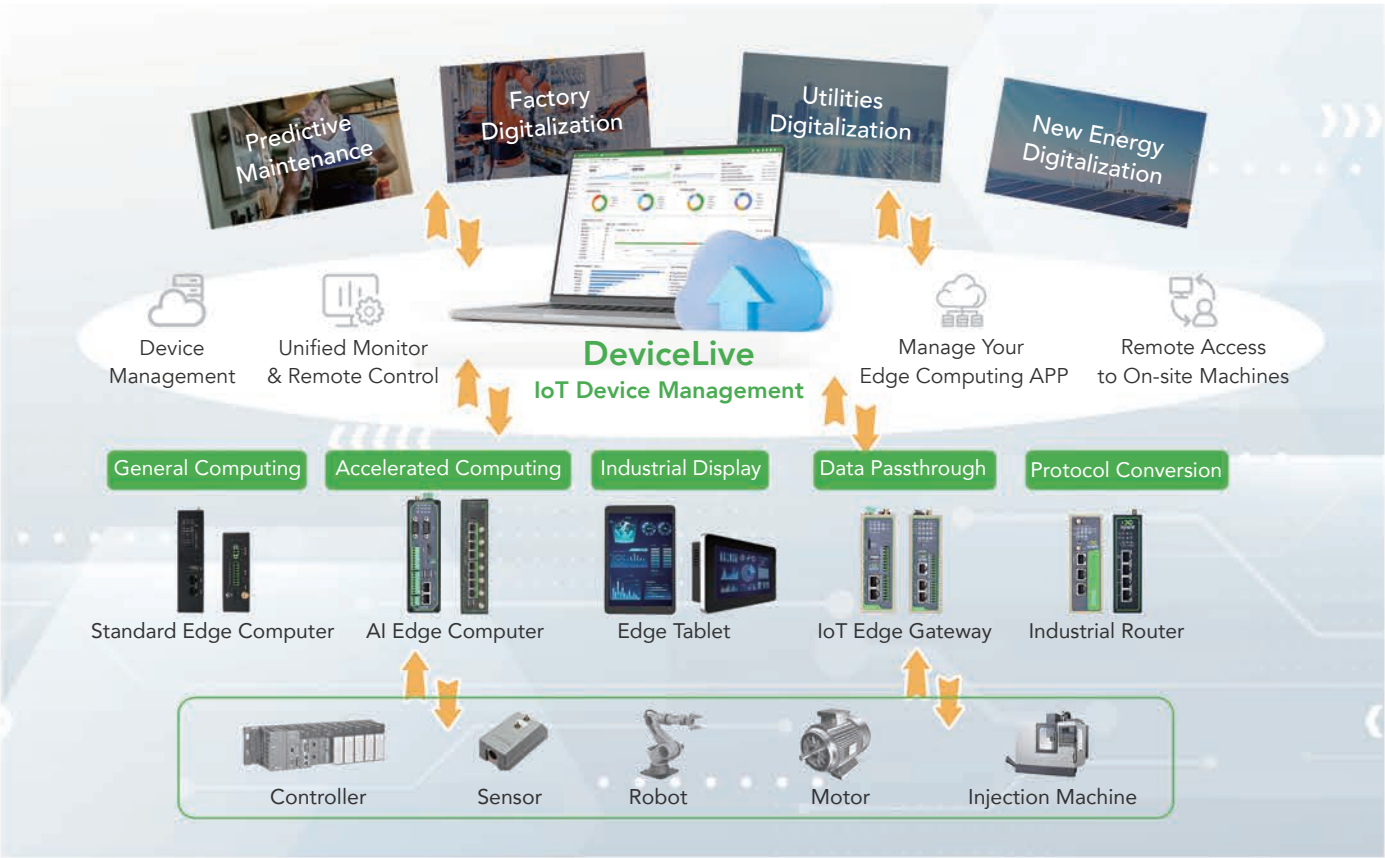
Public Utilities: Edge intelligence can be used in public utilities , such as water affairs. Edge intelligence can be used to monitor water quality, water level and pipeline status in real time, improve water resource management efficiency, prevent water quality problems, and reduce water leakage rates.

Energy Management: In the energy field, edge intelligence can be used to monitor and optimize energy consumption in real time, such as environmental control in smart buildings, equipment energy efficiency analysis, etc.



DeviceLive

IoT Device Management Platform



• **Device Centralized Management**

Zero-touch deployment, remote configuration, predictive alert. Visual monitoring enhances management efficiency



• **Edge Computing Management**

DSA, container management, edge computing app upgrade. Centralized upgrade and control of distributed edge sites



• **Remote Access to On-site Machines**

Remote maintenance, program downloading, parameter adjustment. Establish transmission channels for continuous reporting of terminal data to the business server

Features and Advantages

Designed for industrial IoT, the DeviceLive enables quick building of intelligent edge networks. Collaborating with edge hardware, DeviceLive helps you deploy and upgrade edge APPs, implement edge data collection and pre-processing, and enable status visual monitoring.

Features	Description
Bulk Devices Configuration	Remotely configure devices through GUI
Bulk Devices Upgrade	Remotely upgrade device firmware, support setting upgrade schedule flexibly
Device management by Group	Support device classification according to business needs, making the management more flexible
Remote Control Command	Remote reboot device, factory reset
Connection Status Statistics	Monitor device connection status, network type, etc.
Network Status Analysis	Monitor device interface connection status, link status, and traffic consumption
Network Quality Monitoring	Monitor cellular network signals, monitor network delay, jitter, packet loss, and throughput
DSA Management	DSA remote configuration, upgrade, status overview
Remote Diagnostic Tool	Diagnostic logs, Ping, Traceroute, packet capture, event analysis
Geolocation management	Support GPS/base station positioning/manual positioning, overview device distribution on the map
Alert Policy	Support a variety of alarm strategies, such as CPU utilization, link status, and cellular traffic monitoring; support SMS, email, and APP notifications
Connector	Quickly establish a remote channel to support engineers to remotely access and control terminal equipment
Edge Computing Management	Container and Native Application Management, Edge Computing App Upgrade and Deployment
MFA	Account multi-factor authentication, comprehensive security

Portal Address: device.inhandcloud.com

A wide-angle photograph of a modern industrial factory floor. The ceiling is high with a complex network of grey metal beams and large, flexible silver ventilation ducts. In the foreground and middle ground, several yellow robotic arms are mounted on workstations, enclosed by clear safety glass. The floor is a smooth, light grey with white dashed lines. The overall lighting is bright and even.

Standard Edge Computers

EC312 / InBOX732

Using the ARM architecture, our Standard Edge Computer provides you with a wide range of interface, network, performance and edge application options for seamless edge-to-cloud integration, suitable for today's IoT and edge computing applications.



EC312

Basic Edge Computer

Basic Computility Open Platform

CPU: TI AM6231, single-core,
Cortex-A53@1.4GHz
1G SDRAM+8G eMMC
Linux distribution (based on Debian 11)

High-security Protection

Firewall, VPN
Secure Boot
TPM 2.0
TrustZone

High Reliability

4G/Wi-Fi/FE, etc.
watchdog
Fanless
Supercapacitor

InHand DeviceLive Cloud Manager

Remote device access
Remote device batch management
Remote batch management of edge applications
Remote container management

The EC300 series industrial edge computer is a highly integrated Arm-based Linux platform. It is a compact edge computer, specificallyfor users who need lightweight application design.The EC300 has a built-in Linux distribution and provides long-term support for the Linux kernel, including security patches and troubleshooting, to meet the needs of computing systems in industrial automation applications to extend the life cycle and ensure industrial projects be safe and sustainable.

Hardware

CPU	ARM Cortex-A53@1.4GHz
RAM	1GB DDR4
FLASH	8GB eMMC
Ethernet Port	2*10/100Mbps Ethernet port
Serial Port	1*RS-232/485, 1*RS-485, isolation
Wi-Fi (Optional)	STA, 802.11ac/a/b/g/n, 2.4G/5G
Bluetooth (Optional)	BLE 4.2
GPS (Optional)	Satellite location GPS, 1*SMA
USB	1*USB 2.0
SIM Card	Nano SIM x 2
TF Card	MicroSD support, up to 32GB expansion
Interface Extension (Optional)	LoRa Up to 2*RS232/RS485/4-20mA/CAN FD, isolation Up to 4*DI+4*DO, isolation

TPM (Optional)	TPM2.0
Power Input	DC9-48V
Power Failure	Hold for 20 seconds after power
Protection	failure (safe shutdown)
Installation	Panel, DIN-Rail
Protection Rating	IP30
Housing	Metal + Plastic
Storage Temperature	-40°C ~ 85°C
Operation Temperature	-20°C ~ 70°C
Ambient Humidity	5~ 95% (non-condensing)
EMC	level 3
Certification	CE, FCC, PTCRB, IC, Verizon AT&T

Software

Network Type	LTE CAT1
Access Authentication	CHAP,PAP
Secondary Development	Multi-programming language
Environment	development platform
Access Cloud Platform	AWS, Azure and other cloud platforms
Industrial	Modbus RTU/TCP, EtherNet/IP, ISO on
Protocol	TCP, OPC UA, DLT645-2007, IEC101/104, etc.
LAN Protocol	ARP, Ethernet
Network	ICMP, DNS, TCP/UDP, TCPServer,
Protocol	DHCP, Static routing
Network Security	VPN, Firewall
Reliability	Link Detection, Dual SIM Failover, Embedded Watchdog

Data Security	Secure Boot, TrustZone
Configuration	Web,Telnet,SSH
Upgrade	Web, FOTA, DFOTA Support local system log, remote
Log	log export and important log power-off autosave
Remote	InHandDeviceLiveor HTTP, HTTPS,
Management	Telnet, SSH, etc
DeviceLive	Supports cloud-based parameter configuration,
Cloud	container management, application and firmware management
	IEOS pre-installed
OS	(InHand Edge linux system: Debian11, Kernel 5.10.168)



InBOX732

High Performance Edge Computer

Hardware and Operating System

Six-core high-performance CPU
maximum frequency 1.8GHz
supports Android/Linux

High-security Protection

3G/4G high-speed connection
Gigabit wired network
Wi-Fi, Bluetooth

Rich Peripheral Interfaces

USB2.0/3.0, RS-232/485,
HDMI2.0, GPIO, CAN, SPK, MIC

Industrial Grade Product Quality

Wide temperature operating range
IP40 EMC protection level level3

The InBOX730 series is a high-performance industrial edge computer with a rich variety and quantity of serial ports to meet various peripheral needs. The entire series adopts industrial-grade design and supports 3G/4G, Wi-Fi, and dual Gigabit Ethernet network access., supports wide temperature characteristics, high EMC level and IP40, meets the needs of more scenarios and brings more expansion possibilities

Hardware

CPU	Rockchip six-core processor, maximum frequency 1.8GHz	GPS (optional)	GPS:1*SMA
RAM	2GB	USB	4*USB 2.0; 1*USB3.0
FLASH	16GB eMMC	Power	DC9-24V
Ethernet Port	2*10/100/1000Mbps, WAN/LAN	Installation	Wall mounting
Serial Port	4*RS232, DB9 male connector, 2*RS485 (3pin terminal, with flange)	Protection Rating	IP40
HDMI	1*HDMI2.0	Housing	Metal
Wi-Fi	2*RP-SMA, Support, 802.11a/b/g/n, support Client/AP mode	Storage Temperature	-40°C ~ 85°C
GPIO	10-pin green terminal*1 (plug-in, screw-free spring type) Definition: IN1~4, GND, OUT1~4, GND	Operating Temperature	-20°C ~ 70°C
CAN	1*CAN	Ambient Humidity	5 ~ 95% (no condensation)
MIC&SPK	1*MIC interface, 3.5 mm standard socket 1*SPK interface, two-channel, 4 ohm 3W	EMC	Level 3
		Certification	-

Software

Network Type	LTE-TDD/LTE-FDD/WCDMA/CDMA/TD-SCDMA/ UMTS/EDGE/GPRS/GSM
Graphic Processing	Dual ISP pixel processing capacity is up to 800MPix/s, supports dual camera data input at the same time, and supports high-end
Video Codec	H.265/H.264/VP9 4K@60fps HD video decoding
OS	Linux (Debian10)/Android10
Timed Switch	Support
Upgrade	Local USB upgrade
Bluetooth	Bluetooth5.0
Remote Management	-
Reliability	Support hardware and software watchdog

Selection Guide

	Model	EC312	InBOX732
Processor	CPU	ARM Cortex-A53, single-core 1.4GHz	RK3399, ARM dual Cortex-A72 and quad Cortex-A53 1.8 GHz
Memory	RAM	1GB on board	2GB on board
	FLASH	8GB eMMC	16GB eMMC
Graphics	HDMI	/	1*HDMI2.0, up to 4096*2160
Cellular	Cellular	4G	4G
Interface	Ethernet	2*100Mbps Ethernet port, RJ45 connector	2*10/100/1000Mbps, RJ45 connector
	Serial	1*RS-232/485+1*RS-485, isolated, terminal-block connector	4*RS-232 (DB9)+2*RS-485 (terminal-block connector)
	USB	1*USB 2.0	4*USB 2.0, 1*USB3.0
	CAN	2*CAN FD (optional)	1*CAN
	I/O	4*DI+4*DO, isolated, optional	4*DI+4*DO
	Wi-Fi	STA, 802.11ac/a/b/g/n, 2.4G/5G	STA, 802.11ac/a/b/g/n, 2.4G/5G
	Bluetooth	BT 4.2 On board	BT 4.2 On board
	GPS	YES	YES
	MIC	/	YES
	SPK	/	YES
	LoRa	YES (optional)	/
	Button	1*Reset, 1*USER	1*Mode, 1*Power
Power	Power Supply Voltage	DC input: unregulated 9V to 48V,Reverse voltage protection	DC input: unregulated 9V to 24V, Reverse voltage protection
Environment	Operating Temperature	-20°C~70°C	-20°C~70°C
Operating System	Operating System	Linux	Linux
Mechanical	Installation	Panel, DIN-Rail	Panel
	Dimensions	145*106*36 mm	190.2*160.2*4.36 mm (Includes mounting parts)
	Housing	Metal + Plastic	Metal

A large white industrial robotic arm is positioned in a factory setting. In the background, a large monitor displays various data visualizations, including pie charts, bar graphs, and line charts. The scene is brightly lit with overhead industrial lights.

AI Edge Computers

EC942 / EC954

Our AI Edge Computer portfolio provides the best configuration for your application. AI Edge Computer supports mainstream AI applications, including machine vision, video analysis, automatic inspection, and more. We deliver uncompromising performance under the most demanding operating conditions (temperature, shock and vibration, etc.).



EC942

Lightweight AI Edge Computer

**Strong Performance
Open Platform**

CPU: ARM Quad Cortex-A55@2.0GHz
GPU: Mail-G52 2EE
NPU: RKNN, 1TOPS
Linux distribution (based on Debian 10)

**High-security
Protection**

Firewall, VPN
Secure Boot
TPM 2.0
TrustZone

**High
Reliability**

5G/4G/Wi-Fi/GbE,etc.
watchdog
Fanless

**InHand DeviceLive
Cloud Manager**

Remote device access
Remote device batch management
Remote batch management of edge AI applications
Remote container management

The EC942 series edge computer is a lightweight AI accelerated edge computer developed for industrial IoT applications. With its powerful edge computing capability, 1.0 TOPS AI computing power, comprehensive security, wireless access services and other characteristics, the EC942 can support device networking of up to 10,000 units, providing high-speed data channels for TRUE device informatization.

Hardware

CPU	ARM Quad-core Cortex-A55@2.0GHz	SIM Card	1.8V/3V, 2*Micro SIM
GPU	Mali G52 2EE	TF Card	Supports Micro SD
NPU	1.0 TOPS	I/O (Optional)	4*DI, 4*DO
RAM	4GB DDR4	Expansion Interface	1*mSATA
FLASH	16GB eMMC	TPM (Optional)	TPM2.0
Ethernet Port	2*10/100/1000Mbps Ethernet port	Power Input	DC12-48V
Serial Port	2*RS-232/485/422, terminal-block	Installation	Panel, Rail
CAN (Optional)	1*CAN 2.0A/B	Protection Rating	IP30
HDMI	1*HDMI 2.0	Housing	Metal
Wi-Fi (Optional)	STA, 802.11ac/a/b/g/n, 2.4G/5G	Storage Temperature	-40°C ~ 85°C
Bluetooth (Optional)	BLE 5.0	Operation Temperature	-20°C ~ 70°C
GPS (Optional)	Supports GPS, Beidou, and GLONASS positioning	Ambient Humidity	5~ 95% (non-condensing)
USB	USB 2.0, 2*TypeA, 1*TypeC	EMC	level 3
		Certification	CE, FCC, PTCRB, Verizon, AT&T,

Software

Network Type	5G SA/NSA, LTE CAT4
Access Authentication	CHAP, PAP
Secondary Development Environment	Multi-programming language development platform
Access Cloud Platform	AWS, Azure and other cloud platforms
Industrial Protocol	Modbus RTU/TCP, EtherNet/IP, ISO on TCP, OPC UA, DLT645-2007, IEC101/104, etc.
LAN Protocol	ARP, Ethernet
Network Protocol	ICMP, DNS, TCP/UDP, TCP Server, DHCP, Static routing
Network Security	VPN, Firewall
Reliability	Link Detection, Dual SIM Failover, Embedded Watchdog
Data Security	Secure Boot, TrustZone
Configuration	Web, Telnet, SSH
Upgrade	Web, FOTA, DFOTA
Log	Support local system log, remote log export and important log power-off autosave
Remote Management	InHandDeviceLiveor HTTP, HTTPS, Telnet, SSH, etc
DeviceLive Cloud	Supports cloud-based parameter configuration, container management, application and firmware management
OS	IEOS pre-installed (InHand Edge linux system: Debian10, Kernel 4.19)



EC954

High Performance AI Edge Computer

Strong Performance Open Platform

CPU: ARM Quad Cortex-A55@2.0GHz
GPU: Mail-G52 2EE
NPU: RKNN, 1 Tops,
Integrated 1.0 TOPS computing power, expansion up to 26TOPS

High-security Protection

Firewall, VPN
Secure Boot
TPM 2.0
TrustZone

High Reliability

5G/4G/Wi-Fi/GbE,etc.
watchdog
Fanless

InHand DeviceLive Cloud Manager

Remote device access
Remote device batch management
Remote batch management of edge AI applications
Remote container management

The EC954 series edge computer is a high-performance multi-interface edge computer with AI extensions developed for industrial IoT applications. With its powerful edge computing capability, 1.0 TOPS AI computing power(Expandable up to 26TOPS), comprehensive security, wireless access services and other characteristics, the EC954 can support device networking of up to 10,000 units, providing high-speed data channels for TRUE device informatization.

Hardware

CPU	Arm Quad-core Cortex-A55@2.0GHz	TF Card	Supports Micro SD
GPU	Mali G52 2EE	I/O	4*DI, 4*DO
NPU	1.0 TOPS, extend 8-26 TOPS AI card	Expansion Interface	1*mSATA
RAM	4GB DDR4	TPM	TPM2.0
FLASH	16GB eMMC	Power input	DC12-48V
Ethernet Port	4* 10/100/1000Mbps Ethernet port	Installation	Panel, Rail
Serial Port	4*RS-232/485/422+4*RS485, RJ45	Protection Rating	IP30
CAN	2*CAN 2.0A/B	Housing	Metal
HDMI	1*HDMI 2.0	Storage Temperature	-40°C ~ 85°C
Wi-Fi	STA, 802.11ac/a/b/g/n, 2.4G/5G	Operation temperature	-20°C ~ 70°C
Bluetooth	BLE 5.0	Ambient humidity	5~ 95% (non-condensing)
GPS	Supports GPS, Beidou, and GLONASS positioning	EMC	level 3
USB	USB 2.0, 2*TypeA, 1*TypeC	Certification	CE, FCC, PTCRB
SIM Card	2*Standard SIM		

Software

Network Type	5G SA/NSA, LTE CAT4
Access Authentication	CHAP, PAP
Secondary Development Environment	Multi-programming language development platform
Access Cloud Platform	AWS, Azure and other cloud platforms
Industrial Protocol	Modbus RTU/TCP, EtherNet/IP, ISO on TCP, OPC UA, DLT645-2007, IEC101/104, etc.
LAN Protocol	ARP, Ethernet
Network Protocol	ICMP, DNS, TCP/UDP, TCP Server, DHCP, Static routing
Network Security	VPN, Firewall
Reliability	Link Detection, Dual SIM Failover, Embedded Watchdog
Data Security	Secure Boot, TrustZone
Configuration	Web, Telnet, SSH
Upgrade	Web, FOTA, DFOTA
Log	Support local system log, remote log export and important log power-off autosave
Remote Management	InHandDeviceLiveor HTTP, HTTPS, Telnet, SSH, etc.
DeviceLive Cloud	Supports cloud-based parameter configuration, container management, application and firmware management
OS	IEOS pre-installed (InHand Edge linux system: Debian11, Kernel 5.10)

Selection Guide

	Model	EC942	EC954
Processor	CPU	RK3568, Quad Cortex-A55@2.0GHz	RK3568, Quad Cortex-A55@2.0GHz
	GPU	Mali G52 2EE	Mali G52 2EE
	NPU	1.0 TOPS	1.0 TOPS, extend 8-26 TOPS AI card
Memory	RAM	4GB on board	4GB on board
	FLASH	16/32GB eMMC	16/32GB eMMC
Graphics	HDMI	1*HDMI2.0, up to 4096*2160	1*HDMI2.0, up to 4096*2160
Cellular	Celullar	5G/4G	5G/4G
Expansion	mSATA	YES	YES
	M.2	YES	YES
Interface	Ethernet	2*10/100/1000Mbps	4*10/100/1000Mbps
	Serial	2*RS-232/485/422, terminal-block	4*RS-232/485/422+4*RS-485, RJ45
	USB	USB 2.0, 2*Type A, 1*Type C	USB 2.0, 2*Type A, 1*Type C
	CAN	1*CAN FD	2*CAN FD
	I/O	4DI+4DO	4*DI+4*DO
	Wi-Fi	STA, 802.11ac/a/b/g/n, 2.4G/5G	STA, 802.11ac/a/b/g/n, 2.4G/5G
	Bluetooth	BT 4.2 On board	BT 4.2 On board
	GPS	YES	YES
	Button	1*Reset, 1*USER, 1*Power	1*Reset, 1*USER, 1*Power
Power	Power Supply Voltage	DC input: unregulated 12V to 48V, Reverse voltage protection	DC input: unregulated 12V to 48V, Reverse voltage protection
Environment	Operating Temperature	-20~70°C	-20~70°C
Operating System	Operating System	Linux	Linux
Mechanical	Installation	Panel, DIN-Rail	Panel, DIN-Rail
	Dimensions	47.3*162.7*148.3 mm	200*120*48.6 mm
	Housing	Metal	Metal



ARM Edge Tablets

InPAD070S / InPAD3101

The InPAD series is a reliable intelligent industrial and commercial IoT solution with stable network connection, sufficient interfaces, and good structural design, and can be applied to various application scenarios such as HMI, remote monitoring, and data acquisition, bringing you a more flexible and stable user experience.



InPAD070S

7-inch All-in-one Android Tablet

Hardware and Operating System

Quad-core RK3288 processor, deeply optimized Android/Linux system

Stable and High-speed Connection

3G/4G high-speed connection, Wi-Fi 100M wired network, Bluetooth

Peripheral Interface and Structural Design

USB2.0, RS-232/485-friendly structural design meets any installation scenario

Industrial Grade Product Quality

Wide temperature operating range,IP65 (screen side), EMC protection design

The InPAD070S series is a new generation of 4G smart terminals, equipped with RK3288 processor, providing higher performance, lower power consumption and more stable hardware and software configurations. It supports 3G/4G, Wi-Fi, and wired networking methods, and is available everywhere Uninterrupted Internet access, the whole machine has wide temperature characteristics, and IP65 protection level on one side of the screen, all designed for industrial applications

Hardware

CPU	RK3288 quad-core processor, maximum frequency 1.6GHz	SIM	1.8V/3V, 1*drawer type card holder
RAM	2GB	Power	DC12V
FLASH	8GB eMMC	Installation	Wall mounting
Screen	Size: 7" display ,Resolution; 1024x600,	Protection Rating	IP65 (screen side)
	Brightness: 450cd/m² (typ.) ,Contrast: 800:1	Housing	Metal
	Viewing angle: full viewing angle	Storage Temperature	-40°C ~ 85°C
Ethernet Port	1*10/100Mbps, WAN/LAN	Operating Temperature	-10°C ~ 60°C
Serial Port	2*RS232, 3pin industrial terminal	Ambient Humidity	5 ~ 95% (no condensation)
	2*RS485, 5pin terminal, with flange	EMC	Level 2
Wi-Fi	1*RP-SMA, 802.11b/g/n, Client/AP mode	Certification	CE
USB	4*USB 2.0		

Software

Network Type	LTE-TDD/LTE-FDD/WCDMA/CDMA/TD-SCDMA/ UMTS/EDGE/GPRS/GSM
Graphic Processing	Dual ISP pixel processing capacity is up to 800MPix/s, supports dual camera data input at the same time, and supports high-end processing such as 3D and depth information extraction
Video Codec	Support 4K 10bits H265/H264 video decoding
OS	Android7.1/Android12
Timed Switch	Supported
Upgrade	Local USB upgrade
Bluetooth	Bluetooth4.2
Remote Management	-
Reliability	Support hardware and software watchdog



InPAD3101

10-inch All-in-one Android Tablet

Hardware and Operating System

Quad-core RK3288 processor, deeply optimized Android/Linux system

Stable and High-speed Connection

3G/4G high-speed connection, Wi-Fi 100M wired network, Bluetooth

Peripheral Interface and Structural Design

USB2.0, RS-232/485-friendly structural design meets any installation scenario

Industrial Grade Product Quality

Wide temperature operating range, IP65 (screen side), EMC protection design

The InPAD3101 series is a new generation of 4G smart terminals, equipped with RK3288 processor, providing higher performance, lower power consumption and more stable hardware and software configurations. It supports 3G/4G, Wi-Fi, and wired networking methods, and is available everywhere Uninterrupted Internet access, the whole machine has wide temperature characteristics, and IP65 protection level on one side of the screen, all designed for industrial applications.

Hardware

CPU	RK3288 quad-core processor, maximum frequency 1.6GHz	USB	4*USB 2.0
RAM	2GB	SIM	1.8V/3V, 1*drawer type card holder
FLASH	8GB eMMC	Power	DC12V
Screen	Size: 10.1" display ,Resolution; 1280x800	Installation	Wall mounting
	Brightness: 450cd/m² (typ.)	Protection Rating	IP65 (screen side)
	Contrast: 800:1, Viewing angle: full viewing angle	Housing	Metal
Ethernet Port	1*10/100Mbps, WAN/LAN	Storage Temperature	-40°C ~ 85°C
Serial port	2*RS232, 3pin industrial terminal	Operating temperature	-10°C ~ 60°C
	2*RS485, 5pin terminal, with flange	Ambient Humidity	5 ~ 95% (no condensation)
Wi-Fi	1*RP-SMA, support 802.11b/g/n,	EMC	Level 2
	support Client/AP mode	Certification	CE

Software

Network Standard	LTE-TDD/LTE-FDD/WCDMA/CDMA/TD-SCDMA/ UMTS/EDGE/GPRS/GSM
Graphics processing	Dual ISP pixel processing capacity is up to 800MPix/s, supports dual camera data input at the same time, and supports high-end processing such as 3D and depth information extraction
Video codec	Support 4K 10bits H265/H264 video decoding
OS	Android7.1/Android12
Timer switch	Support
Upgrade	Local USB upgrade
Bluetooth	Bluetooth4.2
Remote management	-
reliability	Support hardware and software watchdog

Selection Guide

	Model	InPAD070S	InPAD3101
Hardware performance	CPU	RK3288 quad-core processor, maximum frequency 1.6GHz	
	RAM	2GB	
	FLASH	8GB eMMC	
Screen	Screen	Size: 7'' display, Resolution; 1024x600, Brightness: 450cd/m² (typ.)	Size: 10.1'' display, Resolution; 1280x800, Brightness: 450cd/m² (typ.) ,
		Contrast: 800:1, Viewing angle: full viewing angle	Contrast: 800:1, Viewing angle: full viewing angle
Hardware interface	Ethernet Port	1*10/100Mbps, WAN/LAN	
	Serial port	2*RS-232, 3pin industrial terminal, 2*RS-485, 5pin terminal, with flange	
	IO	-	
	Cellular	1*SMA	
	Wi-Fi	1*RP-SMA, support 802.11b/g/n, support Client/AP mode	
	GPS	-	
	USB	4*USB 2.0	
	Bluetooth5	Bluetooth4.2	
	LoRa	-	
	HDMI	-	
	TF Card	1*TF Card	
	SIM Card	1.8V/3V, 1*drawer type card holder	
Working environment	Operating temperature	-10°C ~ 60°C	
	Storage Temperature	-40°C ~ 85°C	
	Operating humidity	5 ~ 95% (no condensation)	
Power supply environment	Power	DC12V	
	Reverse polarity protection	support	
	Overcurrent protection	support	
Mechanical characteristic	Mounting	Wall mount	
	Dimensions	19.5 * 12.88 * 3.6 cm	19.5 * 12.88 * 3.6 cm
	Housing	Metal	
	Protection Rating	IP65 (screen side)	
EMC index	EMC	level 2	

A photograph of a modern industrial factory floor. Several yellow robotic arms are visible, some with red joints, working on a production line. The background shows a complex network of pipes and structural elements. The text 'Edge Gateways' is overlaid in a large, white, sans-serif font.

Edge Gateways

IG101 / IG502 / IG504 / IG532

The InHand Edge Gateway can break the data barrier of industrial field, quickly establish the connection between industrial field equipment and the cloud, and help you achieve more efficient operation, which is widely used in various fields such as manufacturing, energy, agriculture and healthcare.



IG101

Entry-level Edge Gateway

Convenient
Cellular Network

LTE CAT1

Connection to
Multiple Cloud Platforms

Standard modbus RTU to MQTT gateway
Support for transparent transfer

Industrial
Interfaces

1*RS232+1*RS485/*RS485

Cloud
Management

InHand Device Manager

InGateway101 (IG101) is a small, compact edge gateway. The product leverages 4G wireless networks deployed by mobile operators to provide uninterrupted Internet access anywhere. With its flexible and simple edge computing capabilities, comprehensive security and wireless access services, it realizes data optimization, real-time response, agile connection and intelligent analysis in the edge nodes of the Internet of Things.

Hardware

CPU	ARM Cortex-A5	Protection Rating	IP30
RAM	4MB	Housing	Plastic
FLASH	2MB	Storage Temperature	-40°C ~ 85°C
Serial Port	1*RS232+1*RS485, industrial terminal block	Operation Temperature	-20°C ~ 70°C
TF Card	MicroSD supported, up to 32GB expansion	Ambient Humidity	5 ~ 95% (non-condensing)
SIM Card	1*Standard SIM	EMC	level 3
Power Input	DC7-38V	Certification	CE
Installation	Panel, DIN-Rail		

Software

Network Type	LTE CAT1
Access Authentication	CHAP/PAP
Access Cloud Platform	Support standard MQTT protocol cloud platform
Industrial Protocol	Modbus RTU
LAN Protocol	ARP, Ethernet
Network Protocol	ICMP, DNS, TCP/UDP, TCP Server
Reliability	Multi-level link detection, watchdog
Configuration Method	Configuring tools
Upgrade Method	local or remote firmware upgrade
Device Management	InHand Device Manager
Network Diagnostics	Ping



IG502

Cost-effective Edge Gateway

Multiple Means of Internet Access

4G/Ethernet/Wi-Fi

Strong Computing Capabilities

ETH, RS232/485, Wi-Fi, DI/DO, GPS, USB, Bluetooth

Edge-to-cloud Data Acquisition

"Zero code/Low code" easy to achieve data acquisition on the cloud
Integrate 80+ mainstream data acquisition protocols

Built for Developers

Python

InGateway502 (IG502) is a cost-effective edge computing gateway for the industrial Internet of Things (IoT). IG502 supports Modbus TCP/RTU and other mainstream industrial protocols. It can connect to AWS, Azure, Aliyun and other mainstream IoT cloud platforms. It has an open edge computing platform, supports user secondary development, and easily realizes enterprise equipment informatization.

Hardware

CPU	ARM Cortex-A8 600MHz	Power Input	DC12-48V
RAM	512MB DDR3	Installation	Panel, Rail
FLASH	8GB eMMC	Protection Rating	IP30
Ethernet Port	2*10/100Mbps, 1WAN/LAN+1*LAN	Housing	Metal
Serial Port	1*RS232+1*RS485, industrial terminal block	Storage Temperature	-40°C ~ 85°C
Wi-Fi (Optional)	STA, 802.11ac/a/b/g/n, 2.4G/5G	Operation Temperature	-20°C ~ 70°C
GPS (Optional)	Support GPS and BeiDou	Ambient Humidity	5 ~ 95% (non-condensing)
SIM Card	2*Micro SIM	EMC	level 3
I/O (Optional)	4*Digital/pulse input DI, 3*Digital/pulse output DO, 1*Digital output	Certification	CE, UKCA, FCC, PTCRB, UL, UL C1D2, Verizon Wireless, AT&T, IC, RCM, NBTC, ANATEL
USB	1*USB 2.0		

Software

Network Type	LTE-TDD/LTE-FDD/WCDMA/CDMA/TD-SCDMA, UMTS/EDGE/GPRS/GSM
Access Authentication	CHAP/PAP
Secondary Development Environment	Python
Access Cloud Platform	AWS, Azure and other cloud platforms
Industrial Protocol	Modbus RTU/TCP, EtherNet/IP, ISO on TCP, OPC UA, DLT645-2007, IEC101/104, etc.
LAN Protocol	ARP, Ethernet
Network Protocol	Ping, Traceroute, DHCP Server/Relay/Client, DNS Relay, DDNS, Telnet, SSH, HTTP, HTTPS, TFTP, FTP, SFTP, Static Routing
Network Security	IPSecVPN, GRE, L2TP, OPENVPN, CA (may auto apply), Firewalls
Reliability	Backup, Link Detection, Embedded Watchdog
Configuration Method	Local or remote HTTP, HTTPS, Telnet, SSH
Upgrade Method	Local or remote WEB, DM, TFTP, FTP, SFTP server
Log	Local or remote log export, power-down log saving
Device Management	InHandDevice Manager network management platform, batch management gateway InConnectcloud connection platform for remote access to on-site PLC and other devices
Network Diagnostics	Ping, Traceroute, Sniffer (network packet capture tool)



IG504

Multi-port Edge Gateway

Multiple Means of Internet Access

4G/Ethernet/Wi-Fi

Strong Computing Capabilities

4*ETH, RS232/485, Wi-Fi, DI/DO, GPS, USB, Bluetooth

Edge-to-cloud Data Acquisition

"Zero code/Low code" easy to achieve data acquisition on the cloud
Integrate 80+ mainstream data acquisition protocols
Integrated data publishing services, public cloud, private cloud, local SCADA and other seamless access

Built for Developers

Python

InGateway504 (IG504) is a Multi-port edge computing gateway for the industrial Internet of Things (IIoT). IG504 supports Modbus TCP/RTU and other mainstream industrial protocols. It can connect to AWS, Azure, Aliyun and other mainstream IIoT cloud platforms. It has an open edge computing platform, supports user secondary development, and easily realizes enterprise equipment informatization.

Hardware

CPU	ARM Cortex-A8 600MHz	Power Input	DC12-48V
RAM	512MB DDR3	Installation	Panel, DIN-Rail
FLASH	8GB eMMC	Protection Rating	IP30
Ethernet Port	2*10/100Mbps, 1WAN/LAN+3*LAN	Housing	Metal
Serial Port	1*RS232+1*RS485, industrial terminal block	Storage Temperature	-40°C ~ 85°C
Wi-Fi (Optional)	STA, 802.11ac/a/b/g/n, 2.4G/5G	Operation Temperature	-20°C ~ 70°C
GPS (Optional)	Support GPS and BeiDou	Ambient Humidity	5 ~ 95% (non-condensing)
SIM Card	2*Standard SIM	EMC	level 3
I/O (Optional)	4*Digital/pulse input DI, 3*Digital/pulse output DO, 1*Digital output	Certification	CE, UKCA, FCC, PTCRB, UL, UL C1D2, Verizon Wireless, AT&T, IC, RCM, NBTC, ANATEL
USB	1*USB 2.0		

Software

Network Type	LTE-TDD/LTE-FDD/WCDMA/CDMA/TD-SCDMA/UMTS/EDGE/GPRS/GSM
Access Authentication	CHAP/PAP
Secondary Development Environment	Python
Access Cloud Platform	AWS, Azure, Ali and other cloud platforms
Industrial Protocol	Modbus RTU/TCP, EtherNet/IP, ISO on TCP, OPC UA, DLT645-2007, IEC101/104.etc
LAN Protocol	ARP, Ethernet
Network Protocol	Ping, Traceroute, DHCP Server/Relay/Client, DNS Relay, DDNS, Telnet, SSH, HTTP, HTTPS, TFTP, FTP, SFTP, Static Routing
Network Security	IPSecVPN, GRE, L2TP, OPENVPN, CA (may auto apply), Firewalls
Reliability	Backup, Link Detection, Embedded Watchdog
Configuration Method	Local or remote HTTP, HTTPS, Telnet, SSH
Upgrade Method	Local or remote WEB, DM, TFTP, FTP, SFTP server
Log	Local or remote log export, power-down log saving
Device Management	InHandDevice Manager network management platform, batch management gateway InConnectcloud connection platform for remote access to on-site PLC and other devices
Network Diagnostics	Ping, Traceroute, Sniffer (network packet capture tool)



IG902

High Performance Edge Gateway

Multiple Means of Internet Access

Cellular/Ethernet/2.4G & 5G dual concurrency Wi-Fi
Global cellular network access

Strong Computing Capabilities

ARM Cortex-A8 1GHz
512MB/1GB DDR3
8GB eMMC

Edge-to-cloud Data Acquisition

Zero code/Low code" easy to achieve data acquisition on the cloud
Integrate 80+ mainstream data acquisition protocols
Integrated data publishing services, public cloud, private cloud, local SCADA and other seamless access

Built for Developers

Python
Docker

InGateway902 (IG902) is a high-performance edge computing gateway for the IoT. IG902 provides a network with global coverage and supports the parsing of industrial protocols such as Modbus,It also connects to mainstream cloud platforms such as AWS. It supports secondary development and Azure IoT Edge and AWS IoT Greengrass, which is safer and faster to respond to field business at the edge of the Internet of things.

Hardware

CPU	ARM Cortex-A8 1GHz	Power Input	DC12-48V
RAM	512MB/1GB DDR3	Installation	Panel, DIN-Rail
FLASH	8GB eMMC	Protection Rating	IP30
Ethernet Port	2*10/100/1000Mbps, 1*WAN/LAN+1*LAN	Housing	Metal
Serial Port	1*RS232+1*RS485, industrial terminal block	Storage Temperature	-40°C ~ 85°C
Wi-Fi (Optional)	STA, 802.11ac/a/b/g/n, 2.4G/5G	Operation Temperature	-20°C ~ 70°C
GPS (Optional)	Support GPS and BeiDou	Ambient Humidity	5 ~ 95% (non-condensing)
SIM Card	2*Standard SIM	EMC	Level 3
I/O (Optional)	4*Digital/pulse input DI,3*Digital/pulse output DO, 1*Digital output	Certification	CE, FCC, PTCRB, RCM, IC, IMDA, AT&T, MIC&JATE, MSIP, EAC, ANATEL, UKCA
USB	1*USB 2.0		

Software

Network Type	LTE-TDD/LTE-FDD/WCDMA/CDMA/TD-SCDMA/UMTS/EDGE/GPRS/GSM
Access Authentication	CHAP/PAP
Secondary Development	Python, Docker
Environment	
Access Cloud Platform	AWS, Azure and other cloud platforms
Industrial Protocol	Modbus RTU/TCP,EtherNet/IP,ISO on TCP,OPC UA,DLT645-2007,IEC101/104.etc
LAN Protocol	ARP,Ethernet
Network Protocol	Ping, Traceroute, DHCP Server/Relay/Client, DNS Relay, DDNS, Telnet, SSH, HTTP , HTTPS, TFTP , FTP, SFTP, Static Routing
Network Security	IPSecVPN, GRE, L2TP, OPENVPN, CA (may auto apply), Firewalls
Reliability	Backup, Link Detection, Embedded Watchdog
Configuration Method	Local or remote HTTP, HTTPS, Telnet, SSH
Upgrade Method	Local or remote WEB, DM, TFTP, FTP, SFTP server
Log	Local or remote log export, power-down log saving
Device Management	InHandDevice Manager network management platform, batch management gateway InConnectcloud connection platform for remote access to on-site PLC and other devices
Network Diagnostics	Ping, Traceroute, Sniffer (network packet capture tool)

Selection Guide

	Model	IG101	IG502	IG504	IG902
Hardware Platform	CPU	ARM Cortex-A5	ARM Cortex-A8	ARM Cortex-A8	ARM Cortex-A8 1GHz
	RAM	4MB	512MB	512MB	512MB/1GB DDR3
	FLASH	2MB	8GB eMMC	8GB eMMC	8GB eMMC
Interfaces	Ethernet Port	/	2*10/100Mbps,(1*WAN/LAN + 1*LAN)	4*10/100Mbps, (1*WAN/LAN + 3*LAN)	2*10/100/1000Mbps (1*WAN/LAN + 1*LAN)
	Serial Port	1*RS-232, 1*RS-485	1*RS-232, 1*RS-485 or 2*RS-485	1*RS-232, 1*RS-485 or 2*RS-485	1*RS-232 , 1*RS-485
	IO	/	4*Digital/pulse input DI, 3*Digital/pulse output DO, 1*Digital output	4*Digital/pulse input DI, 3*Digital/pulse output DO, 1*Digital output	4*Digital/pulse input DI, 3*Digital/pulse output DO, 1*Digital output
	Cellular	CAT1	CAT1, CAT4	CAT1, CAT4	CAT4, CAT6
	Wi-Fi	/	STA/AP, 2.4G (802.11 b/g/n)	STA/AP, 2.4G (802.11 b/g/n)	STA/AP, 2.4G&5G (802.11 a/c/a/b/g/n)
	GPS	/	GPS, 1*SMA	GPS, 1*SMA	GPS, 1*SMA
	USB	/	1*USB 2.0	1*USB 2.0	1*USB 2.0
	Bluetooth	/	BLE4.0	BLE4.0	/
	TF Card	MicroSD	MicroSD	Micro SD	MicroSD
	SIM Card	2*Standard SIM	2*Micro SIM	2*Standard SIM	2*Micro SIM
Environment	Button	1*Pinhole reset button	1*Pinhole reset button	1*Pinhole reset button	1*Pinhole reset button
	Operation Temperature	-20~70°C	-20~70°C	-20~70°C	-20~70°C
	Storage Temperature	-40~85°C	-40~85°C	-40~85°C	-40~85°C
Power	Ambient Humidity	5~ 95% (non-condensing)	5~ 95% (non-condensing)	5~ 95% (non-condensing)	5~ 95% (non-condensing)
	Power Input	DC 7~38V	DC 12~48V	DC 12~48V	DC 12~48V
	Power Interface	Industrial terminal block	Industrial terminal block	Industrial terminal block	Industrial terminal block
Mechanical	Installation	Panel, DIN-Rail	Panel, DIN-Rail	Panel, DIN-Rail	Panel, DIN-Rail
	Dimensions	76*108*37.5mm	35*127*109.7mm	113*133*45mm	45*140.6*122.6mm
	Housing	Plastic	Metal	Metal	Metal
	Protection Rating	IP30	IP30	IP30	IP30
EMC	Static	EN61000-4-2, level 3	EN61000-4-2, level 3	EN61000-4-2, level 3	EN61000-4-2, level 3
	Radiation Electric Field	EN61000-4-3, level 3	EN61000-4-3, level 3	EN61000-4-3, level 3	EN61000-4-3, level 3
	Pulsed Electric Field	EN61000-4-4, level 3	EN61000-4-4, level 3	EN61000-4-4, level 3	EN61000-4-4, level 3
	Surge	EN61000-4-5, level 3	EN61000-4-5, level 3	EN61000-4-5, level 3	EN61000-4-5, level 3
	Conducted Disturbance Immunity	EN61000-4-6, level 3	EN61000-4-6, level 3	EN61000-4-6, level 3	EN61000-4-6, level 3
	Power Frequency	EN61000-4-8,	EN61000-4-8,	EN61000-4-8,	EN61000-4-8,
	Magnetic Field Resistance	horizontal / vertical 400A/m (>level 2)	horizontal / vertical 400A/m (>level 2)	horizontal / vertical 400A/m (>level 2)	horizontal / vertical 400A/m (>level 2)
	Shock Wave Resistance	EN61000-4-12, level 3	EN61000-4-12, level 3	EN61000-4-12, level 3	EN61000-4-12, level 3
Physical Specs	Shockproof	IEC60068-2-27	IEC60068-2-27	IEC60068-2-27	IEC60068-2-27
	Free Fall	IEC60068-2-32	IEC60068-2-32	IEC60068-2-32	IEC60068-2-32
	Vibration Resistance	IEC60068-2-6	IEC60068-2-6	IEC60068-2-6	IEC60068-2-6
Certification	Certification	/	CE, UKCA, FCC, PTCRB, UL, C1D2 (Class1 Division 2), Verizon Wireless, AT&T, IC, RCM, NBTC, ANATEL	CE, UKCA, FCC, PTCRB, UL, C1D2 (Class1 Division 2), Verizon Wireless, AT&T, IC, RCM, NBTC, ANATEL	CE, FCC, PTCRB, RCM, IC, IMDA, AT&T, MIC&JATE, MSIP, EAC, ANATEL, UKCA
Industrial Protocol	Industrial Protocol	Modbus RTU	Modbus RTU Master/Slave, Modbus TCP Master/Slave, EtherNet/ IP, ISO on TCP, OPC UA Client/Server, Mitsubishi MC 3C/3E/3C Over TCP, Mitsubishi CPU Port, FINS UDP, HostLink, PPI, DLT645-2007, IEC 104 Server	Modbus RTU Master/Slave, Modbus TCP Master/Slave, EtherNet/ IP, ISO on TCP, OPC UA Client/Server, Mitsubishi MC 3C/3E/3C Over TCP, Mitsubishi CPU Port, FINS UDP, HostLink, PPI, DLT645-2007, IEC 104 Server	Modbus RTU Master/Slave, Modbus TCP Master/Slave, EtherNet/ IP, ISO on TCP, OPC UA Client/Server, Mitsubishi MC 3C/3E/3C Over TCP, Mitsubishi CPU Port, FINS UDP, HostLink, PPI, DLT645-2007, IEC 104 Server
Operating System	OS	FreeRTOS	Custom Linux	Custom Linux	Custom Linux
Secondary Development Environment	Secondary Development Environment	/	Python	Python	Python, Docker, Azure IoT Edge, AWS IoT Greengrass
IoT Cloud Platform	IoT Cloud Platform	MQTT	DeviceLive, AWS, Azure and other cloud platforms	DeviceLive, AWS, Azure and other cloud platforms	DeviceLive, AWS, Azure and other cloud platforms



Industrial Routers

IR302 / IR315 / IR615-S / IR624 / IR912 / IR915

Equipped with comprehensive and intelligent software functions and all industrial-grade hardware, InHand industrial routers are suitable for various IoT scenarios and capable of providing highly reliable, high-speed and secure networking services to help enterprises improve operational efficiency.



IR302

Economical Industrial Router

4G

LTE CAT4,
compatible with 3G/2G

Security

VPN
Firewall

Reliable

Link Backup, Link Detection,
VRRP, Dual SIM Failover, Embedded Watchdog

Cloud Management

DeviceManager Cloud

InRouter302, industrial router, supports 4G, dual Ethernet ports (WAN/LAN), Wi-Fi (AP, STA modes), serial port, and IO, effectively reducing deployment costs with a cost-effective design.

Hardware

CPU	580MHz	Weight	240g
RAM	128MB	Mounting Options	DIN rail, Wall Mount
FLASH	32MB	Protection Rating	IP30
Ethernet Port	2*10/100Mbps, WAN/LAN	Housing	Metal, Fanless
Serial Port (Optional)	1*RS232, industrial terminal	Storage Temperature	-40°C ~ 85°C
IO (Optional)	2*IO, DI and DO Configurable	Operating Temperature	-20°C ~ 70°C
SIM	2*NANO-SIM (4FF)	Operating Humidity	5 ~ 95% (non-condensing)
Antenna Interface	4G: 2*SMA, WLAN: 1*RP-SMA	EMC Rating	2
Wi-Fi (Optional)	IEEE 802.11b/g/n, Access Point (AP), Station (STA) Maximum transmission speed of 150Mbps	Certification	CE, CB, UKCA, E-MARK, FCC, IC, PTCRB, AT&T, Verizon, RCM, CCC, EAC&FAC, UL, Anatel
Power	9-36 VDC, industrial terminal		
Dimensions	90*90*25 mm		

Software

Network Standard	TDD LTE/FDD LTE/HSPA+/UMTS/GSM
Network Access	APN, VPDN, dual APN
Access Authentication	CHAP/PAP
LAN Protocol	ARP, Ethernet
WAN Protocol	Static IP, DHCP, PPPoE
Network Protocol	IPv4, TCP, UDP, Static routing, Ping, Traceroute, DHCP Server, DHCP Relay, DHCP Client, DNS relay, Telnet, SSH, HTTP, HTTPS
Firewall	Stateful Packet Inspection (SPI), DoS attack defense, Multicast filter, Access Control List (ACL), Content URL filter, Port mapping, virtual IP mapping, NAT, IP-MAC binding
Data Security	IPSec (IKEv1/IKEv2), L2TP, PPTP, GRE, OPEN VPN, CA digital certificate, WireGuard, ZeroTier
Reliability	Link Backup, Link Detection, VRRP, Dual SIM Failover, Embedded Watchdog
Configuration	HTTPS, Telnet, SSH
Update	Web, DeviceManager cloud
Log	Local system log, remote log, and serial export of log
Network Management	SNMP, DeviceManager cloud
Remote Maintenance	InConnect Services
Traffic Management	Traffic threshold, traffic statistics and traffic alarm
Alarm	System restart alarm, LAN port online/offline alarm, data traffic alarm, SIM card failure alarm, etc.
Maintenance Tools	Ping, route tracking,tcpdump



IR315

Economical Multi-port Industrial Router

4G	Rich industrial interfaces	Reliable	Cloud Management
LTE CAT4/6, compatible with 3G/2G	5 Ethernet ports, Wi-Fi, serial ports, IO, GNSS	Link Backup, Link Detection, VRRP, Dual SIM Failover, Embedded Watchdog	DeviceManager Cloud

InRouter315, industrial router, supports 4G, 5 Ethernet ports, Wi-Fi (AP, STA modes), serial port and IO, providing an economical and efficient networking solution.

Hardware

CPU	580MHz	Dimensions	127*108.2*35 mm
RAM	128MB	Weight	454g
FLASH	64MB	Mounting Options	DIN rail
Ethernet Port	5*10/100Mbps,1WAN, 4LAN	Protection Rating	IP30
Serial Port (optional)	1*RS232 and 1*RS485, industrial terminal	Housing	Metal, Fanless
IO (optional)	4*IO, DI and DO Configurable	Storage Temperature	-40°C ~ 85°C
SIM	2*NANO-SIM (4FF)	Operating Temperature	-20°C ~ 70°C
Antenna Interface	4G: 2*SMA,WLAN: 2*RP-SMA,GPS: 1* SMA	Operating Humidity	5 ~ 95%(non-condensing)
Wi-Fi (optional)	IEEE 802.11b/g/n, Access Point (AP), Station (STA)	EMC Rating	3
	Maximum transmission speed of 300Mbps	Certification	CE, E-MARK, FCC, IC, PTCRB, AT&T, Verizon
Power	9-36 VDC, industrial terminal		

Software

Network Standard	NR NSA/NR SA/TDD LTE/FDD LTE/HSPA+/UMTS/GSM
Network Access	APN, VPDN, dual APN
Access Authentication	CHAP/PAP
LAN Protocol	ARP, Ethernet, VLAN
WAN Protocol	Static IP, DHCP, PPPoE
Network Protocol	IPv4, TCP, UDP, Static routing, OSPF, Ping, Traceroute, DHCP Server, DHCP Relay, DHCP Client, DNS relay, Telnet, SSH, HTTP, HTTPS
Firewall	Stateful Packet Inspection (SPI), DoS attack defense, Multicast filter, Access Control List (ACL), Content URL filter, Port mapping, virtual IP mapping, NAT, IP-MAC binding
Data Security	IPSec (IKEv1/IKEv2), L2TP, PPTP, GRE, OPEN VPN, DMVPN, CA digital certificate, WireGuard, ZeroTier
Reliability	Link Backup, Link Detection, VRRP, Dual SIM Failover, Embedded Watchdog
Configuration	HTTPS, Telnet, SSH
Update	Web, DeviceManager cloud
Log	Local system log, remote log, and serial export of log
Network Management	SNMP, DeviceManager cloud
Remote Maintenance	InConnect Services
Traffic Management	Traffic threshold, traffic statistics and traffic alarm
Alarm	System restart alarm, LAN port online/offline alarm, data traffic alarm, SIM card failure alarm, etc.
Maintenance Tools	Ping, route tracking,tcpdump



IR615-S

Multi-port Industrial Router

4G

LTE CAT4/6,
compatible with 3G/2G

Reliable

Link Backup, Link Detection, VRRP,
Dual SIM Failover, Embedded Watchdog

Security

VPN
Firewall

Cloud Management

DeviceManager
Cloud

InRouter615-S, industrial router, supports 4G, 5 Ethernet ports (LAN/WAN), Wi-Fi (AP, STA modes), and serial ports, providing a stable and secure network connectivity service.

Hardware

CPU	580MHz	Mounting options	DIN rail, Wall Mount
RAM	128MB	Protection Rating	IP30
FLASH	64MB	Housing	Metal, Fanless
Ethernet Port	5*10/100Mbps,1WAN, 4LAN	Storage Temperature	-40°C ~ 85°C
Serial port	1*RS232 or 1*RS485, industrial terminal	Operating temperature	-20°C ~ 70°C
SIM	2*Mini-SIM(2FF) SIM slot	Operating humidity	5 ~ 95%(non-condensing)
Antenna Interface	4G: 2*SMA,WLAN: 2*RP-SMA	EMC Rating	3
Wi-Fi (optional)	IEEE 802.11b/g/n, Access Point (AP), Station (STA) Maximum transmission speed of 300Mbps	Certification	CE, UKCA, E-MARK, FCC, IC, PTCRB, AT&T, Verizon, RCM, CCC, SRRC, SDPPI, IMDA, UL, C1D2, MIC&JATE
Power	9-36V DC, industrial terminal		
Dimensions	127*108.2*35 mm		
Weight	440g		

Software

Network Standard	TDD LTE/FDD LTE/HSPA+/UMTS/GSM
Network Access	APN, VPDN, dual APN
Access Authentication	CHAP/PAP
LAN Protocol	ARP, Ethernet, VLAN
WAN Protocol	Static IP, DHCP, PPPoE
Network Protocol	IPv4, TCP, UDP, Static routing, OSPF, Ping, Traceroute, DHCP Server, DHCP Relay, DHCP Client, DNS relay, Telnet, SSH, HTTP, HTTPS
Firewall	Stateful Packet Inspection (SPI), DoS attack defense, Multicast filter, Access Control List (ACL), Content URL filter, Port mapping, virtual IP mapping, NAT, IP-MAC binding
Data Security	IPSec (IKEv1/IKEv2), L2TP, PPTP, GRE, OPEN VPN, DMVPN, CA digital certificate, WireGuard, ZeroTier
Reliability	Link Backup, Link Detection, VRRP, Dual SIM Failover, Embedded Watchdog
Configuration	HTTPS, Telnet, SSH
Update	Web, DeviceManager cloud
Log	Local system log, remote log, and serial export of log
Network Management	SNMP, DeviceManager cloud
Remote Maintenance	InConnect Services
Traffic Management	traffic threshold, traffic statistics and traffic alarm
Alarm	System restart alarm, LAN port online/offline alarm, data traffic alarm, SIM card failure alarm, etc.
Maintenance Tools	Ping, route tracking, tcpdump



IR624

Multi-port 5G Industrial Router

5G	Wi-Fi 5	Reliable	Cloud Management
5G NR	Dual-band, 2.4GHz and 5GHz, with a maximum speed of 1200Mbps	Link Backup, Link Detection, Dual SIM Failover, Embedded Watchdog	DeviceLive Cloud

InRouter624, industrial router, supports 5G/4G, 4 Ethernet ports(LAN/WAN), Wi-Fi (AP, STA modes), and serial ports, providing an efficient networking solution.

Hardware

CPU	880MHz	Dimensions	127*108.2*35 mm
RAM	256MB	Weight	544g
FLASH	128MB	Mounting options	DIN rail
Ethernet Port	4*10/100/1000Mbps, WAN/LAN	Protection Rating	IP30
Serial port	1*RS232 and 1*RS485, industrial terminal	Housing	Metal, Fanless
SIM	2*NANO-SIM (4FF), eSIM (Optional)	Storage Temperature	-40°C ~ 85°C
Antenna Interface	5G: 4*SMA, 4G: 2*SMA, WLAN: 2*RP-SMA	Operating temperature	-20°C ~ 70°C
Wi-Fi (Optional)	IEEE 802.11ac/a/b/g/n, 2.4GHz and 5GHz dual-band,	Operating humidity	5 ~ 95% (non-condensing)
	Access Point (AP), Station (STA)	EMC Rating	3
Power	Maximum transmission speed of 300Mbps	Certification	CE, E-MARK
	9-36 VDC, industrial terminal		

Software

Network Standard	NR NSA/NR SA/TDD LTE/FDD LTE/HSPA+/UMTS/GSM
Network Access	APN, VPDN, dual APN
Access Authentication	CHAP/PAP
LAN Protocol	ARP, Ethernet, VLAN
WAN Protocol	Static IP, DHCP, PPPoE
WLAN	Wi-Fi Portal
Network Protocol	IPv4, IPv6, TCP, UDP, Static routing, Ping, Traceroute, DHCP Server, DHCP Relay, DHCP Client, DNS relay, Telnet, SSH, HTTP, HTTPS
Firewall	MAC address filtering, domain filtering, NAT, port mapping, access control
Network Security	Policy-Based Routing
Data Security	IPSec VPN、 L2TP
Reliability	Link Backup, Link Detection, Dual SIM Failover, Embedded Watchdog
Configuration	HTTPS, Telnet, SSH
Update	Web, DeviceLive Cloud
Log	Local system log, remote log
Network Management	DeviceLive Cloud
Remote Maintenance	DeviceLive Cloud
Traffic Management	Traffic threshold, traffic statistics and traffic alarm
Alarm	User login, configuration changes, high CPU utilization, detection state changes, VPN state changes, client state changes, upstream link switching, device restart, device upgrade, etc.
Maintenance Tools	Ping, route tracking, lperf, tcpdump



IR912

High-Performance Industrial Router

4G

LTE CAT4,
compatible with 3G/2G

Large-scale deployment

Multiple dynamic
routing protocols

Security

VPN
Firewall

Cloud Management

DeviceManager
Cloud

InRouter912, industrial router, supports 4G, 2 Ethernet ports (LAN/WAN). It provides reliable and secure network connectivity services, facilitating the easy deployment and management of large-scale device networks.

Hardware

CPU	600MHz	Dimensions	132.6*112.8*45 mm
RAM	128MB	Weight	565g
FLASH	128MB	Mounting options	DIN rail, Wall Mount
Ethernet Port	2*10/100Mbps, WAN/LAN	Protection Rating	IP30
Console	1*RS-232, RJ-45	Housing	Metal, Fanless
SIM	2*Mini-SIM (2FF) SIM slot	Storage Temperature	-40°C ~ 85°C
Antenna Interface	4G: 2*SMA	Operating temperature	-25°C ~ 70°C
Power	12-48 VDC, industrial terminal	Operating humidity	5 ~ 95% (non-condensing)
Certification	CE, E-MARK, FCC, IC, PTCRB, AT&T, Verizon, RCM, CCC, IMDA, EAC&FAC	EMC Rating	4

Software

Network Standard	TDD LTE/FDD LTE/HSPA+/EDGE/GPRS
Network Access	APN, VPDN, dual APN
Access Authentication	CHAP/PAP/MS-CHAP/MS-CHAPV2
LAN Protocol	ARP, Ethernet
WAN Protocol	Static IP, DHCP, PPPoE
Network Protocol	IPv4, TCP, UDP, Static routing, RIP, OSPF, IGMP Proxy, BGPV4, Ping, Traceroute, DHCP Server, DHCP Relay, DHCP Client, DNS relay, Telnet, SSH, HTTP, HTTPS
AAA	Local Authentication, Radius, TACACS+, LDAP
Firewall	Stateful Packet Inspection (SPI), DoS attack defense, Multicast filter, Access Control List (ACL), Content URL filter, Port mapping, virtual IP mapping, NAT, IP-MAC binding
Data Security	IPsec, L2TP, PPTP, GRE, OPEN VPN, DMVPN, CA digital certificate
Reliability	Link Backup, Link Detection, VRRP, Dual SIM Failover, Embedded Watchdog
Configuration	HTTPS, Telnet, SSH
Update	Web, DeviceManager cloud
Log	Local system log, remote log, and serial export of log
Network Management	SNMP, DeviceManager cloud
Remote Maintenance	InConnect Services
Traffic Management	traffic threshold, traffic statistics and traffic alarm
Alarm	System restart alarm, LAN port online/offline alarm, data traffic alarm, SIM card failure alarm, etc.
Maintenance Tools	Ping, route tracking, network speed test, tcpdump



IR915

High-Performance Multi-port Industrial Router

4G

LTE CAT4,
compatible with 3G/2G

Large-scale deployment

Multiple dynamic
routing protocols

Security

VPN
Firewall

Cloud Management

DeviceManager
Cloud

InRouter915, industrial router, supports 4G, 5 Ethernet ports (LAN/WAN), Wi-Fi (AP, STA modes), serial ports, and IO. It provides reliable and secure network connectivity services, facilitating the easy deployment and management of large-scale device networks.

Hardware

CPU	600MHz	Power	12-48 VDC, industrial terminal
RAM	128MB	Dimensions	132.6*112.8*45 mm
FLASH	128MB	Weight	590g
Ethernet Port	5*10/100Mbps,1WAN, 4LAN	Mounting options	DIN rail, Wall Mount
Serial port	1*RS232 and 1*RS485, industrial terminal	Protection Rating	IP30
I/O	1*DI, 1*relay output	Housing	Metal, Fanless
GPS (optional)	GPS:1*SMA	Storage Temperature	-40°C ~ 85°C
Console	1*RS-232, RJ-45	Operating temperature	-25°C ~ 70°C
SIM	2*Mini-SIM(2FF) SIM slot	Operating humidity	5 ~ 95%(non-condensing)
Antenna Interface	4G: 2*SMA,WLAN: 2*RP-SMA,GPS: 1*SMA	EMC Rating	4
Wi-Fi (optional)	IEEE 802.11b/g/n, Access Point (AP), Station (STA) Maximum transmission speed of 300Mbps	Certification	CE, E-MARK, FCC, IC, PTCRB, AT&T, Verizon, RCM, CCC, IMDA, EAC&FAC

Software

Network Standard	TDD LTE/FDD LTE/HSPA+/EDGE/GPRS
Network Access	APN, VPDN, dual APN
Access Authentication	CHAP/PAP/MS-CHAP/MS-CHAPV2
LAN Protocol	ARP, Ethernet, VLAN
WAN Protocol	Static IP, DHCP, PPPoE
Network Protocol	IPv4, TCP, UDP, Static routing, RIP, OSPF, IGMP Proxy, BGPV4, Ping, Traceroute, DHCP Server, DHCP Relay, DHCP Client, DNS relay, Telnet, SSH, HTTP, HTTPS
AAA	Local Authentication, Radius, TACACS+, LDAP
Firewall	Stateful Packet Inspection (SPI), DoS attack defense, Multicast filter, Access Control List (ACL), Content URL filter, Port mapping, virtual IP mapping, NAT, IP-MAC binding
Data Security	IPsec, L2TP, PPTP, GRE, OPEN VPN, DMVPN, CA digital certificate
Reliability	Link Backup, Link Detection, VRRP, Dual SIM Failover, Embedded Watchdog
Configuration	HTTPS, Telnet, SSH
Update	Web, Device Manager cloud
Log	Local system log, remote log, and serial export of log
Network Management	SNMP, DeviceManager cloud
Remote Maintenance	InConnect Services
Traffic Management	Traffic threshold, traffic statistics and traffic alarm
Alarm	System restart alarm, LAN port online/offline alarm, data traffic alarm, SIM card failure alarm, etc.
Maintenance Tools	Ping, route tracking, network speed test, tcpdump

Selection Guide

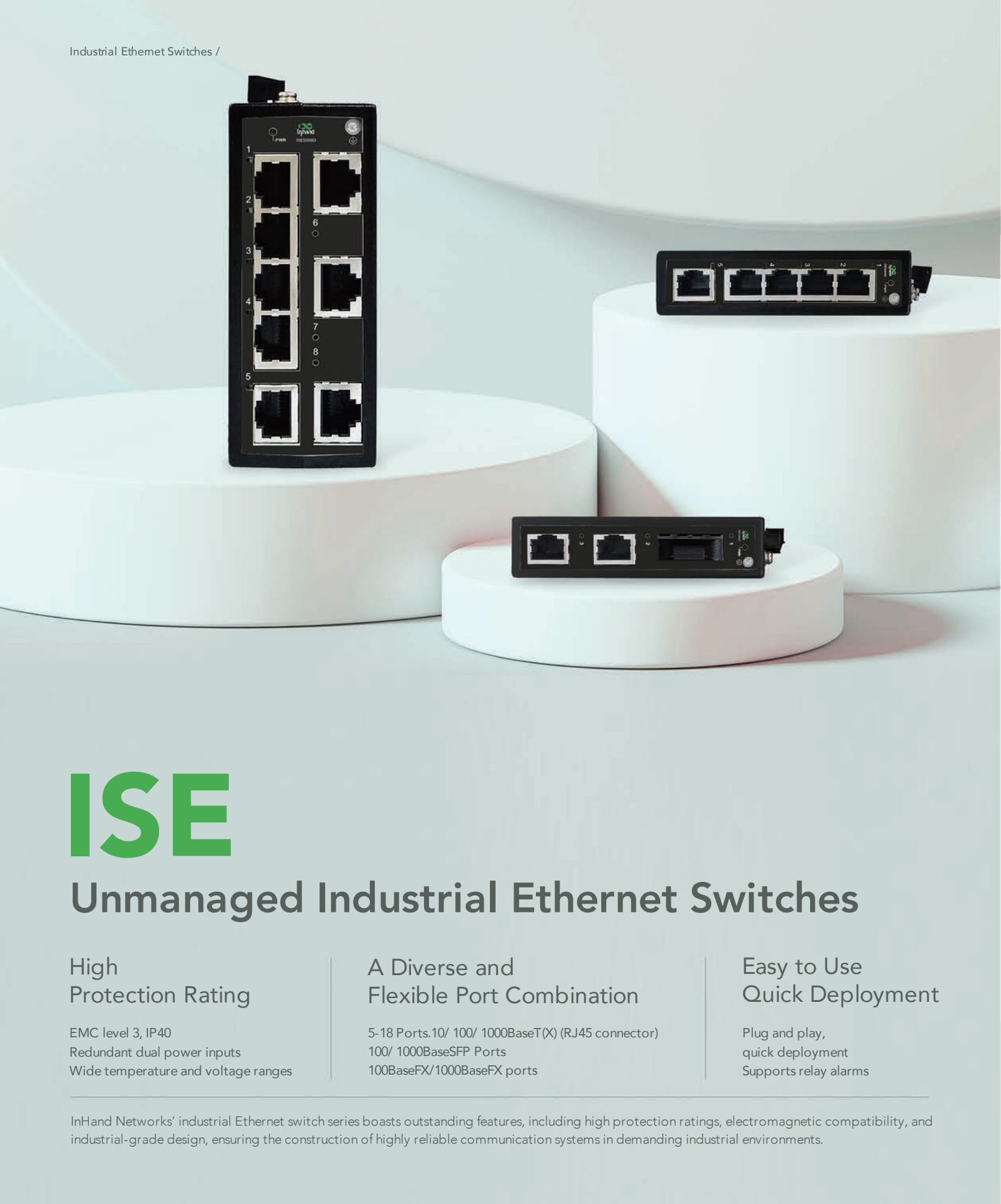
	Model	IR302	IR315	IR615-S	IR624	IR912	IR915
Hardware platform	CPU	580MHz	580MHz	580MHz	880MHz	600MHz	600MHz
	RAM	128MB	128MB	128MB	256MB	128MB	128MB
	FLASH	32MB	64MB	64MB	128MB	128MB	128MB
Interface	Ethernet Port	2*10/100Mbps (WAN/LAN)	5*10/100Mbps (WAN/LAN)	5*10/100Mbps (WAN/LAN)	4*10/100/1000Mbps (WAN/LAN)	2*10/100Mbps (WAN/LAN)	5*10/100Mbps (WAN/LAN)
		RJ45 interface, network status indicator light,1.5KV network isolation transformer protection	RJ45 interface, network status indicator light,1.5KV network isolation transformer protection	RJ45 interface, network status indicator light,1.5KV network isolation transformer protection	RJ45 interface, network status indicator light 1.5KV network isolation transformer protection	RJ45 interface, network status indicator light 1.5KV network isolation transformer protection	RJ45 interface, network status indicator light 1.5KV network isolation transformer protection
	Serial port	Supported only in the -S model, 1*RS232, 3PIN industrial terminal	Supported only in the -S model, 1*RS232+1*RS485,5PIN industrial terminal	1*RS232 or 1*RS485 5PIN industrial terminal	1*RS232+1*RS485 5PIN industrial terminal	NO	1*RS232+1*RS485 5PIN industrial terminal
	IO	2*IO, DI and DO Configurable 3PIN industrial terminal	4*IO, DI and DO Configurable 5PIN industrial terminal	NO	NO	NO	1*DI and 1*relay output 4PIN industrial terminal
	Cellular	LTE CAT1/LTE CAT4/LTE CAT M/NB	LTE CAT4/LTE CAT6	LTE CAT4/LTE CAT6	5G NR	LTE CAT4	LTE CAT4
	Wi-Fi	IEEE 802.11b/g/n, 2.4G,	IEEE 802.11b/g/n, 2.4G,	IEEE 802.11b/g/n, 2.4G,	IEEE 802.11ac/a/b/g/n, 2.4GHz and 5GHz dual-band,	IEEE 802.11b/g/n, 2.4G,	IEEE 802.11b/g/n, 2.4G,
		Access Point (AP),	Access Point (AP),	Access Point (AP), Station (STA)	Access Point (AP),	Access Point (AP),	Access Point (AP),
		Station (STA) Maximum transmission speed of 150Mbps	Station (STA) Maximum transmission speed of 300Mbps	Maximum transmission speed of 300Mbps	Station (STA) Maximum transmission speed of 1200Mbps	Station (STA) Maximum transmission speed of 300Mbps	Station (STA) Maximum transmission speed of 300Mbps
	Console	NO	NO	NO	NO	1*RS232, RJ45 interface, baud rate 115200	1*RS232, RJ45 interface, baud rate 115200
	GPS	NO	Optional	NO	NO	NO	Optional
	USB	NO	NO	NO	NO	NO	NO
	Bluetooth	NO	NO	NO	NO	NO	NO
	LoRa	NO	NO	NO	NO	NO	NO
	HDMI	NO	NO	NO	NO	NO	NO
	TF Card	NO	NO	NO	NO	NO	NO
Ambient Environment	SIM Card	2*NANO-SIM (4FF)	2*NANO-SIM (4FF)	2*Mini-SIM (2FF)	2*NANO-SIM (4FF), eSIM (optional)	2*Mini-SIM (2FF)	2*Mini-SIM (2FF)
	Reset	YES	YES	YES	YES	YES	YES
	Grounding	YES	YES	YES	YES	YES	YES
Power	Operating temperature	-20°C ~ 70°C	-20°C ~ 70°C	-20°C ~ 70°C	-20°C ~ 70°C	-25°C ~ 70°C	-25°C ~ 70°C
	Storage Temperature	-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 85°C	-40°C ~ 85°C
	Operating humidity	5 ~ 95% (non-condensing)	5 ~ 95% (non-condensing)	5 ~ 95% (non-condensing)	5 ~ 95% (non-condensing)	5 ~ 95% (non-condensing)	5 ~ 95% (non-condensing)
Mechanical Specs	Power Input	DC9-36V	DC9-36V	DC 9-36V	DC9-36V	DC12-48V	DC12-48V
	Reverse Polarity Protection	YES	YES	YES	YES	YES	YES
	Overcurrent Protection	NO	YES	YES	YES	YES	YES
EMC	Mounting options	DIN rail, Wall Mount	DIN rail	DIN rail, Wall Mount	DIN rail	DIN rail, Wall Mount	DIN rail, Wall Mount
	Dimensions	90*90*25 mm	127*108.2*35 mm	127*108.2*35 mm	127*108.2*35 mm	132.6*112.8*45 mm	132.6*112.8*45 mm
	Housing	Metal	Metal	Metal	Metal	Metal	Metal
	Protection Rating	IP30	IP30	IP30	IP30	IP30	IP30
Physical Specs	EMC Rating	2	3	3	3	4	4
	Shockproof	IEC60068-2-27	IEC60068-2-27	IEC60068-2-27	IEC60068-2-27	IEC60068-2-27	IEC60068-2-27
	Free Fall	IEC60068-2-32	IEC60068-2-32	IEC60068-2-32	IEC60068-2-32	IEC60068-2-32	IEC60068-2-32
Certification	Vibration Resistance	IEC60068-2-6	IEC60068-2-6	IEC60068-2-6	IEC60068-2-6	IEC60068-2-6	IEC60068-2-6
		CE, CB, UKCA, E-MARK, FCC, IC, PTCRB, AT&T, Verizon, RCM, CCC, EAC&FAC, UL, Anatel	CE, E-MARK, FCC, IC, PTCRB, AT&T, Verizon	CE, UKCA, E-MARK, FCC, IC, PTCRB, AT&T, Verizon, RCM, CCC, SRRC, SDPPI, IMDA, UL, C1D2, MIC&JATE	CE, E-MARK	CE, E-MARK, FCC, IC, PTCRB, AT&T, Verizon, RCM, CCC, IMDA, EAC&FAC	CE, E-MARK, FCC, IC, PTCRB, AT&T, Verizon, RCM, CCC, IMDA, EAC&FAC



Industrial Ethernet Switches

ISE / ISM

InHand Networks' industrial Ethernet switch series boasts outstanding features, including high protection ratings, electromagnetic compatibility, and industrial-grade design, ensuring the construction of highly reliable communication systems in demanding industrial environments.



ISE

Unmanaged Industrial Ethernet Switches

High Protection Rating

EMC level 3, IP40
Redundant dual power inputs
Wide temperature and voltage ranges

A Diverse and Flexible Port Combination

5-18 Ports.10/ 100/ 1000BaseT(X) (RJ45 connector)
100/ 1000BaseSFP Ports
100BaseFX/1000BaseFX ports

Easy to Use Quick Deployment

Plug and play,
quick deployment
Supports relay alarms

InHand Networks’ industrial Ethernet switch series boasts outstanding features, including high protection ratings, electromagnetic compatibility, and industrial-grade design, ensuring the construction of highly reliable communication systems in demanding industrial environments.

Model Selection

	ISE2003D	ISE2005D	ISE5005D	ISE2008D	ISE5008D	ISE3018D	ISE2016D	ISE5010D	ISE5306D	ISE5310D
Ethernet Interface										
Max. Number of Ports	3	5	5	8	8	18	16	10	6	10
100BaseFX Ports	1									
100/1000BaseSFP Slots								2	2	2
10/100BaseT(X) Ports	2	5		8		16	16			
10/100/1000BaseT(X) Ports			5		8			8		
Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP)						2				
PoE Ports 10/100/1000BaseT(X)									4	8
PoE Standards	IEEE802.3af , IEEE802.3at									
Switch Properties										
Backplane Bandwidth	16 Gbps	16 Gbps	16 Gbps	16 Gbps	16 Gbps	8.8 Gbps	8.8 Gbps	20 Gbps	20 Gbps	20 Gbps
MAC Table Size	4 K	4 K	4 K	4 K	4 K	8 K	8 K	4 K	4 K	4 K
Packet Buffer Size	1.5 Mbits	1.5 Mbits	1.5 Mbits	1.5 Mbits	1.5 Mbits	4 Mbits	4 Mbits	1.5 Mbits	1.5 Mbits	1.5 Mbits
Others										
Dimensions	24*100*61.8mm			40*100*61.8mm		72*140*110mm	52*140*110mm			
Operating Voltage	9.6~60 VDC & 18~30 VAC							18-60VDC	48-57VDC	
Storage Temperature	-40 ~ +75℃									
Installation	DIN-rail mounting									
Certifications	CE, FCC, UL							CE, FCC		



ISM

Managed Industrial Ethernet Switches

Stable and Reliable

EMC level 4, IP40
Redundant dual power inputs
Wide temperature and voltage ranges

Advanced Ring Network Technology

Supports STP, RSTP, and MSTP protocols
some models also support
ERPS networking protocol

Comprehensive Network Security Performance

ACL policies, MAC address binding VLAN
Supports QoS
IGMP Snooping, GMRP

The ISM series supports various network redundancy protocols, offering users a flexible choice for building complex industrial Ethernet communication systems. Whether in harsh production environments or industrial applications with strict requirements for reliability and availability, InHand Networks' industrial Ethernet switches can meet your needs.

Model Selection

	ISM5006D	ISM5010D	ISM5012D	ISM5020D	ISM5026U	ISM7028U	ISM5310D
Ethernet Interface							
Max. Number of Ports	6	10	12	20	26	28	10
100BaseFX Ports							
100/1000BaseSFP Slots	2	2	4	4	2	4	2
10/100BaseT(X) Ports							
10/100/1000BaseT(X) Ports	4	8	8	16	20	16	
Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP)					4	8	
PoE Ports 10/100/1000BaseT(X)							8
PoE Standards	IEEE802.3af , IEEE802.3at						
Switch Properties							
Backplane Bandwidth	44 Gbps	44 Gbps	56 Gbps	68 Gbps	56 Gbps	144 Gbps	44 Gbps
MAC Table Size	8 K	8 K	8 K	16 K	8 K	16 K	8 K
Packet Buffer Size	4 Mbits	4 Mbits	4 Mbits	4 Mbit	4 Mbits	1.5 Mbits	4 Mbits
Redundancy Protocols							
STP/RSTP/MSTP	√	√	√	√	√	√	√
Management							
Web	√	√	√	√	√	√	√
RMON	√		√	√	√	√	√
SNMPv1/v2c/v3	√	√	√	√	√	√	√
Port Mirror	√	√	√	√	√	√	√
Syslog	√	√	√	√	√	√	√
Telnet/SSH	√	√	√	√	√	√	√
Console Port	√	√	√	√	√	√	√
Filter							
802.1p Priority Queuing	√	√	√	√	√	√	√
802.1Q VLAN	√	√	√	√	√	√	√
IGMP v1/v2/v3	√	√	√	√	√	√	√
Security							
HTTPS/SSL	√	√	√	√	√	√	√
TACACS+	√	√	√	√	√	√	√
MAC Sticky	√	√	√	√	√	√	√
RADIUS	√	√	√	√	√	√	√
SSH	√	√	√	√	√	√	√
Access Control List	√	√	√	√	√	√	√
Layer 3 Switching	/	/	/	√	/	√	/
Others							
Dimensions	52*140*10mm		72*140*110mm	130*140*110mm	442*43.8*335mm	440*44.4*321mm	52*140*110mm
Operating Voltage	18-60VDC		18-60VDC	18-60VDC	100-240VAC	100-240VAC	48~57VDC
Storage Temperature	-40 ~ +75℃		-40 ~ +85℃	-40 ~ +85℃	-40 ~ +85℃	-40 ~ +85℃	-40 ~ +75℃
Installation	DIN-rail mounting		DIN-rail mounting	DIN-rail mounting	Rack mounting	Rack mounting	DIN-rail mounting
Certification	CE, FCC		CE, FCC, UL, IEC61850-3	CE, FCC, IEC61850-3	UL, CE, FCC	UL, IEC61850-3	CE, FCC, IEC61850-3

A landscape photograph showing a grassy field in the foreground, a utility pole with power lines on the left, and two wind turbines in the distance under a blue sky with scattered clouds. The title 'Industrial Cellular Modems' is overlaid in large white text.

Industrial Cellular Modems

InDTU324

The InDTU series industrial cellular modem features fast networking, flexible scalability, quick construction and low costs. It provides industrial users with wireless data transmission channels over TCP/IP on 4G/3G/2G/NB-IoT/Cat1 networks, enabling communications between on-site serial devices and central control systems, facilitating remote data acquisition and equipment control. It is widely applied in power, industrial automation, transportation, water management, agriculture, environmental protection, and meteorology.



InDTU324

Industrial Cellular Modem

Multiple
Network Access

4G/3G/2G/CAT M1
/NB cellular networks

High
Reliability

Self-recovery
Link redundancy, Link detection

Ultra-low Power
Consumption

Adaptable to various
field power supply modes

Fully Industrial
Grade

-40°C ~ 70°C
+5 ~ 35VDC, IP30

The InDTU324 series industrial grade wireless data terminal 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.

Hardware

CPU	ARM Cortex-M3 108MHz	Consumption	47mA@12V
RAM	96KB	Installation	Wall mounting
ROM	1024KB	Protection Rating	IP30
Serial	2*Logic serial ports:	Housing	Metal
	Serial port 1: RS-232/RS-485 (Optional)	Storage Temperature	-40°C ~ 85°C
	Serial port 2: RS-232	Operation Temperature	-40°C ~ 70°C
SIM Card	1*SIM, Mini-SIM(2FF)	Ambient Humidity	5 ~ 95% (non- condensing)
Antenna Interface	1*LTE	EMC	Level 2
Power Input	DC5-35V, pluggable industrial terminal connection	Certification	CE

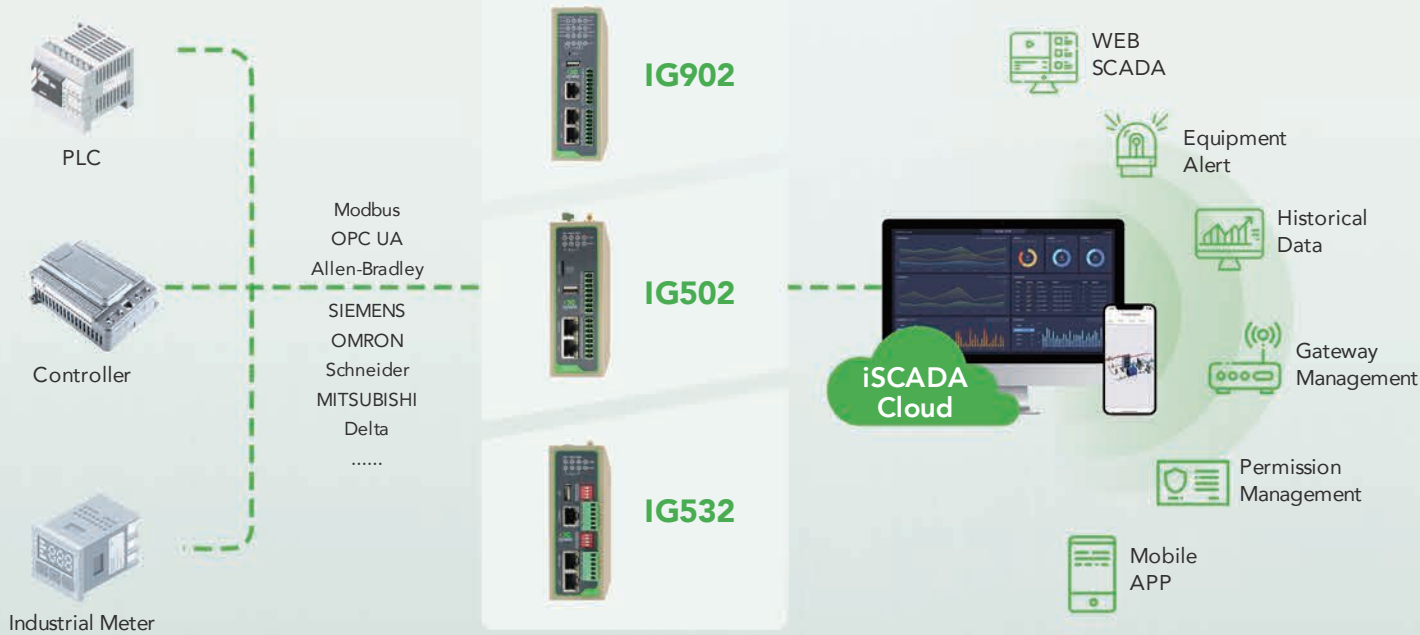
Software

Network Type	LTE-TDD/LTE-FDD/WCDMA/CDMA/GSM/EGPRS
Access Authentication	CHAP/PAP
Industrial Protocol	Modbus RTU/TCP protocol conversion
Network Protocol	Ping, DNS, transparent TCP/UDP, InHand DC TCP/DC UDP, user-defined login/heartbeat data packet
Reliability	Backup, Link Detection, Embedded Watchdog
Configuration Method	Local serial port, RTool, InHand Device Manager, SMS
Upgrade Method	Upgrade firmware through local serial port or remotely
Log	Supports local and online viewing of logs, facilitates checking device operating status
Device Management	Supports InHand Device Manager remote central management



iSCADA

The iSCADA Cloud provides web-based SCADA, equipment alert, and remote control for customers. Data acquisition and cloud integration are made effortless, allowing real-time monitoring of equipment status and swift response to operational alarms, enhancing operational efficiency, and minimizing equipment downtime.



iSCADA

Simple and Efficient Equipment Visualization Platform

Rapid Deployment

One configuration, batch deployment

Remote Monitoring

Multiple real-time monitoring methods for remote equipments

Alert Notification

Supports various alert notification methods

Data Security

Security mechanism based on AWS IoT

The iSCADA Cloud provides web-based SCADA, equipment alarms, and remote control for customers. Data acquisition and cloud integration are made effortless, allowing real-time monitoring of equipment status and swift response to operational alarms, enhancing operational efficiency, and minimizing equipment downtime.

Remote Monitoring

WEB SCADA	Supports custom WEB SCADA, providing common SCADA components and functions. Through WEB SCADA, intuitively and efficiently view equipment operating status and modify equipment operation parameters.
Equipment Alert	Customize alert notification strategies, with the ability to push alerts through various channels such as WEB, SMS, email, etc., enabling proactive fault warnings.
Historical Data	Supports storing critical data, analyzing historical device performance through charts, and exporting data.
Dashboard	Analyze enterprise operations from multiple dimensions, including online/offline status, alerts, and traffic.
Mobile APP	Stay informed about equipment operations and receive alerts on anomalies anytime, anywhere with mobile app.
Rapid Deployment	Configure data collection strategies and other settings through device model features. Once configured, deploy the settings in bulk to multiple gateways.

Permission Management

Organization	Customize the organization tree structure to flexibly assign permissions for equipments, gateways, and models under each organization.
Role	Customize role-based functional permissions.
User	Customize user data and functional permissions.
API Token	Customize API token permissions and expiration time.

Gateway Management

Gateway Status	Monitor gateway cellular signal, IMSI, online/offline status, and other information.
Monitoring	
Software Upgrade	Remotely batch upgrade firmware, Python SDK, and DeviceSupervisor Agent versions for gateways.
Remote WEB Access	Remote access to the gateway's WEB page for modifying runtime configurations.

Complementary Hardware Products

Product	InGateway902, InGateway532, InGateway502
Cloud address: iscada.inhandcloud.com	

Quick Response to Market Demands

5 R&D Centers

Beijing
Chengdu
Jiaxing
Toronto
Coming soon
Virginia



3 Manufacturing Centers

Supply Chain: Self-owned Factory with Ensured Capacity and Quality



3 Manufacturing centers: Jiaxing (China), Bangkok (Thailand), Toronto (Canada)

8 Production lines with a high level of flexibility

3,000 Units produced per day

17,898 Square meters

Multi-location Inventory & Tech Support

3 Storage and Technical Support Centers

Toronto
Canada
Düsseldorf
Germany
Virginia
US



Used worldwide. Proven worldwide.



Canada

Management of
Hydropower Station



Germany

Smart
EV Charging Kiosks



China

Predictive Maintenance
of Air Compressors



US

Predictive Maintenance
of Generators



Switzerland

Predictive Maintenance
of Textile Machines



Thailand

Flood Early Warning



Australia

Wireless Water Metering