

Energy Gateway

Multi-protocol, Secure, Cloud Managed

IG532 Series

Breaking down protocol barriers to empower digital energy



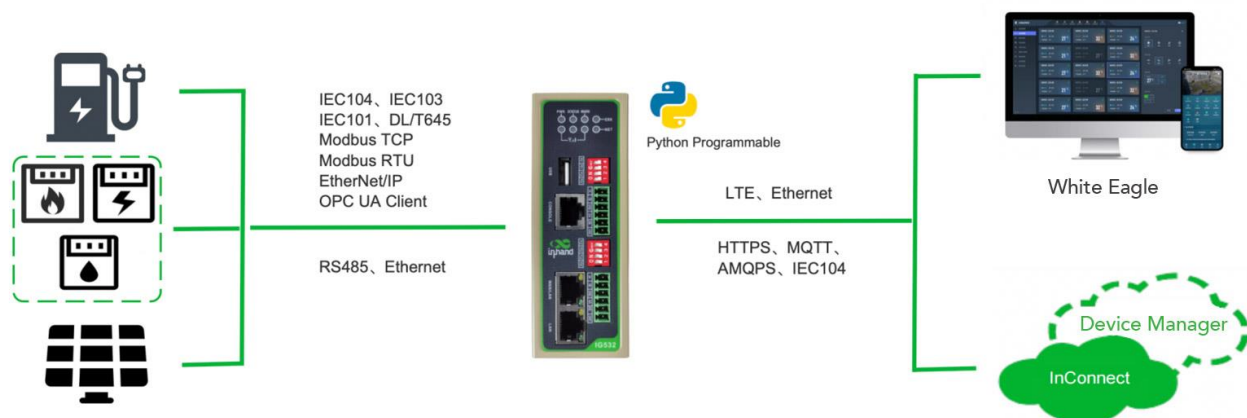
InGateway532 (IG532) series energy gateway is a small size and cost-effective energy gateway launched by InHand for low-voltage power distribution and energy field. With a globally deployed LTE wireless network and multiple broadband services, the product provides uninterrupted Internet access available anywhere. With its powerful edge computing capabilities, comprehensive security and wireless access services, it can achieve up to 10,000 level equipment networking and provide high-speed access for equipment energy data acquisition.

IG532 supports a variety of mainstream power and industrial protocols such as IEC101, IEC103, IEC104, DNP3, DL/T645, Modbus, and can also connect to mainstream IoT cloud platforms such as AWS, Azure, Ali, so that field devices can easily access the cloud. It has an open edge computing platform to realize data optimization, real-time response, agile connection, and intelligent analysis at the edge nodes of the Internet of Things; Significantly reduce data traffic on site and at the center, reducing operating expenses and cloud stress for users. The excellent product features, easy deployment and perfect remote management function of IG532 shine in the wave of equipment information construction and energy management.

The IG532 series is particularly suitable for data acquisition and monitoring of distributed energy-consuming devices, such as:

- Low-voltage distribution
- Smart grid
- Smart building
- New energy
- Heating/water/gas supply
- Environmental protection

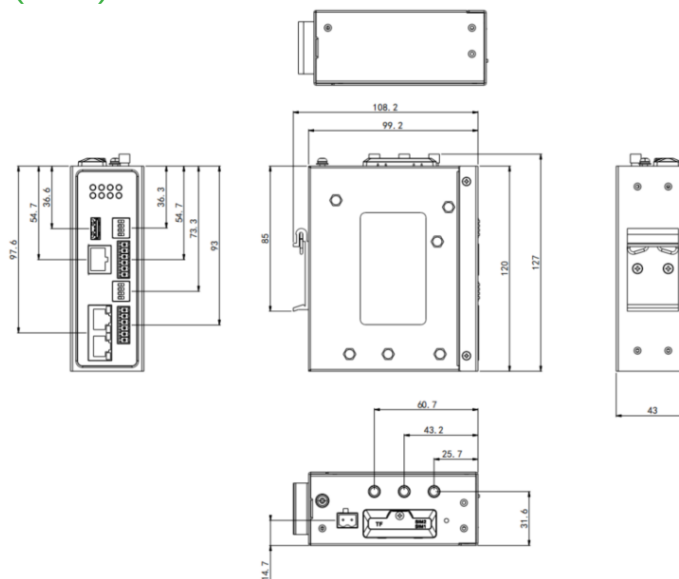
Application



Features and Advantages

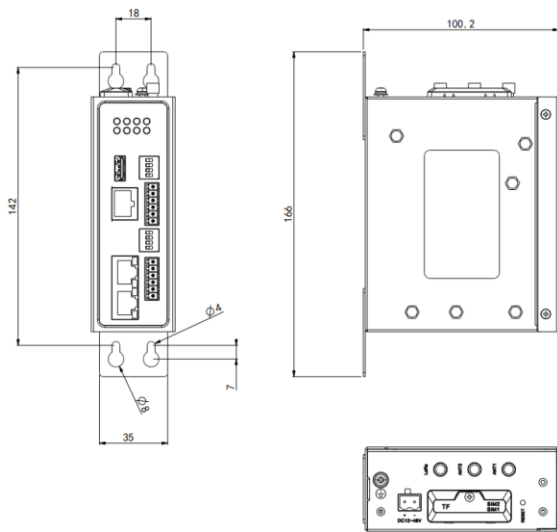
- Industrial-grade, ready for harsh industrial environments**
 - Industrial-grade design, with operating temperatures up to $-20^{\circ}\text{C} \sim 70^{\circ}\text{C}$, supports $+12 \sim 48\text{VDC}$ wide voltage power inputs, protection rating IP30, providing stable and secure network communications for demanding unattended industrial sites.
- Built-in InHand Device Supervisor™ Agent service, easy to collect, process and upload data to cloud**
 - Built-in InHand Device Supervisor™ Agent service for simple configuration, no programming required.
 - Support mainstream protocols, including IEC101/103/104, DL/T645 Modbus RTU/TCP/ASCII, OPC UA, ISO on TCP, etc.
 - Support public cloud platforms such as AWS, Azure, and Alibaba, also support connecting with mainstream IoT cloud platforms, and provides you with diversified IoT cloud ecological solutions.
- LoRa self-organizing network, easy to achieve wireless LAN networking**
 - No wiring, wireless data transceiver; In complex environment, it is easy to realize equipment data acquisition.
 - Ultra-long communication distance, up to 5km.
 - Star networking mode, automatic networking, no need to configure networking parameters, the use of simple and convenient, to provide you with comfortable user experience
- Highly reliable design, ensuring continuous data transmission**
 - Device auto recovery: embedded watchdog, self recovers from faults, ensuring high device availability
 - Link detection: application layer link detection, auto redials when disconnected, maintain continuous data transmission.
 - PPP-layer detection: maintains connection to operator network, prevents forced hibernation, can detect stability of dial-up connections.
- Powerful edge computing capabilities, intelligent data processing**
 - Equipped with ARM Cortex-A8 processor, 1GHz frequency, 512MB RAM and 8GB eMMC, the IG532 offers strong edge computing capabilities, providing computing resources for data optimization, real-time response, agile connection, and intelligent analysis on edge nodes.
- Easy for use and management, support for mass deployment**
 - Supports configuration through Web interface, easy for use.
 - In large-scale IIoT applications, tens of thousands of machines are to be networked. The InGateway supports Device Manager to enable efficient large-scale deployment and management.

Dimensions (mm)

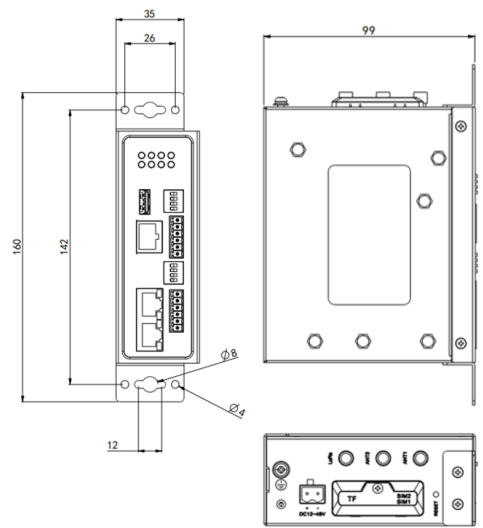


IG532 DIN-Rail Mounting

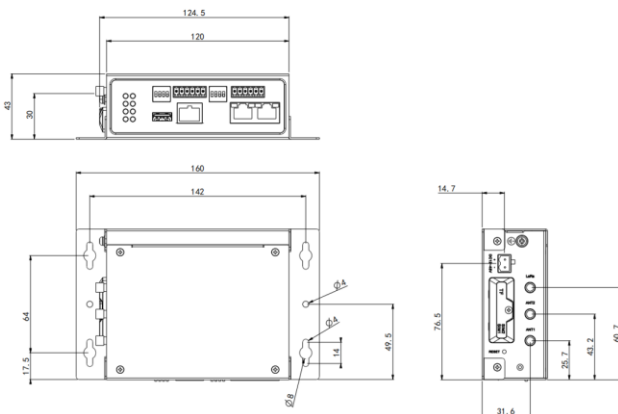
Dimensions (mm)



IG532 Wall Mounting (A)



IG532 Wall Mounting (B)



IG532 Wall Mounting (C)

* Wall mounting (A) – accessory code: AFIX000088, AFIX000089

* Wall mounting (B) – accessory code: AFIX000090

* Wall mounting (C) – accessory code: AFIX000091

Product Specifications

Hardware Specifications

Item	IG532		
Hardware Platform			
CPU	ARM Cortex-A8@1GHz		
RAM	512MB		
FLASH	8GB eMMC		
Interfaces			
Ethernet Port	2*10/100Mbps Ethernet port		
Serial Port	RS485 *4 , industrial terminal block, isolation		
USB	USB 2.0, 1*TypeA		
SIM Card	Micro SIM x 2		
Antenna Connector	LTE: SMA *1, LoRa: SMA*1 Note: North America models: 2 x SMA 4G antenna connectors.		
Button	Pinhole reset button *1		
TF card	MicroSD support, up to 32GB expansion		
LoRa(Optional)	Support for LoRa is optional		
LoRa Wireless Parameters			
Frequency	470MHz – 510MHz		
Indoor/urban communication distance	1km		
Outdoor/line-of-sight communication distance	5km		
Transmit Power	-9dBm-22dBm		
Data Rate	0.15Kbps-46.8Kbps		
Receiver Sensitivity	-140dBm		
channel	80		
Power			
Power input	12-48V DC		
Power Interface	Industrial terminal block		
Power	250mA@12V		
Mechanical Characteristics			
Installation	Panel,Rail	Protection Rating	IP30
Housing	Metal	Cooling	Fanless
Ambient Temperature And Humidity			
Storage Temperature	-40 ~ 85℃	Ambient humidity	5~95% (non-condensing)
Operation temperature	-20~ 70℃		
Indicator			
LED	PWR, STATUS, WARN,ERR, Signal Strength (3), LTE		
EMC			
Static	EN61000-4-2, level 3		
Radiation Electric Field	EN61000-4-3, level 3		
Pulsed Electric Field	EN61000-4-4, level 3		
Surge	EN61000-4-5, level 3		
Conducted Disturbance Immunity	EN61000-4-6 ,level 3		
Shock Wave Resistance	EN61000-4-12,level 3		
Power Frequency Magnetic Field Resistance	EN61000-4-8, horizontal / vertical 400A/m (>level 2)		
Physical Specs			
Shockproof	IEC60068-2-27	Vibration Resistance	IEC60068-2-6
Free Fall	IEC60068-2-32		
Certification			
CE、FCC、PTCRB、Verizon Wireless、AT&T			

Software Specifications

Item	IG532		
Operating System			
OS	Custom Linux		
Internet			
Access authentication	APN,VPDN		
Internet access	CHAP,PAP		
Network format	5G SA/NSA,LTE Cat1,LTE Cat4		
LAN protocol	ARP,Ethernet		
WAN protocol	Static IP,DHCP		
Network Protocol			
IP Application	ICMP,DNS,TCP/UDP,TCPServer,DHCP		
IP Routing	Static routing		
Security			
Multilevel user	Multi-level management rights		
Data security	Firewall		
	OpenVPN, IPSec VPN		
Reliability			
Link Detection	Sends heartbeat packets to detect, auto redials when disconnected		
Dual SIM Failover	Supports dual SIM failover		
Embedded Watchdog	Device runs self-detection, auto recovers from malfunctions		
Open Platform			
Secondary development environment	Multi-programming language development platform		
Access cloud platform	AWS, Azure, Ali and other cloud platforms		
Industrial Protocol			
Industrial Protocol	ModbusRTU Master/Slave、ModbusTCP Master/Slave、EtherNet/IP、ISOonTCP、OPCUAClient/Server、MitsubishiMC 3C/3E/3CoverTCP、MitsubishiCPUPort、FINSUDP、HostLink、PPI、DLT645-2007、IEC104Server		
Network Management			
Configuration	Web,Telnet,SSH		
Upgrade	Web,DM		
Log	Support local system log, remote log export and important log power-off save		
Configuration backup	Import and export configuration files		
Remote management	DM or HTTP, HTTPS, Telnet, SSH, etc.		

Ordering Guide

Model code:IG532-<WMNN>-<W/NA>				
Model	<WMNN>: Cellular Type & Frequency Band	Ethernet Port	Serial Port	<LoRa/NA>: LoRa
IG532-LFA3	China LTE CAT1 LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/B38/B39/B40/B41 GSM: 900/1800/MHz	2*10/100Mbps	4*RS485	NONE
IG532-LFA3-LRAS	China LTE CAT1 LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/B38/B39/B40/B41 GSM: 900/1800/MHz	2*10/100Mbps	4*RS485	LoRa
IG532-LQA8	China LTE CAT4 LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 TD-SCDMA Band 34/39 WCDMA and 1/8 CDMA BC0 GSM 900/1800 MHz	2*10/100Mbps	4*RS485	NONE
IG532-LQA8-LRAS	China LTE CAT4 LTE-FDD Band 1/3/5/8 LTE-TDD Band 34/38/39/40/41 TD-SCDMA Band 34/39 WCDMA and 1/8 CDMA BC0 GSM 900/1800 MHz	2*10/100Mbps	4*RS485	LoRa
IG532-NRQ1	China 5G NR 5G NR NSA:n41/n78/n79 5G NR SA:n1/n28/n41/n77/n78/n79 LTE-FDD:B1/B3/B5/B8 LTE-TDD:B34/B38/B39/B40/B41 WCDMA:B1/B5/B8	2*10/100Mbps	4*RS485	NONE
IG532-NRQ1-LRAS	China 5G NR 5G NR NSA:n41/n78/n79 5G NR SA:n1/n28/n41/n77/n78/n79 LTE-FDD:B1/B3/B5/B8 LTE-TDD:B34/B38/B39/B40/B41 WCDMA:B1/B5/B8	2*10/100Mbps	4*RS485	LoRa
IG532-FQ08	Global LTE CAT4 LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/ B19/B20/B25/B26/B28 LTE-TDD: B38/B39/B40/B41 WCDMA: B1/B2/B4/B5/B6/B8/B19 GSM: B2/B3/B5/B8	2*10/100Mbps	4*RS485	NONE
IG532-EN00	Global, no cellular	2*10/100Mbps	4*RS485	NONE
IG532-EN00-LRAS	Global, no cellular	2*10/100Mbps	4*RS485	LoRa

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.



43671 Trade Center Place, Suite 100, Dulles,
VA 20166, USA
T: +1 (703) 348-2988
E: info@inhandnetworks.com
www.inhandnetworks.com