

# InGateway912 Series

## Industrial Edge Computing Gateway

“The new 4G edge computing InGateway912 provides reliable and intelligent communications for smart industrial equipment. By strong edge computing capability, the IG912 supports enhanced device network structure with data caching, preprocessing and analysis on network edge, enables fast on-site response with field-end intelligent data processing. ”

### Powerful edge computing capability.

ARM Cortex-A8 processor, 1GHz CPU, 1GB DDR3 RAM and 8GB eMMC FLASH, support quick intelligent data processing.

### Open Python development platform.

Access APIs and resources of the gateway, custom develop Python programs to meet vertical requirements.

**Fully industrial-grade.** Thoroughly industrial-grade to withstand challenging conditions on industrial sites: EMC III, IP30, wide voltage and temperature tolerance.

### Easy Internet access, reliable

communications. Fast Ethernet, 3G/4G and multiple DSLs. Dual-link backup, dual SIM and VRRP. Auto link detection and watchdog safeguard continuous connection.

### Multiple cloud ecosystems.



### Multiple industrial protocols.



### Applications:

Ideal for IIoT systems of smart industrial equipment, large machinery, etc.

- Industrial Robots
- Large Packaging Machinery
- CNC Machine
- Oil & Gas
- Air Compressor
- Power, Water & Gas Utilities
- HVAC System
- Smart Agriculture

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## IG912 Hardware Specs

Item	IG912-B (Basic Model)	IG912-H (High-config Model)	
<b>Hardware Platform</b>			
CPU	ARM Cortex-A8 1GHz	ARM Cortex-A8 1GHz	
RAM	512MB DDR3	1GB DDR3	
FLASH	8GB eMMC	8GB eMMC	
<b>Interfaces</b>			
Real-time Ethernet Protocol Port	None	2*100Mbps real-time industrial Ethernet protocol port	
I/O	None	4-channel digital input DI, 2-channel digital output DO, 2-channel analog input AI	
Ethernet Port	2*10/100/1000Mbps fast Ethernet port, WAN/LAN or 2*LAN RS-232 x 1, RS-485 x 1		
Industrial Serial Port	RS-232 signal : TXD, RXD, GND RS-485 signal: A, B, GND ESD protection: 15KV		
Console	RS-232 x 1 RJ-45 interface	Wi-Fi (Optional)	2.4G or 5G (802.11 ac /b/g/n)
USB	USB 2.0 port x 1	Reset Button	Pinhole reset button
SIM Card Slot	1.8V/3V, Drawer-type slot x 2	Micro-SD Expansion	Support Micro-SD card, up to 128GB
GPS (Optional)	Satellite positioning GPS: SMA x 1		
<b>Mechanical Features</b>			
Installation Method	DIN-rail, wall mounting	Protection Rating	IP30
Housing	Metallic structure	Cooling	Fan-less cooling
<b>Power Supply</b>			
Power Input	DC9-48V	Polarity Reverse Protection	Support
Power Connector	Pluggable industrial terminal connection		
<b>Environment</b>			
Storage Temperature	-40 ~ 85°C	Operating Temperature	-25 ~ 75°C
Ambient Humidity	5 ~ 95% (non-condensing)		
<b>Others</b>			
Real Time Clock (Optional)	Embedded real time clock (RTC), powered by super capacitor		
<b>Indicators</b>			
LED	POWER, STATUS, WARN, ERROR, MODEM, SIM1, SIM2, TF (TF card), PYTHON, USER1, USER2, WIFI, GPS, Signal Indicator		
<b>EMC Indexes</b>			
Static	EN61000-4-2, level 3	Radiation Electric Field	EN61000-4-3, level 3
Surge	EN61000-4-5, level 3	Pulse Electric Field	EN1000-4-4, level 3
Conducted Disturbance	EN61000-4-6, level 3		
Power Frequency Magnetic Field	EN61000-4-8, horizontal / vertical 400A/m (>level 3)		
<b>Physical Features</b>			
Shockproof	IEC60068-2-27	Vibration	IEC60068-2-6
Free Fall	IEC60068-2-32		
<b>Certifications</b>			
CE, FCC, PTCRB, Verizon Wireless, AT&T (Note: New product, these certifications are in plan.)			

## IG912 Software Specs

Item	IG912
<b>Network Connection</b>	
Network Access	APN, VPDN
Access Authentication	CHAP/PAP/MS-CHAP/MS-CHAPV2
Network Type	LTE, WCDMA (HSPA+), EVDO, EDGE, GPRS, CDMA
LAN Protocol	ARP, Ethernet
WAN Protocol	Static IP, DHCP, PPPoE
<b>Network Protocols</b>	
IP Application	Ping, Traceroute, DHCP Server/Relay/Client, DNS Relay, Dynamic DNS, Telnet, SSH, HTTP, HTTPS, TFTP, FTP, SFTP
IP Routing	Static Routing
<b>Network Security</b>	
Firewall	Stateful packet inspection (SPI), anti-DoS attack Multicast/Ping filter, Access Control List (ACL) NAT, PAT, DMZ, port mapping, virtual server
Multi-level Authorization	Multi-level user authorization
AAA	Local authentication, Radius, Tacacs+, LDAP
Data Security	IPsec VPN, OPENVPN, CA (Can auto apply.)
<b>Reliability</b>	
Backup	VRRP, interface backup
Link Detection	Heartbeat packet detection, auto-recovery of disconnection
Embedded Watchdog	Device self-diagnosing, device auto-recovery
<b>WLAN (Optional)</b>	
Protocol Standard	IEEE 802.11ac/b/g/n
Security	Open system, shared key, WPA/WPA2 certification, WEP/TKIP/AES encryption
Mode	AP mode, Client mode
<b>Network Management</b>	
Configuration Method	Local configure; remote configure via HTTP, HTTPS, Telnet, SSH
Upgrade Method	Local upgrade; remote upgrade via WEB, DM, TFTP, FTP, SFTP server
Log	Local or remote log export, support power-down log saving
SMS	Status enquiry, configuration, and reboot
Dial On-demand	Data activation, SMS activation, scheduled on/off
Network Management	SNMP v1/v2c/v3, InHand MIBs
DM	Centralized network management, batch configuration
Network Diagnosis	Ping, Traceroute, Sniffer (network packet capture tool)
<b>Development Platforms</b>	
Multiple Platforms	Python custom development platform; MS Azure IoT, AWS IoT, etc.
<b>Industrial Protocol</b>	
Multiple Protocols	Modbus RTU, Modbus TCP, OPC UA Client, OPC UA Server, PPI, Profinet, Profibus, EtherCAT, CC-LINK, EtherNET/IP