

InGateway 601 Intelligent Cellular Gateway

Cellular Routing, Text Message Alarms, Remote Secure Access



InGateway 601

The InGateway 601 series, integrating 3G cellular routing, Modbus data acquisition, text message (SMS) alarms and VPN technology into a compact industrial grade gateway, establishes a new standard in remote access. The IG601 is the total solution for any PLC or device.

As a part of InHand Networks' industrial cellular portfolio, the IG601 can ensure a reliable, secure connection to the 3G network. From the rugged design to the built in automatic recovery mechanisms, the IG601 can ensure critical applications stay connected. While providing a suite of VPN features, the IG601 guarantees data security.

The IG601 is not only cellular router, but also an intelligent gateway, supporting industrial protocols like Modbus over TCP/IP and DC protocol. The IG601 can monitor PLCs and equipment, and can send an alarm by text message if the user-defined conditions are triggered. It notifies response personnel immediately, in the field or in the office.

Working with the cloud based *InHand Device Touch*, the IG601 can access a PLC's serial or Ethernet port with its native software tools, allowing techs to program remote PLCs just as if the devices were by their side, and the connection is secured by an automatic VPN tunnel.

InGateway is the intelligent companion for your PLC or device.

Key Features

■ Rugged Design for Industrial Environment

- EMC levels 3, exceeding industrial standards
- 1.5 KV isolated Ethernet port
- Serial port: 15KV ESD protection
- Wide operating temperature range: -30~ 70°C
- Wide input voltage range: 12 ~ 24VDC
- IP30 metal enclosure
- DIN rail or wall mounting bracket.

■ Cellular Routing

- Supports 3G Networks: HSPA+, EV-DO
- VPN: GRE, L2TP, PPTP, IPSec, OpenVPN, Certificates
- Firewall: Stateless Packet Inspection, Intrusion Protection, DDoS Prevention, IP to MAC binding, DMZ, Virtual IP Mapping
- VRRP: Multiple Redundant Routers

■ Remote Access

- Supports InHand Device Touch to build secure tunnel for remote PLC and machines
- Secure tunnel can be built on demand
- Operator access control and traceable historical records

■ Bi-directional Text Message Function

- SMS Inquiry and Control via Modbus over the serial or Ethernet port
- Text Message Alarm, triggered by predefined criteria
- Intelligent white list function improves security

■ Serial Port Networking

- Protocols converting between serial and Ethernet: Modbus RTU & TCP
- Multiple virtual serial links

■ Simplify Management

- Intuitive with web configuration interface
- Text Message to Inquiry Status, Reboot the IG601
- Support industrial standard SNMP and InHand MIBs, so as to integrate into enterprise level IT management system
- Support InHand Device Manager: centralized network management

- IG601 can be managed easily, whether for a single installation or large scale system

Specifications

IG601 Software Specifications

		IG601
Networking	Cellular Standard	HSPA+/UMTS/EDGE/GPRS/GSM CDMA 1xEVDO Rev.A/1xEVDO Rel0/1xRTT
	Band Options	GSM/GPRS/EDGE 850/900/1800/1900MHz UMTS/HSPA+ 850/900/1900/2100MHz CDMA/EVDO 800/1900MHz
	Network Access	APN, VPDN, Access Authentication CHAP/PAP/MS-CHAP
	IP	Ping, Trace, DHCP Server, DNS Relay, DDNS, Telnet
Security	Networking Security	SPI, DDoS protection, Stateless Packet Inspection
		Filtering Multicast/Ping package, Access Control List (ACL)
		NAT, DMZ, Port mapping
	Data Security	GRE, L2TP, PPTP, IPSec, OpenVPN, Certification
Management	HTTPS	
Reliability	Auto-Recovery	Hardware Watchdog
	Link Status Detection	Reconnects automatically when link failure is detected.
Application Functions	Bi-directional Text Message (SMS) Functions	Broadcasts a text message when an alarm criteria is triggered
		SMS Inquiry and Control: with authorized cellular number, to inquire data, configure or control remote PLC/device
	Remote Maintenance	InHand Device Touch. Remote PLC programming via serial/Ethernet port
	Data Acquisition	Acquire local data (via Modbus) and feed into monitoring center, Support InHand Device Sense for a web-based SCADA interface
Intelligence	Integrate DTU Functions	Support Modbus protocol, virtual serial port, WP agreement, WN protocol, Trap+Poll, RFC2217, transparent transmission
Network Management	Configuration	Configure via Serial Port, Telnet, Web
	Firmware Upgrade	Via Web interface or InHand Device Manager
	Log	Local log, remote log, export log via serial port
	Text Message (SMS)	Interactive text messaging, allowing SMS commands like 'Reboot' or 'Status.'
	On-Demand Dial Up	Trigger by data on port, text message or by predefined schedule
	SNMP	SNMP v1/v2c, InHand MIBs
InHand Device Cloud	Device Manager	Centralized network management for thousands of devices, batch configuration, bandwidth usage, connection status and location.

		IG601
(Not included)	Device Touch	Remote access PLC, virtual serial, dual VPN tunneling, OpenVPN with TLS tunneling for anonymity and security
	Device Sense	Remote monitoring, Real-time data, Simple web interface

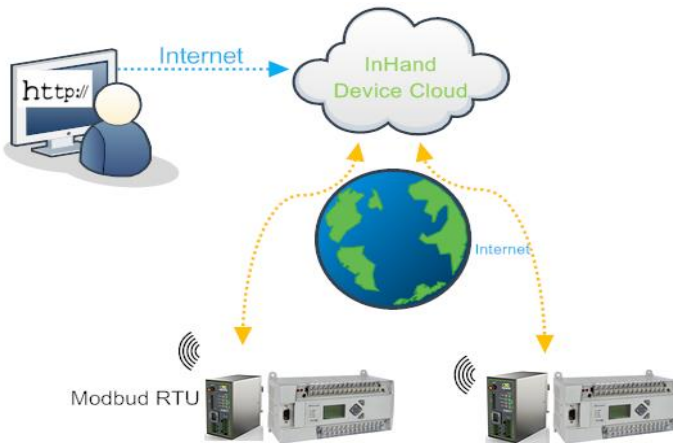
IG601 Hardware Specifications

		IG601
Interface	Ethernet Port	1 RJ45, 10/100 Mbps auto-sensing
	Power Supply	3 Pole Industrial Wiring Terminal Input Voltage: 12 to 24VDC
	Serial Port	RS-232/RS-485, 5-pin Industrial Terminal Block Connector 15KV ESD protection
	SIM Holder	Drawer Card Holder x1
	Reset	Pinhole Reset Button
	Real Time Clock	Embed RTC, Powered by Button Battery
	SMA connector	One Standard SMA Connector with a Female Inner Pin
Mechanical Features	Mounting	DIN-Rail, or wall mounted (additional accessory shall be ordered)
	Dimension (mm)	80 x 45 x 90
	Dimension (in)	3.1 x 1.8 x 3.5
	Weight	340g
	Enclosure	Metal
	IP Level	IP30
	Cooling	No Fan
Power Consumption	Standby	90-130 mA@12V
	Operating	130-160 mA@12V
	Peak	180 mA@12V
Environment Temperature	Humidity	5 ~ 95% relative humidity (non-condensing)
	Storage Temp	-40 ~ 85°C, -40 ~ 185°F
	Working Temp	-30 ~ 70°C, -22 ~ 160°F
LED Indicators		POWER, STATUS, WARN, ERROR, MODEM, SIM, Three Levels of Cellular Signal Strength
EMC & Physical Specifications		EN61000-4-2, level 3 EN61000-4-3, level 3 EN61000-4-4, level 3 EN61000-4-5, level 3 EN61000-4-6, level 3 EN61000-4-12, level 3 EN61000-4-11, Voltage Dip: 70% Shock Test: IEC60068-2-27 Free Fall: IEC60068-2-32

	IG601
	Vibration: IEC60068-2-6
Certificated and Approved by	CE, FCC, UL, PTCRB, RCM, Verizon Wireless, AT&T

Applications

1. Secure Remote Connectivity

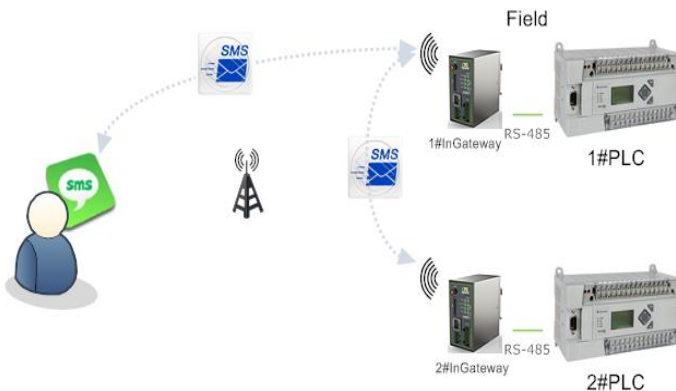


Reliable, Secure Remote Networking

Utilizing ubiquitous cellular networks, the IG601 helps you to connect your remote machines for remote monitoring, SCADA, equipment maintenance, vending operations, wind turbines, ATMs and more.

The IG601 ensures your equipment stays protected and connected.

2. Easily manage your PLC by text message

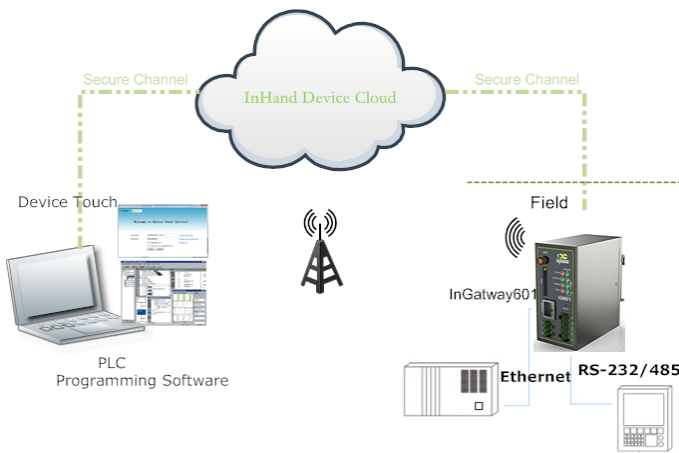


Text-Messaging

The IG601 allows engineers to monitor their device, receive alarms, or even reboot the device via a short text message or SMS.

Get notified before equipment fails. Text-messaging ensures you stay connected.

3. Remote Programming and Diagnostics

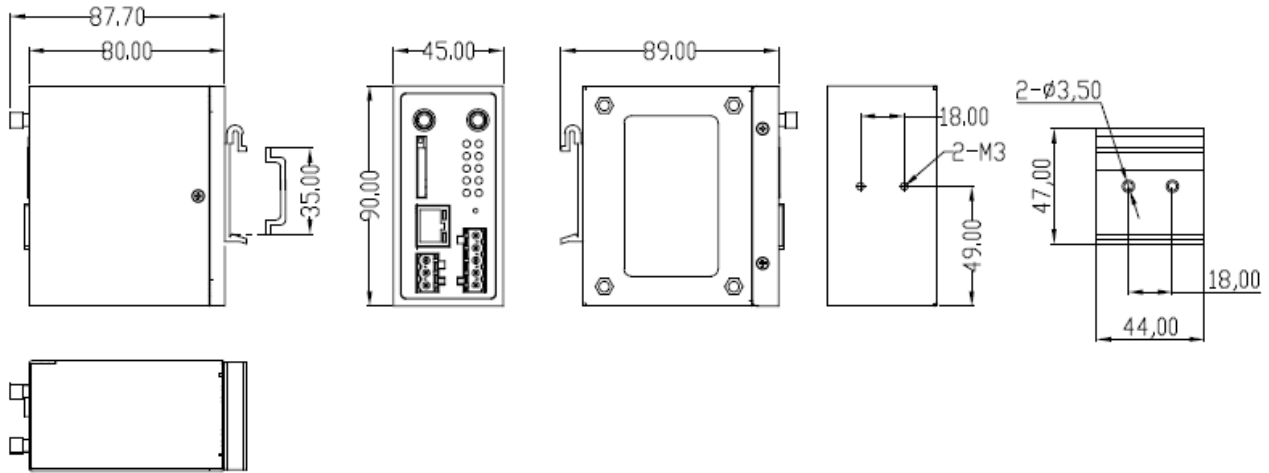


InHand Device Touch

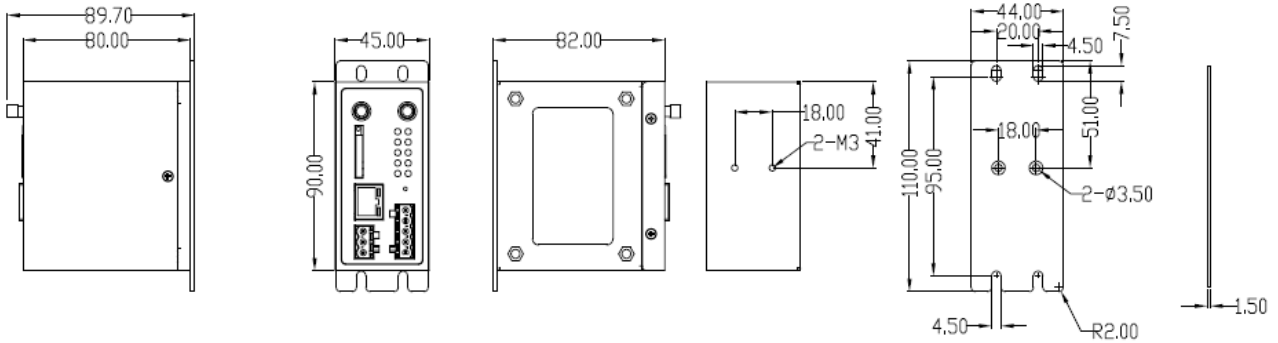
The *InHand Device Touch Cloud* allows technicians to remotely program, monitor and diagnose a PLC.

InHand Device Touch software is a one-click solution and provides all the security of a VPN without any complex VPN configuration. *InHand Device Touch* is a simple, secure and powerful tool for the mobile age.

Dimensions (mm)



DIN-Rail Mount



Wall Mount (Order accessory separately.)

Ordering Information

Features	InGateway601Part Number
Part Number	IG601-<NW>
NW	PS08: UMTS(HSPA+) Band1/2/5/8 EDGE/GPRS/GSM 850/900/1800/1900 VS08: EVDO and CDMA 1x (For Verizon Wireless in USA)
Sample	IG601-PS08:with a HSPA+ module
Accessory	Include standard antenna. External power supply or adapter not included.

InHand Networks

InHand Networks provides reliable, secured and intelligent M2M solution for electric power, industrial automation, commercial and medical devices. Recognized by world class customers and partners, Proven by a large install base, Expanding with intensive investments in research and development and Enduring for long-term support.

InHand Networks has become leader in industrial grade network technology by providing industrial cellular routers, industrial Ethernet switches, wireless sensor network devices and cloud based M2M platforms.

Connecting devices, enabling service.



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