InHand Networks

Compact Industrial LTE Router

InRouter 305



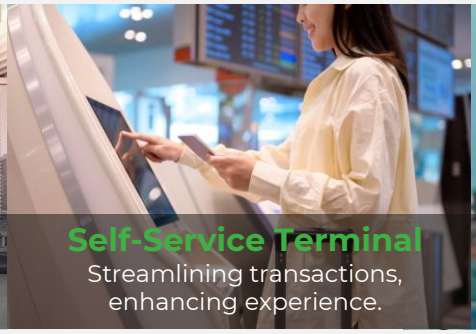
· 4G · Wi-Fi · Security

· Cloud-Managed · Rich Industrial Interfaces

The IR305 is an IoT cellular router that integrates 4G LTE, Wi-Fi, and VPN technologies to provide easy, reliable, and secure Internet connectivity. With features such as 4G wireless wide area network and Wi-Fi wireless local area network, it offers uninterrupted access to multiple networks. With comprehensive security and intelligent software services, it enables efficient and secure networking, providing enterprises with safe and reliable data links for digital networking.



Digital signage
Connecting Digital Signage for a Smarter Future!



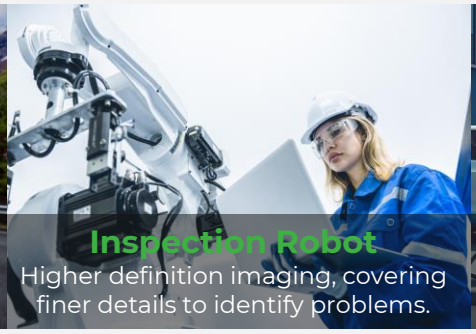
Self-Service Terminal
Streamlining transactions, enhancing experience.



Medical Equipment
The intelligence of equipment leads to more efficient healthcare.



Electronic Police
Happiness city starts with enhancing urban security.

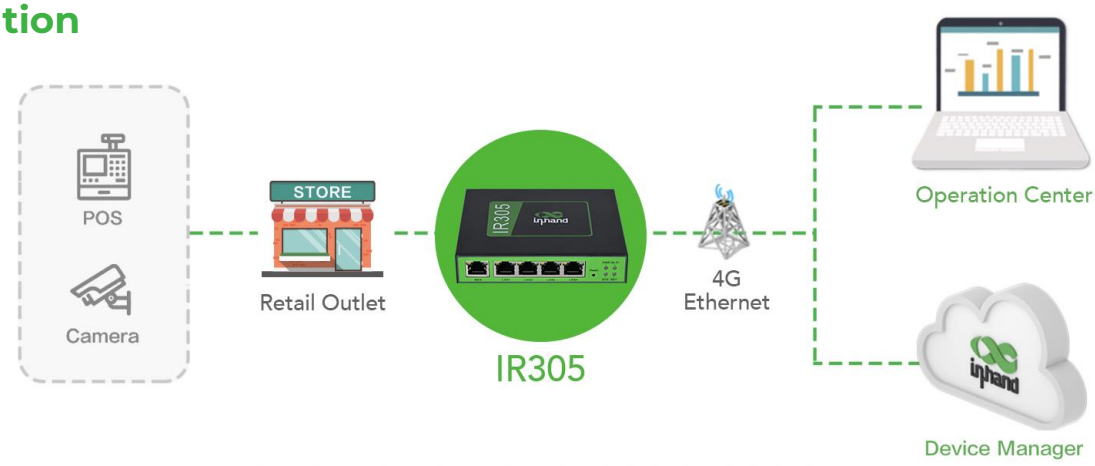


Inspection Robot
Higher definition imaging, covering finer details to identify problems.



Charging Station
Connected Charging for a Sustainable Future!

Solution



Features and Advantages

Diverse access methods covering all scenarios

IR305 has the capability to access the Internet through cellular, wired, and Wi-Fi connections, catering to different network environments. It provides differentiated cellular network services based on varying business requirements.

"Always-on" connectivity

The IR305 comes with 4G/wired/Wi-Fi backup, cellular link failover, dual SIM switching, VRRP, multi-layer detection mechanism, and other features, providing a reliable and robust connection to ensure your network stability and reliability.

Secure Network Connection

The IR305 is equipped with firewall policies, access control, built-in VPN, data encryption, enhanced Wi-Fi security, 802.1x and other features, effectively ensuring the security of the network.

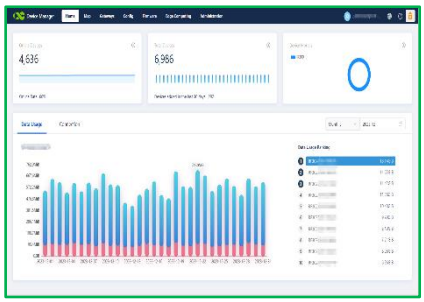




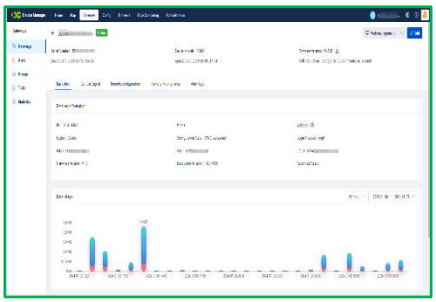


Device Manager-Cloud management

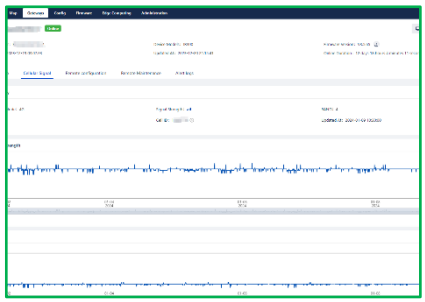
The IR305 connects to the InHand Device Manager remote device management cloud platform to manage tens of thousands of distributed site devices in real time and grasp device status anytime and anywhere, making management more economical and more efficient!



Take control

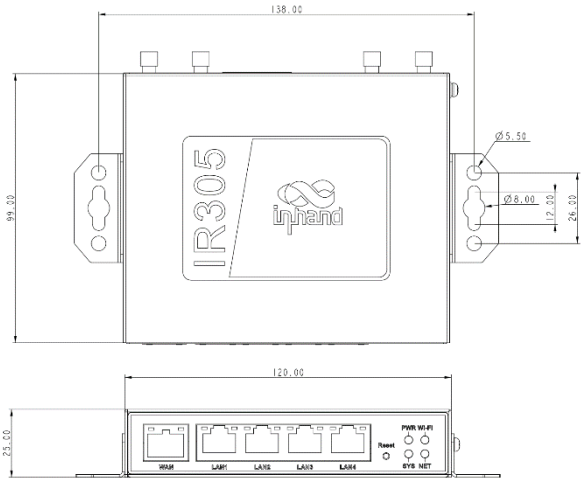


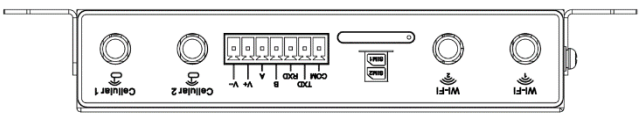
Real-time monitoring



Critical Status

Dimensions (mm)





Industrial Terminal						
IR305						
COM	DIO4	DIO3	DIO2	DIO1	V+	V-
IO					Power supply	
IR305-S						
GND	TXD	RXD	B	A	V+	V-
RS232			RS485		Power supply	

Dimensions: 120*99*25 (mm)

Product Specifications

InRouter 305 Hardware Specifications			
Hardware Platform			
CPU	580MHz		
RAM	128MB DDR2		
FLASH	64MB SPI		
Interface			
Ethernet Port	5*10/100Mbps fast Ethernet port, RJ45，WAN/LAN/VLAN port，1.5KV network isolation transformer protection		
Power Supply	DC9-36V, over-current protection, anti-reverse connection, 2 PIN industrial terminal		
IO. (Optional)	Support 4*IO (DO or IO can be configured)		
Serial port (*Optional)	1*RS232 + 1*RS485		
*Alternatives for I/O or Serial port			
Reset	Pinhole reset button		
SIM Card	Drawer-type slot*1, support dual-NANO SIM		
Wi-Fi (Optional)	IEEE 802.11b/g/n，300Mbps		
GNSS (Optional)	Support GPS/ GLONASS /BeiDou /Galileo/ QZSS Positioning accuracy is 2.5 meter		
Antenna Connector	4G： SMA x 1; Wi-Fi： RP-SMA x 2; GPS(Optional): SMA x 1 Note： North America models: 2 x SMA 4G antenna connectors GPS models：1 x RP-SMA Wi-Fi antenna connector, 1 x SMA GPS antenna connector		
Ground Terminal	Supports		
Mechanical Specs			
Dimensions	120x99x25mm	Weight	354g
Installation	Panel mounting, rail mounting	Protection Rating	IP30
Housing	Metal	Cooling	Fanless
Power rate			
Standby power	120mA-200mA@12V		
Working power	150mA-320mA@12V		
Peak power	320mA@12V		
Wi-Fi Transmit Power			
Transmit Power	802.11b:16dBm+/-2dBm(11Mbps) 802.11g:16dBm+/-2dBm(54Mbps) 802.11n@2.4GHz:16dBm +/-2dBm(HT20MCS7) 802.11n@2.4GHz:16dBm +/-2dBm(HT40MCS7)		
Ambient Environment			
Storage Temperature	-40 ~ 85℃	Operating Temperature	-20~ 70℃
Ambient Humidity	5~95% (no condensing)		
Indicator			
LED	Power, Status, Cellular, Wi-Fi		
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		
Certificate			
CE, CB, UKCA, E-MARK, FCC, IC, PTCRB, AT&T, Verizon, T-mobile，Anatel			

InRouter 305 Software Specifications	
Network Connection	
Network Access	APN, VPDN
Access Authentication	CHAP/PAP
Network Type	GSM/GPRS/EDGE, UMTS/HSPA+/EVDO/TD-SCDMA/, TDD LTE/FDD LTE (Please refer to the Ordering Guide for frequencies)
LAN protocol	ARP, Ethernet
WAN protocol	Static IP, DHCP, PPPoE
Network Protocol	
IP Application	IPv4, Ping, Trace, DHCP Server, DHCP Relay, DHCP Client, DNS relay, DDNS, Telnet, IP Passthrough
IP Routing	Static routing, OSPF dynamic routing
NAT	Supports network address translation
Security	
Network Security	Stateful Packet Inspection (SPI), DoS attack defense; Multicast filter/Ping probe packet, Access Control List (ACL); Content URL filter, port mapping, virtual IP mapping, IP-MAC binding; 802.1x
Data Security	Supports PPTP, L2TP, GRE, IPSEC VPN (IKEv1, IKEv2), OPENVPN，DMVPN，WireGuard，ZeroTier Supports CA digital certificate
Reliability	
Hot Backup	VRRP hot backup
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
WLAN (Optional)	
Protocol	IEEE 802.11b/g/n
Rate	Up to 300Mbps
Security	Open system, shared key, WPA/WPA2 certification WEP/TKIP/AES encryption
Transmission Distance	80 meters by line of sight (Actual transmission distance depends on environment of the site.)
Intelligence	
Integrated DTU Functions	TCP, UDP transparent transmission mode, TCP Server mode Supports conversion of Modbus RTU to Modbus TCP bridge Supports DCUDP, DCTCP mode
Network Management	
QoS Management	Bandwidth limit, IP speed limit
Configuration	Telnet, web, ssh and console
Update	Web, DeviceManager
Log	Local system log, remote log, and serial export of log. Power down saving of important logs.
SMS Functions	Status query, restart
Dial-on-demand	Dial-on-demand, data / SMS activation
Network management	Supports InHand DeviceManager, batch management Add the user experience plan to access The InHand Networks cloud platform to enjoy efficient and convenient services
SNMP	SNMP v1/v2c/v3，supports SNMP TRAP
Traffic Management	Supports data 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
Status Query	System status, modem status, network connection status, and routing status

Ordering Guide

Model code: IR305-<WMNN>-<WLAN/NA>-<S/NA>-<G/NA>				
Model	<WMNN>: Cellular Type & Module	<WLAN/NA>: Wi-Fi	<S/NA>: Serial/IO	<G/NA>: GNSS
IR305-FQ58-< WLAN /NA>-<S/NA>-<G/NA>	(For Europe & APAC, CAT 4) FDD: B1/B3/B7/B8/B20/B28A TDD: B38/B40/B41 WADMA: B1/ B8 GSM: B3/ B8	WLAN: Wi-Fi <NA>: no Wi-Fi	S: 1*RS232+1*RS485 <NA>: 4*IO	G: GNSS <NA>: no GNSS
IR305-FQ53-< WLAN /NA>-<S/NA>	(For Europe & APAC, CAT 1) FDD: B1/B3/B7/B8/B20/B28A WCDMA: B1/B8	WLAN: Wi-Fi <NA>: no Wi-Fi	S: 1*RS232+1*RS485 <NA>: 4*IO	
IR305-FF38-<WLAN/NA>-<S/NA>-<G/NA>	(For North America, AT&T, VzW, LTE CAT4) FDD: B2/B4/B5/B12/B13/B17/B66/B71 WCDMA: B2/B4/B5	WLAN: Wi-Fi <NA>: no Wi-Fi	S: 1*RS232+1*RS485 <NA>: 4*IO	G: GNSS <NA>: no GNSS
IR305-FQ33-<WLAN/NA>-<S/NA>	(For North America, AT&T, VzW, LTE CAT1) FDD: B2/ B4/ B5/ B12/B13/ B25/ B26 WCDMA: B2/B4/B5	WLAN: Wi-Fi <NA>: no Wi-Fi	S: 1*RS232+1*RS485 <NA>: 4*IO	
IR305-FQ78-<WLAN/NA>-<S/NA>	(For Australia, Latin America, LTE CAT4) FDD: B1/B2/B3/B4/B5/B7/B8/B28 TDD: B40 WCDMA: B1/B2/B5/B8 GSM: B2/B3/B5/B8	WLAN: Wi-Fi <NA>: no Wi-Fi	S: 1*RS232+1*RS485 <NA>: 4*IO	
IR305-EN00-<WLAN/NA>-<S/NA>	NA	WLAN: Wi-Fi <NA>: no Wi-Fi	S: 1*RS232+1*RS485 <NA>: 4*IO	
IR305-NRQ2-<WLAN/NA>-<S/NA>	(For China 5G) 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	WLAN: Wi-Fi <NA>: no Wi-Fi	S: 1*RS232+1*RS485 <NA>: 4*IO	
IR305-LQ20-<WLAN/NA>-<S/NA>	(For China CAT4) FDD: B1/B3/B5/B8 TDD: B34/B38/B39/B40/B41 WADMA: B1/B5/B8 GSM: B3/B8	WLAN: Wi-Fi <NA>: no Wi-Fi	S: 1*RS232+1*RS485 <NA>: 4*IO	

Example: IR305-FQ58-WLAN: Five Ethernet ports IR305 series cellular router, support IPSec / PPTP / L2TP / OPEN VPN.

Note: Users are asked to join InHand User Experience Plan at first time login. If user agreed to join, the router will connect to InHand DeviceManager portal. If users want to disable it, please go to Services->User Experience Plan to change the setting.

InHand Remote Operation and Maintenance Solution

InConnect is a simple “plug & play” service that builds secure remote networks for your machines (IPCs, IP cameras, PLCs, HMIs, RTUs, controllers, etc.). Engineers can use InConnect to realize remote maintenance, program downloads, and log diagnostics. InConnect helps enterprises quickly connect to globally distributed business locations, empowering enterprises in their IT infrastructure and digital transformation initiatives.



InConnect Service

- Centralized management
- Efficient zero touch deployment
- Simplified network configuration
- Multi-dimensional security



4G Industrial Router IR302

- Multilink Backup & Dual SIM failover
- VPN networking
- Serial Port， I/O
- EMC Level 2
- IP30, -20~70℃, DC 9~36V

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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