

Compact Industrial Router 4G LTE, Dual SIM and Dual Ethernet Ports

InRouter302 Series Industrial LTE Router

The InRouter302 (IR302) is an IoT cellular router that integrates 4G LTE, Wi-Fi, and VPN technologies to provide an easy, reliable, and secure Internet connectivity. With technologies such as 4G wireless wide area network and Wi-Fi wireless local area network, it provides uninterrupted multiple network access capabilities, and with its comprehensive security and wireless services, it realizes up to 10 thousands equipments networking and provides high-speed data access for equipment networking.

This product is suitable for the networking of unattended devices and sites. It is embedded with watchdog and multi-layer link detection mechanisms to ensure reliable and stable communications. The router can be deployed easily to build large scale networks scaling up to tens of thousands of devices. Using our InHand Device Manager cloud platform, users can manage their network efficiently.

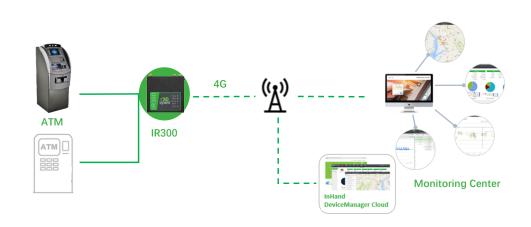
The IR302 can be used in a wide range of industrial and commercial IoT applications, providing an option of good balance between cost and performance.

Revere Barres Ba

Key industries:

- Smart Commerce
 - ATM, POS
 - Unattended kiosk
 - Digital signage
 - Retail stand
- Smart Energy
 - EV charging
 - Power distribution, Meter reading
- Smart City
 - Heat & Water supply
 - Gas supply security, Traffic management
- Smart Manufacturing
 - Medical device networking and other applications

Application Case



ACOM Singel 3 | B-2550 Kontich | Belgium | Tel. + 32 (0)3 458 30 33 | info@alcom.be | www.alcom.be

ctronics Rivium 1e straat 52 | 2909 LE Capelle aan den Ijssel | The Netherlands | Tel. + 31 (0)10 288 25 00 | info@alcom.nl | www.alcom.nl

Features and Advantages

- Supports both high-speed LTE CAT 4 and low-speed LTE CAT 1 CAT M1/NB loT networks
- + Dual Ethernet ports, WAN/LAN
- + Multiple VPN protocols
- Built-in link redundancy, dual-SIM failover, ensure uninterrupted communications
- + Supports InHand Device Manager cloud platform for efficient central network management
- + Compact in size, easy to install

• Uninterrupted network access

Supports fast LTE WAN networks for business continuity and WAN diversity. Get device connected easily with the widely available 4G cellular network. Three optional network types: LTE CAT 4 (150/50Mbps DL/UL), LTE CAT 1 (10/5Mbps DL/UL), and LTE CAT M1 (1119/588kbps, DL/UL) and NB-IoT(127/158.5kbps DL/UL).

Supports Wi-Fi, both AP & STA modes, for users to easily set up secure wireless networks. Supports 802.11b/ g/n, transmission rate up to 150Mbps, WEP/WPA/WPA2 encryption. Failover between 4G and Wi-Fi or 4G and WAN, effectively ensuring uninterrupted data transmission.

• Strong security protection

Data transmission: IPsec VPN (IKEv1, IKEv2), L2TP, PPTP, OPEN VPN, GRE and CA certificate.
Network protection: supports SPI (Stateful Packet Inspection), SSH (Secure Shell), intrusion protection (forbidden ping), DDoS defense, attack defense, IP-MAC binding, etc., protecting the network against external attacks.

- Device access: supports user hierarchical authorization (CLI only), implementing secure access management by providing different roles and different permissions.

High reliability and stability

- Link layer detection: continuously detecting and auto redials when dropped off to maintain link connection.
- Dual SIM failover: automatically switches to the more stable carrier network.
- PPP layer detection: maintains connection to the carrier network, preventing forced hibernation, keeping network communications smooth.
- VPN tunnel detection: maintains stable connection of the VPN tunnel, ensuring continuous transmission.
 Device self-recovery: embedded hardware watchdog, self-recovers from malfunctions, maintaining high device availability.

Easy to use

Allows multiple network management methods including CLI, WEB, and a network management platform. Functions of the WEB interface are grouped according to the habits of IT personnel, which logic is clear immediately.

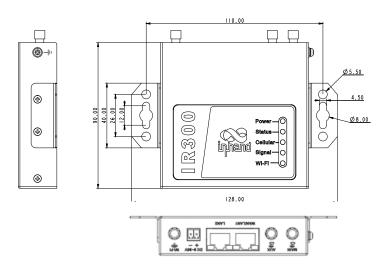
· Central management and deployment

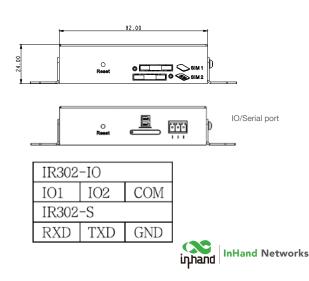
Supports InHand Device Manager cloud platform to facilitate remote monitoring and central management of large-scale device networks. Batch configure large numbers of devices, efficiently deploying and managing device networks.Add the user experience plan to access The InHand Networks cloud platform to enjoy efficient and convenient services

• Industrial-grade design

Metal shell, IP30 protection. Level 2 on EMC. Ethernet ports support 1.5KV isolation transformer protection. Wide operating temperature: -20°C~70°C. Wide voltage input: DC9-36V.

Dimensions (mm)





Product Specifications

<table-container>Hardware PlatformSalMB IZSalMB IZFlan23MB SP1InterfaceInterfaceSalma SP1InterfaceSalma Carl InterfaceInterfaceSalma Carl InterfaceInterfaceSalma Carl InterfaceSalports 2*10/100Mbg Isale Herms port, LAW MortSalina Carl InterfaceSalports 2*10/100 Carl InterfaceSalina Carl InterfaceSalports 2*10/100 Carl InterfaceSalina Carl InterfaceSalports 2*10/100 Carl Interface*Alterative Carl InterfaceSalports 2*10/100 Carl Interface*Alter Carl InterfaceSalports 2*10/100 Carl Interface*Alter Carl InterfaceSalports 2*10/100 Carl InterfaceSalports 2*10/100 Carl InterfaceSalports 2*10/100 Carl Interface*Alter Carl Interf</table-container>	InRouter302 Hardv	vare Specifications						
Flach32MB SP1InterfaceImage: Second Seco	Hardware Platform							
InterfaceaBinerie PortIP302: 2*10/100Mps fast Ethernet port, LANWAP port 1.SKV network isolation ransformer protection:Serial Port1*R5232Sinal PortSports 2*10 (DO or DL an be configured) DL 0-30V, birk toro V (pull up)VD (Opbional)Sports 2*10 (DO or DL an be configured) DL 0-30V, birk toro V (pull up)VD (Opbional)Sports 2*10 (DO or DL an be configured) DL 0-30V, birk toro V (pull up)**Alternatives for U-V-Vert contract, low: V.Vert Staff (pull up)Sports 2*10Power SupplyDG3-36V, over contract, low: V.Vert Staff (pull up)SportsStaff CardDLai drawer-type SIM cards 2* SF SIM ConnectorSports 2*10Ground TerminalSG4G: SMA x 1;WFF RP-SMA x 1Antenna ConnectorsSports 2*10*10 (PO at Staff RQ at Staff R	CPU Platform	580MHz	RAM	128MB DDR2				
Ethernet PortIR302: 2'10/100Mbps fait Ethernet port, LAN/VAN port 1.5KV network isolation transformer protectionSerial Port ('Optional)1'RS232UO ('Optional)Symports 2'IO (DO DI Can be configured) DI-0-30V, max input: 30V Do-30V, input: 13V (pull up)*/Iternatives for U-V-V-V-V-V-V-V-V-V-V-V-V-V-V-V-V-V-V-V	Flash	32MB SPI						
Literine I vition 1.5KV network isolation transformer protection Serial Port ("Optional) 1*RS232 Vi0 ("Optional) Supports 2*I0 (00 or DI can be configured) body Wet contact, low: 0V, high: 134 (pull up) * Alternatives for U/O wet contact, low: 0V, high: 134 (pull up) * Alternatives for U/O wet contact, low: 0V, high: 134 (pull up) * Alternatives for U/O wet contact, low: 0V, high: 134 (pull up) Power Supply DC9-398, over-current Postson, anti-reverse contaction, 2 PIN industrial terminal block SMG Card Dual drawer-type SIM car U-EXERS SMG Card Dual drawer-type SIM car U-EXERS SMG Card Dual drawer-type SIM car U-EXERS Antenna Connectors SG44G: SMA x 1; WFF: RP-SMA x 1 Note: North America wet (FO38, FO33): 2 x SMA 4G antenna connectors. Ground Terminal Supports Z59g Mechanical Spece Protection Rating Protection Rating Protection Rating Protection Rating Protection Rating Notified Daw 4/2 dBM (TMDB) Social Ing 2/4 CH2: 16dBm +/2 dBm (TTO MCS7) Social Ing 2/4 CH2: 16dBm +/2 dBm (TTO MCS7) Prisent Environmet Social Ing 2/4 CH2: 16dBm +/2 dBm (TTO MCS7) Social Ing 2/4 CH2: 16dBm +/2 dBm (TTO MCS7) </td <td>Interface</td> <td></td> <td></td> <td></td>	Interface							
(*Optional)I**PS24(*Optional)Supports 2*10 (DO or DI can be configured) DI: 0-30V, Max input: 30V DO: Wet contact, Iow: 0V, high: 13V (pull up)* Alternatives for UVersion 200, Michael 10-30V, max input: 30V DO: Wet contact, Iow: 0V, high: 13V (pull up)* Alternatives for UVersion 200, Supports 2*10 (DO or DI can be configured) Industrial terminal block Michael 10-30V, max input: 13V (pull up)* Alternatives for USold 0: Sold 200, Supports 2*10 (DO or DI can be configured) Industrial terminal block Michael 10-30V, max input: 13V (pull up)Reset ButtonPinhole reset buttonSM CardDual drawer-type SIM cart 2*15 (ST SIM (Part 2*10))SM CardDual drawer-type SIM cart 2*15 (ST SIM (Part 2*10))Antenna connectors3G/4G: SMA x 1; WF F: RP-SMA x 1 Note: North America model connectors.Antenna ConnectorSupportsGround Terminal ConnectorsSupportsMethanical SpeceNote: North America model mounting, rail mounting, rail 	Ethernet Port							
I/O (*Optional) D: 0:-030V, Iow: -03V, Ingl:: 10-30V, max input: 30V DO: Wet contact, Iow: 0V, Ingl:: 13V (pull up)* Alternatives for I/O ::Serial portPower SupplyDCS-36V, over-current protection, anti-reverse ::Reset ButtonPinhole reset buttonSIM CardDual drawer-type SIM card ::SIM CardDual drawer-type SIM card ::Wi-Fi (Optional)IEEE 802.11b/g/n, 150MEyWi-Fi (Optional)IEEE 802.11b/g/n, 150MEyAntenna3G/4G: SMA x 1;Note: North America model(FG38, FG33): 2: SMA 4G antenna connectors.Ground TerminalSupportsMechanical SpecsVerotection RatingPower Rate90 x 90 x 25mmPower Rate100-120 mA@12VPower Rate100-120 mA@12VPower Rate902.11b:16dBm +/2dBm(11Mbps) 802.11m@2.44b::16dBm +/2dBm(12D MCS7) 802.11m@2.44b::16dBm +/2dBm(12D MCS7) 802.11m@2.44b::16dBm +/2dBm(12D MCS7) 802.11m@2.44b::16dBm +/2dBm(12D MCS7) 802.11m@2.44b::16dBm +/2dBm(12D MCS7) 802.11m@2.44b::16dBm +/2dBm(12D MCS7) 802.11m@2.44b::16dBm +/2dBm(12D MCS7)Indicator100-200, 4.0, Ievel 2 <td></td> <td>1*RS232</td> <td></td> <td></td>		1*RS232						
Power SupplyDC9-36V, over-current protection, anti-reverses bounced in a statistic terminal blockReset ButtonPinhole reset buttonSIM CardDual drawer-type SIM cards los. 2FF SIMWi-Fi (Optional)IEEE 802.11b/g/n, 150MErresWi-Fi (Optional)IEEE 802.11b/g/n, 150MErresAntenna Connectors3G/4G: SMA x 1; Note: North America werresBound Terminal SupportsSupportsWieflendSupportsMetanical SpecerPortection Rating Protection RatingMoters North America werresPortection Rating Protection RatingMusingMetalCoolingMousingMetalCoolingMoring Power100-120mA@12.VMoring Power100-120mA@12.VPeak Power100-120mA@12.VSour Jing IdeBm +/-2dBm[14DRDWBP) Sour 11n@2.4G12: IdeBm +/-2dBm[14DRDMCS7Parasmit Power302.11b: IdeBm +/-2dBm[14DRDMCS7Sour Jing IdeBm +/-2dBm[14DRDMCS7Sour Jing 2.4G12: IdeBm +/-2dBm[14DRDMCS7Sour Jing 2.4G12: IdeBm +/-2dBm[14DRDMCS7Ambient EnvironemSour Jing 2.4G12: IdeBm +/-2dBm[14DRDMCS7IndicatorFindStorage TemperatureAnden LewinderSour Jang 2.4G12: IdeBm +/-2dBm[14DRDMCS7Sour Jing 2.4G12: IdeBm +	I/O (*Optional)	DI: 0~30V, low: 0~3V, hig	DI: 0~30V, low: 0~3V, high: 10~30V, max input: 30V					
Prower suppy industrial terminal block Reset Button Pinhole reset button SIM Card Dual drawer-type SIM carJ SIM: SIM: SIM: SIM: SIM: SIM: SIM: SIM:	* Alternatives for I/C	or Serial port						
SIM CardDual drawer-type SIM card SEF SIMWi-Fi (Optiona)IEEE 802.11b/g/n, 150///FI: RP-SMA x 1 Note: North America modelAntenna Connector3G/4G: SMA x 1; Note: North America modelGround TerminalSupportsWeindSupportsMechanical SpeceVDimensions90 x 90 x 25mmWeightJonandianPostSolonaMetalCoolingFanlessInstallation MethodMetalCoolingFanlessPower RateVStandby Power80-90mA@12VPeak Power100-120mA@12VStandby Power80-90mA@12VPeak Power100-120mA@12VStandby Power80-90mA@12VPeak Power100-120mA@12.0VStandby Power80-90mA@12VParal mounting, rail 02.11g.16dEm +/2dEm(1TMbps) 602.11m@2.4GH:16dEm +/2dEm(HT20 MCST) 602.11m@2.4GH:21GHm +/2dEm(HT20 MCST) 602.11m@2.4GH:21GHm +/2dEm(HT20 MCST) 602.11m@2.4GH:21GHm +/2dEm(HT20 MCST)Solona@12VPristStandby Power80-90mA@12VStandby PowerAntient EnvironmetStandby Powerstandby Powerstandby PowerStorage Temperature40 ~ 85°COperating Temperaturestandby PowerIndicatorStandby Powerstandby Powerstandby PowerIndicatorStandby Powerstandby Powerstandby PowerIndicatorStandby Powerstandby Powerstandby PowerIndicatorStandby Powerstandby Powerstandby PowerPower, Status, Cellular, W-Fi, cellular Signalstandby Power </td <td>Power Supply</td> <td></td> <td>rotection, anti-reverse</td> <td>connection, 2 PIN</td>	Power Supply		rotection, anti-reverse	connection, 2 PIN				
SIM CardDual drawer-type SIM cursters 2FF SIMWi-Fi (Optional)IEEE 802.11b/g/n, 150/WFT: RP-SMA x 1 Net: North America modelingArtenna ConnectorsSQI4G: SMA x 1; Net: North America modelingGround TerminalSupportsBrechanical SpeeseSupportsDimensions90 x 90 x 25mmWeightInstallation MethodPole I mounting, rail Protection Rating IPologinalIPologinal Protection Rating Protection RatingHousingMetalCoolingFanlessPower RateVertexStandby Power80-90mA@12VPeak Power100-120mA@12VStandby Power80-90mA@12VPeak Power100-120mA@12VStandby Power80-90mA@12VPeak Power2002.11b:16/Bm +/2dBm(11Mbps) 002.11m@2.4GHz:16dBm +/2dBm(HT20 MCS7) S02.11m@2.4GHz:16dBm +/2dBm(Pinhole reset button						
Antenna Connector3G/4G: SMA x 1; Wi-Fi: RP-SMA x 1 Note: North America modelAntenna Connectors.SupportsGround TerminalSupportsMechanical SpeceVersionDimensions90 x 90 x 25mmWeightInstallation MethodPanel mounting, rail mountingProtection Rating Portection RatingIP30Power RateVersionStandby Power80-90mA@12VPower RateVersion80-2110:16dBm +/-2dBm(HTMDsp) S02.1110:24GBm 14/2dBm(HTMDsp) S02.1110:24GBm 24GBm(HTMDsp) S02.1110:24GBm 24GBm(HTMDsp) S02.1110:24GBm 24GBm(HTMD MCST)Transmit Power802.110:16dBm +/-2dBm(GAMbps) S02.1110:24GBm 42/2dBm(HTAD MCST)Transmit Power802.110:16dBm +/-2dBm(HTAD MCST) S02.1110:24GBm 42/2dBm(HTAD MCST)Transmit Power802.110:16dBm +/-2dBm(HTAD MCST) S02.1110:24GBm 42/2dBm(HTAD MCST)Transmit Power140 ~ 85°COperating Temperature1-40 ~ 85°COperating Temperature1-595% (non-condensum+2dBm(HTAD MCST)IndicatorEventLEDPower, Status, Cellular, Signat TeinelPulsed ElectriciRof1000-4-2, level 2Pulsed ElectriciSurgePulsed ElectriciSurgion-4-4, level 2SurgeEN61000-4-4, level 2Surgencis FieldSurgencis FieldPower, Frequency Magnetis FieldSurdion-4-4, level 2Surgencis FieldSurgencis FieldPhysical SpecesSurgencis FieldPowersEnfotion-4-6, level 2Surgencis FieldSurgencis Field<		Dual drawer-type SIM ca	rd slots. 2FF SIM					
Artenna Connectors.Note: North America models.(FQ38, FQ33): 2 x SMA 4G antenna connectors.Ground Terminal Mechanical SpecsSupportsDimensions90 x 90 x 25mmWeight259gInstallation MethodPanel mounting, rail mounting, rail MethodProtection Rating Power RateIP30Power Rate100-120mA@12VStandby Power80-90mA@12VPeak Power100-120mA@12VStandby Power80-90mA@12VPeak Power00-120mA@12VStandby Power80-90mA@12VPeak Power000-112/mA@12VStandby Power80-90mA@12VPeak Power902.11b.164Bm +/-24Bm(1HMbps) 802.11m@2.4GHz216dBm +/-24Bm(HT20 MCS7) 802.11m@2.4GHz216dBm +/-24Bm(HT20 MCS7) 802.11m@2.4GHz216dBm +/-24Bm(HT20 MCS7)Arbient Environ	Wi-Fi (Optional)	IEEE 802.11b/g/n, 150M	ops					
ConnectorNote: North America models (FQ38, FQ33): 2 x SMA 4G antenna connectors.Ground TerminalSupportsMechanical SpecsSupportsMechanical Specs90 x 90 x 25mmWeight259gInstallation MethodPanel mounting, rail mountingProtection Rating (Panel mounting, rail)Protection Rating (Panel mounting)Panel mountingHousingMetalCoolingFanlessPower Rate100-120mA@12VStandby Power80-90mA@12VPeak Power190mA@12.0VVVWr.Fi Transmit Power902.11b.16dBm +/-2dBm(11Mbps) 802.11g.16dBm +/-2dBm(14Mbps) 802.11g.16dBm +/-2dBm(HT20 MCS7) 802.11m@2.4GH:16dBm +/-2dBm(HT20 MCS7) 8	A	3G/4G: SMA x 1; Wi-Fi: RP-SMA x 1						
Mechanical SpecsDimensions90 x 90 x 25mmWeight259gInstallation MethodPanel mounting, rail mountingProtection RatingIP30HousingMetalCoolingFanlessHousingMetalCoolingFanlessPower Rate100-120mA@12VStandby Power80-90mA@12VPeak Power190mA@12.0VStandby Power80-90mA@12VWr.Fi Transmit Power602.11b.16dBm +/-2dBm(11Mbps) 802.11g.16dBm +/-2dBm(HT20 MCS7) 802.11m@2.4GH:16dBm +/-2dBm(HT20 MCS7)Indicator-40 ~ 85°CNorthore Stored-20 ~ 70°CIndicatorEN61000-4-2, level 2Rediation Electric FieldEN61000-4-3, level 2Pulsed Electric FieldEN61000-4-4, level 2Store								
Dimensions90 x 90 x 25mmWeight259gInstallation MethodPanel mounting, rail mountingProtection RatingIP30HousingMetalCoolingFanlessPower Rate100-120mA@12VStandby Power80-90mA@12VPeak Power190mA@12.0VStandby Power80-90mA@12VPeak Power190mA@12.0VStandby Power80-2110:16dBm +/-2dBm(11Mbps) S02.111:02.4GHz:16dBm +/-2dBm(HT40 MCST) S02.111:02.4GHz:16dBm +/-2dBm(HT40 MCST) S02.111:02.4GHz:16dBm +/-2dBm(HT40 MCST) S02.111:02.4GHz:16dBm +/-2dBm(HT40 MCST)Ambient EnvironS02.111:02.4GHz:16dBm +/-2dBm(HT40 MCST) S02.111:02.4GHz:16dBm +/-2dBm(HT40 MCST)Ambient EnvironS02.111:02.4GHz:16dBm +/-2dBm(HT40 MCST) S02.111:02.4GHz:16dBm +/-2dBm(HT40 MCST)Storage Temperature40 ~ 85°COperating TemperatureStorage Temperature40 ~ 85°COperating TemperatureStorage Temperature40 ~ 85°COperating TemperatureStorage Temperature40 ~ 85°COperating TemperatureStorage Temperature40 ~ 85°CSocial Storage TemperatureStorage Temperature15 ~ 55% (non-condensize)Storage TemperatureSocial Storage FieldSocial Storage StorageStorage TemperatureInfo00-4-2, level 2Radiation Electric FieldPulsed Electric FieldShol000-4-4, level 2Shock Wave ResistanceDisturbanceShol000-4-6, level 2Shock Wave ResistancePhysical SpeeseItofa00a-4, horizontal KestanceStorage<	Ground Terminal Supports							
Installation Installation MethodPanel mounting, rail mountingProtection RatingIP30HousingMetalCoolingFanlessPower Rate100-120mA@12VStandby Power80-90mA@12VPeak Power190mA@12.0VStandby Power80-90mA@12VWr-Fi Transmit Power802.11b.16dBm +/-2dBm(11Mbps) 802.11n@2.4GHz.16dBm +/-2dBm(HT20 MCS7) 802.11n@2.4GHz.16dBm +/-2dBm(HT20 MCS7) 802.11n@2.4GHz.16dBm +/-2dBm(HT20 MCS7) 802.11n@2.4GHz.16dBm +/-2dBm(HT40 MCS7)Ambient Environmetr\$02.11n@2.4GHz.16dBm +/-2dBm(HT40 MCS7) 802.11n@2.4GHz.16dBm +/-2dBm(HT40 MCS7) 802.11n@2.4GHz.16dBm +/-2dBm(HT40 MCS7)Storage famperature40 ~ 85°COperating Temperature-20 ~ 70°CAmbient Humidity5 ~ 95% (non-condensing S ~ 95% (non-condensing)-20 ~ 70°CIndicatorInterperature-20 ~ 70°CIndicatorS ~ 95% (non-condensing)-20 ~ 70°CIndicatorInterperature-20 ~ 70°CIndicatorS ~ 95% (non-condensing)-20 ~ 70°CStaticEN61000-4-2, level 2Singlation Electric FieldEN61000-4-3, level 2StaticEN61000-4-4, level 2SurgeEN61000-4-5, level 2SurgeEN61000-4-6, level 2Shock Wave ResistanceEN61000-4-12, level 2Physical SpecsShock Wave ResistanceEN61000-4-6, horizontal / virtioin ResistanceEN60068-2	Mechanical Specs							
MethodmountingProtection HatingIP30HousingMetalCoolingFanlessPower Rate100-120mA@12VStandby Power80-90mA@12VPeak Power190mA@12.0VStandby Power80-90mA@12VPeak Power190mA@12.0VWi-Fi Transmit Power802.11b:16dBm +/-2dBm(11Mbps) 802.11n@2.4GHz:16dBm +/-2dBm(HT20 MCS7) 802.11n@2.4GHz:16dBm +/-2dBm(HT40 MCS7)Transmit Power802.11n@2.4GHz:16dBm +/-2dBm(HT40 MCS7) 802.11n@2.4GHz:16dBm +/-2dBm(HT40 MCS7)Ambient Environmet	Dimensions	90 x 90 x 25mm	Weight	259g				
Nover RatePower RateWorking Power100-120mA@12VStandby Power80-90mA@12VPeak Power190mA@12.0VWi-Fi Transmit Power802.11b.16dBm +/-2dBm(11Mbps) 802.11g.16dBm +/-2dBm(54Mbps) 802.11g.16dBm +/-2dBm(HT40 MCS7) 802.11m@2.4GHz:16dBm +/-2dBm(HT40 MCS7)Transmit Power802.11m@2.4GHz:16dBm +/-2dBm(HT40 MCS7) 802.11m@2.4GHz:16dBm +/-2dBm(HT40 MCS7)Ambient EnvironmetricImage: Colspan="2">			Protection Rating	IP30				
Working Power100-120mA@12VStandby Power80-90mA@12VPeak Power190mA@12.0VWi-Fi Transmit Power802.11b:16dBm +/-2dBm(11Mbps) 802.11n@2.4GHz:16dBm +/-2dBm(HT20 MCS7) 802.11n@2.4GHz:16dBm H/-2dBm(HT20 MCS7) 802.11n@2.4GHZ:16dBm	Housing	Metal	Cooling	Fanless				
Peak Power190mA@12.0VWi-Fi Transmit Power802.11b:16dBm +/-2dBm(11Mbps) 802.11g:16dBm +/-2dBm(54Mbps) 802.11n@2.4GHz:16dBm +/-2dBm(HT20 MCS7) 802.11n@2.4GHz:16dBm +/-2dBm(HT40 MCS7)Ambient Power802.11n@2.4GHz:16dBm +/-2dBm(HT40 MCS7) 802.11n@2.4GHz:16dBm +/-2dBm(HT40 MCS7)Ambient Environmeter140 ~ 85°COperating TemperatureStorage Temperature-40 ~ 85°COperating TemperatureIndicator5 ~ 95% (non-condensing Temperature-20 ~ 70°CIndicatorPower, Status, Cellular, Wi-Fi, cellular SignalENG1000-4-3, level 2EMCEN61000-4-2, level 2Radiation Electric FieldEN61000-4-3, level 2Pulsed Electric Pulsed ElectricEN61000-4-4, level 2SurgeEN61000-4-5, level 2Conducted Disturbance ImmunityEN61000-4-6, level 2Shock Wave ResistanceEN61000-4-12, level 2Power Frequency Magnetic FieldEN61000-4-8, horizontal / vitration ResistanceEN61000-4-8, horizontal vitration ResistanceEN60068-2-6	Power Rate							
Wi-Fi Transmit PowerTransmit Power802.11b:16dBm +/·2dBm(11Mbps) 802.11n@2.4GHz:16dBm +/·2dBm(HT20 MCS7) 802.11n@2.4GHz:16dBm +/·2dBm(HT20 MCS7) 802.11n@2.4GHz:16dBm +/·2dBm(HT40 MCS7)Ambient Environm-40 ~ 85°COperating Temperature-20 ~ 70°CAmbient Humidity5 ~ 95% (non-condensing) Temperature-20 ~ 70°CAmbient Humidity5 ~ 95% (non-condensing)-20 ~ 70°CIndicator5 ~ 95% (non-condensing)-20 ~ 70°CLEDPower, Status, Cellular, Wi-Fi, cellular SignalEMCStaticEN61000-4-2, level 2Radiation Electric FieldEN61000-4-3, level 2Pulsed ElectricEN61000-4-4, level 2SurgeEN61000-4-5, level 2Conducted Disturbance ImmunityEN61000-4-6, level 2Shock Wave ResistanceEN61000-4-12, level 2Power Frequency Magnetic FieldEN61000-4-8, horizontal / vertical 400A/m (>level 2)EN61000-4-12, level 2Physical SpecsIEC60068-2-27Vibration ResistanceIEC60068-2-6	Working Power	100-120mA@12V	Standby Power	80-90mA@12V				
Transmit Power802.11b:16dBm +/-2dBm(54Mbps) 802.111@2.4GHz:16dBm +/-2dBm(HT20 MCS7) 802.111@2.4GHz:16dBm +/-2dBm(HT40 MCS7)Ambient Environmeter	Peak Power	190mA@12.0V						
Transmit Power802.11g:16dBm +/-2dBm(54Mbps) 802.11n@2.4GHz:16dBm +/-2dBm(HT20 MCS7) 802.11n@2.4GHz:16dBm +/-2dBm(HT40 MCS7)Ambient Environment-40 ~ 85°COperating Temperature-20 ~ 70°CAmbient Humidity5 ~ 95% (non-condensing) Temperature-20 ~ 70°CAmbient Humidity5 ~ 95% (non-condensing) Temperature-20 ~ 70°CIndicatorPower, Status, Cellular, Wi-Fi, cellular SignalEMCEMCEN61000-4-2, level 2Radiation Electric FieldEN61000-4-3, level 2Pulsed Electric FieldEN61000-4-4, level 2SurgeEN61000-4-5, level 2Conducted Disturbance ImmunityEN61000-4-6, level 2Shock Wave ResistanceEN61000-4-12, level 2Power Frequency Magnetic FieldEN61000-4-8, horizontal / v=trical 400A/m (>level 2)EN61000-4-12, level 2Physical SpecsIEC60068-2-27Vibration ResistanceIEC60068-2-66	Wi-Fi Transmit Pov	ver						
Storage Temperature-40 ~ 85°COperating Temperature-20 ~ 70°CAmbient Humidity5 ~ 95% (non-condensing) Temperature-20 ~ 70°CIndicatorIndicatorLEDPower, Status, Cellular, Wi-Fi, cellular SignalEMCENG1000-4-2, level 2Radiation Electric FieldEN61000-4-3, level 2Pulsed Electric FieldEN61000-4-4, level 2SurgeEN61000-4-5, level 2Conducted Disturbance ImmunityEN61000-4-6, level 2Shock Wave ResistanceEN61000-4-12, level 2Power Frequency Magnetic FieldEN61000-4-8, horizontal / vertical 400A/m (>level 2)EN61000-4-12, level 2Physical SpecsIEC60068-2-27Vibration ResistanceIEC60068-2-6	Transmit Power	802.11g:16dBm +/-2dBm(54Mbps) 802.11n@2.4GHz:16dBm +/-2dBm(HT20 MCS7)						
Temperature-40 ~ 85°CTemperature-20 ~ 70°CAmbient Humidity5 ~ 95% (non-condensing)IndicatorLEDPower, Status, Cellular, Wi-Fi, cellular SignalEMCStaticEN61000-4-2, level 2Radiation Electric FieldEN61000-4-3, level 2Pulsed Electric FieldEN61000-4-4, level 2SurgeEN61000-4-5, level 2Conducted Disturbance 	Ambient Environme	ent						
Indicator Indicator Indicator ILED Power, Status, Cellular, Wi-Fi, cellular Signal EMC Static EN61000-4-2, level 2 Radiation Electric Field EN61000-4-3, level 2 Pulsed Electric EN61000-4-4, level 2 Surge EN61000-4-5, level 2 Conducted Disturbance EN61000-4-6, level 2 Shock Wave Resistance EN61000-4-12, level 2 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		-40 ~ 85°C		-20 ~ 70°C				
LEDPower, Status, Cellular, Wi-Fi, cellular SignalEMCStaticEN61000-4-2, level 2Radiation Electric FieldEN61000-4-3, level 2Pulsed Electric FieldEN61000-4-4, level 2SurgeEN61000-4-5, level 2Conducted Disturbance ImmunityEN61000-4-6, level 2Shock Wave ResistanceEN61000-4-12, level 2Power Frequency Magnetic FieldEN61000-4-8, horizontal / vertical 400A/m (>level 2)EN61000-4-12, level 2Physical SpecsIEC60068-2-27Vibration ResistanceIEC60068-2-6	Ambient Humidity	5 ~ 95% (non-condensin	g)					
EMC EM61000-4-2, level 2 Radiation Electric Field EN61000-4-3, level 2 Static EN61000-4-2, level 2 Surge EN61000-4-3, level 2 Pulsed Electric Field EN61000-4-4, level 2 Surge EN61000-4-5, level 2 Conducted Disturbance Immunity EN61000-4-6, level 2 Shock Wave Resistance EN61000-4-12, level 2 Power Frequency Magnetic Field EN61000-4-8, horizontal / vertical 400A/m (>level 2) Physical Specs Physical Specs IEC60068-2-27 Vibration Resistance IEC60068-2-6	Indicator							
StaticEN61000-4-2, level 2Radiation Electric FieldEN61000-4-3, level 2Pulsed Electric FieldEN61000-4-4, level 2SurgeEN61000-4-5, level 2Conducted Disturbance ImmunityEN61000-4-6, level 2Shock Wave ResistanceEN61000-4-12, level 2Power Frequency Magnetic Field ResistanceEN61000-4-8, horizontal / vertical 400A/m (>level 2)EN61000-4-12, level 2Physical SpecsEN61000-4-8, horizontal / vertical 400A/m (>level 2)EN60068-2-27ShockproofIEC60068-2-27Vibration ResistanceIEC60068-2-6	LED	Power, Status, Cellular, V	Vi-Fi, cellular Signal					
Static EN61000-4-2, level 2 Field EN61000-4-3, level 2 Pulsed Electric Field EN61000-4-4, level 2 Surge EN61000-4-5, level 2 Conducted Disturbance Immunity EN61000-4-6, level 2 Shock Wave Resistance EN61000-4-12, level 2 Power Frequency Magnetic Field Resistance EN61000-4-8, horizontal / vertical 400A/m (>level 2) EN61000-4-2, level 2 Physical Specs Shockproof IEC60068-2-27 Vibration Resistance IEC60068-2-6	EMC							
Field EN61000-4-4, level 2 Surge EN61000-4-5, level 2 Conducted Disturbance Immunity EN61000-4-6, level 2 Shock Wave Resistance EN61000-4-12, level 2 Power Frequency Magnetic Field Resistance EN61000-4-8, horizontal / vertical 400A/m (>level 2) EN61000-4-12, level 2 Physical Specs Shockproof IEC60068-2-27 Vibration Resistance IEC60068-2-6	Static	EN61000-4-2, level 2		EN61000-4-3, level 2				
Disturbance Immunity EN61000-4-6, level 2 Shock Wave Resistance EN61000-4-12, level 2 Power Frequency Magnetic Field Resistance EN61000-4-8, horizontal / vertical 400A/m (>level 2) EN61000-4-12, level 2 Physical Specs Shockproof IEC60068-2-27 Vibration Resistance		EN61000-4-4, level 2	Surge	EN61000-4-5, level 2				
Magnetic Field Resistance EN61000-4-8, horizontal / vertical 400A/m (>level 2) Physical Specs Physical Specs Shockproof IEC60068-2-27 Vibration Resistance IEC60068-2-6	Disturbance	EN61000-4-6, level 2		EN61000-4-12, level 2				
Shockproof IEC60068-2-27 Vibration Resistance IEC60068-2-6	Magnetic Field	EN61000-4-8, horizontal / vertical 400A/m (>level 2)						
Resistance IEC00008-2-27	Physical Specs							
	Shockproof	IEC60068-2-27	1	IEC60068-2-6				
	Free Fall	IEC60068-2-32						

Network Connectio									
Network Connectio	on 								
Network Access	APN, VPDN, PrivateNetwork	Access Authentication	CHAP/PAP						
LAN Protocol	ARP	WAN Protocol	PPP, PPPoE, DHCP						
Network Type		GSM/GPRS/EDGE, UMTS/HSPA+/EVDO/TD-SCDMA, TDD LTE/FDD LTE (Please refer to the Ordering Guide for frequencies.)							
Network Protocol									
IP Application	Ping, RouteTrace, DHCP Server, DHCP Relay, DHCP Client, DNS relay, DDNS, Telnet								
IP Routing	Static routing								
NAT	Supports network addre	ss 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								
Data Security	Supports PPTP, L2TP, GRE, IPSEC VPN (IKEv1, IKEv2), OPENVPN protocols 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 150Mbps						
Mode	AP, Client and WDS modes								
Security	Open system, shared key		ation						
Transmission Distance	WEP/TKIP/AES encryption 80 meters by line of sight (Actual transmission distance depends on environment of the site.)								
Network Managerr									
QoS Management Bandwidth limit, IP speed limit									
Configuration	Telnet, web, ssh and console								
Upgrade	Web, DeviceManager								
Log	Local system log, remote log, and serial export of log. Power down saving of important logs.								
SMS Functions	Status query, configuration, 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, LA card failure alarm, etc.	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 s status	status, network conne	ection status, and routing						

InHand Networks

CE, FCC, UL, PTCRB, IC, Verizon, AT&T, E-mark, T-mobile

Ordering Guide

	Region		Model code: IR302- <wmnn>-<wlan na="">-<io na="" s=""></io></wlan></wmnn>				
Model	(Operato r)	Network Type	<wmnn>: Cellular Type & Module</wmnn>	<wlan na="">: Wi- Fi</wlan>	<io na="" s=""></io>		
IR302-LQ28- <wlan na="">-<io na="" s=""></io></wlan>	China	LTE CAT4	FDD: B1/B3/B5/B8 TDD: B34/B38/B39/B40/B41 WCDMA: B1/B8 TD-SCDMA: B34/B39 EVDO/CDMA: BC0 GSM: B3/B8	WLAN: Wi-Fi <na>: no Wi-Fi</na>	IO: 2*IO S: 1*RS232 <na>: no interface</na>		
IR302-FQ58- <wlan na="">-<io na="" s=""> -<s-485 na=""></s-485></io></wlan>	Europe & APAC	LTE CAT4	FDD: B1/B3/B7/B8/B20/B28A WCDMA: B1/B8 GSM: B3/B8	WLAN: Wi-Fi <na>: no Wi-Fi</na>	IO: 2*IO S: 1*RS232 S-485: 1*RS485 <na>: no interface</na>		
IR302-FQ38- <wlan na="">-<io na="" s=""></io></wlan>	North America AT&T, Verizon	LTE CAT4	FDD: B2/B4/B5/B12/B13/B14/B66/B71 WCDMA: B2/B4/B5	WLAN: Wi-Fi <na>: no Wi-Fi</na>	IO: 2*IO S: 1*RS232 <na>: no interface</na>		
IR302-FQ78- <wlan na="">-<io na="" s=""></io></wlan>	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</na>	IO: 2*IO S: 1*RS232 <na>: no interface</na>		
IR302-FQ33- <wlan na="">-<io na="" s=""></io></wlan>	North America, AT&T, Verizon	LTE CAT1	FDD: B2/B4/ B5/B12/B13/B25/B26 WCDMA: B2/B4/B5	WLAN: Wi-Fi <na>: no Wi-Fi</na>	IO: 2*IO S: 1*RS232 <na>: no interface</na>		
IR302-FQ53- <wlan na="">-<io na="" s=""></io></wlan>	EMEA	LTE CAT1	FDD: B1/B3/B7/B8/B20/B28 WCDMA: B1/B8 GSM/EDGE: B3/B8	WLAN: Wi-Fi <na>: no Wi-Fi</na>	IO: 2*IO S: 1*RS232 <na>: no interface</na>		
IR302-LQ00- <wlan na="">-<io na="" s=""></io></wlan>	China	LTE CAT1	FDD: B1/B3/B5/B8 TDD: B34/B38/B39/B40/B41 GSM: 900/1800MHz	WLAN: Wi-Fi <na>: no Wi-Fi</na>	IO: 2*IO S: 1*RS232 <na>: no interface</na>		
IR302-FQ02- <wlan na="">-<io na="" s=""></io></wlan>	Global	LTE CATM/NB	CAT M: B1/B2/B3/B4/B5/B8/B12/B13/B14/B18/B19/B20/B25/B26/B27/ B28/B66/B85 CAT NB: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66/ B71/B85 GSM/EDGE: 850/900/1800/1900 MHz	WLAN: Wi-Fi <na>: no Wi-Fi</na>	IO: 2*IO S: 1*RS232 NA: no interface		
IR302-EN00- <wlan>-<io na="" s=""></io></wlan>			No cellular module	WLAN: Wi-Fi <na>: no Wi-Fi</na>			
Example:	xample: IR302-FQ38-WLAN: CAT 4, AT&T, VzW, Dual Ethernet port IR300 series cellular router, support IPSec / PPTP / L2TP / OPEN VPN, supports FDD, and WCDMA networks, supports Wi-Fi AP & Client mode						

Note: Users are asked to join InHand User Experience Plan at fist 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.



About Us

InHand Networks is a global leader of Industrial IoT, with a record of tremendous success following groundbreaking innovation since our inception in 2001.

InHand serves world-class partners and customers with industrial M2M routers, gateways, industrial Ethernet switches, rugged computers and IoT management platforms. We provide IoT solutions for various vertical markets including Smart Grid, Industrial Automation, Remote Machine Monitoring, Smart Vending, Smart City, Retail and more.

Proudly bearing the marks of both Rockwell Automation Technology Partner in Asia-Pacific and Schneider Electric Technology Partner, InHand Networks defines industrial innovation and reliability.



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