

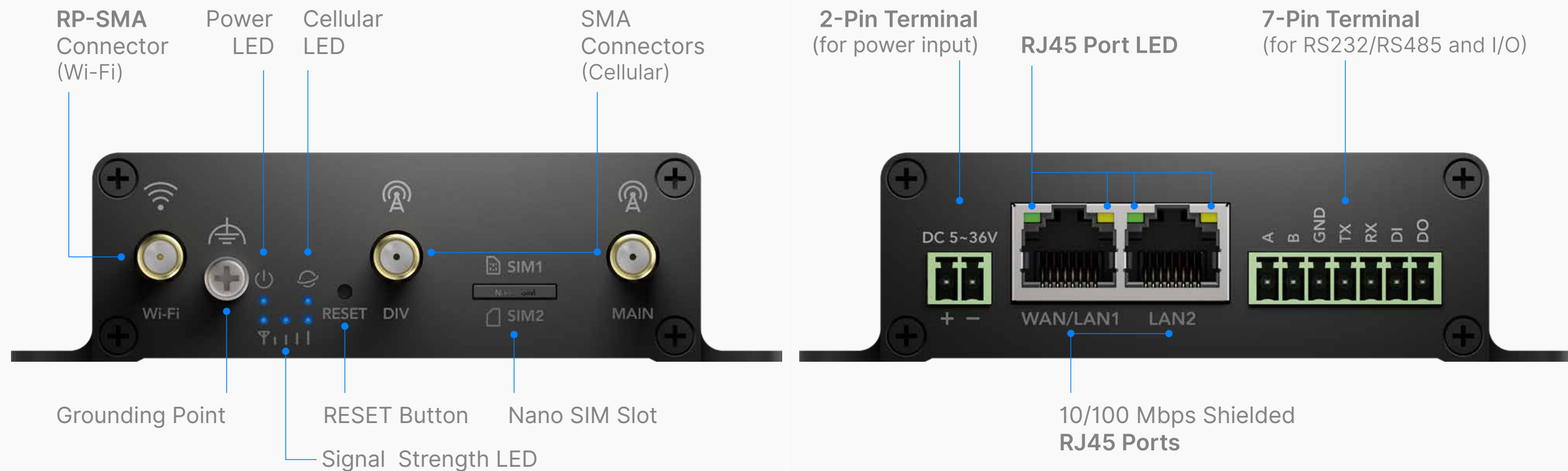
Model: IR02

4G LTE Cat. 4 N150 Industrial Router

-  4G LTE Cat.4
Dual SIM Card Slots
-  N150 Wi-Fi, Ethernet,
RS232, RS485, and IO
-  L3 EMC Protection
-40~75 °C Ambient Temperature
-  Compact Design

[Datasheet](#)





Built Compact to Fit into Machine Enclosures



Built Tough for Different Environments



Transportation



Retail Enterprise



Power Grid Management



Manufacturing and Automation

Package Content

- IR02
- Power Adapter
- Power Cable (DC to Terminal)
- 1x Detachable Wi-Fi Antenna
- 2x Detachable Cellular Antennas
- 2-PIN Connector
- 7-PIN Connector
- Ethernet Cable
- Mounting Kit
- Installation Guide





Highlights

A compact cellular Wi-Fi router designed for branch connectivity scenarios such as vending machines, ATMs, chain stores, franchise outlets, highway toll stations, and logistics machines.

- 4G Cat. 4 with Max 150 Mbps DL
- Level 3 EMC Protection
- IP30, -40~75°C (-40~167°F)
- Shock and Vibration Resistant
- Serial (RS232/485), IO
- 150 Mbps Wi-Fi
- 2× 10/100M RJ45
- 2× SIM Slots
- 2-PIN DC Input (5-36V)
- Wall-Mount

Hardware Specs

CPU	CPU Details	580 MHZ Single-Core, MIPS24KEC
Memory /Storage	Flash/ROM	16 MB (128 Mbit) NOR
	DDR/RAM	128 MB (1 Gbit) DDR2
Cellular	Cellular Standards	4G Cat. 4
	Cellular Antennas	2× Detachable
	Detachable Cellular Antennas Connector	SMA Female
	SIM Options	2× Nano SIM Slots
	Available Versions	EU, US, ME, LA
EU Version Cellular	Suitable Region	Europe, Middle East, Africa, SEA, Australia, New Zealand
	Max DL Speed	150 Mbps (LTE-FDD), 130 Mbps (LTE-TDD)
	Max UL Speed	50 Mbps (LTE-FDD), 30 Mbps (LTE-TDD)
	Advanced	DL 2×2 MIMO
	Cellular Bands	LTE-FDD: B1/3/5/7/8/20/28
		LTE-TDD: B38/40/41
		WCDMA: B1/5/8
US Version Cellular	Suitable Region	United States, Canada
	Max DL Speed	150 Mbps
	Max UL Speed	50 Mbps
	Advanced	DL 2×2 MIMO
	Cellular Bands	LTE-FDD: B2/4/5/12/13/14/66/71
		WCDMA: B2/4/5



Hardware Specs

LA Version Cellular	Suitable Region	Latin America, Australia, New Zealand
	Max DL Speed	150 Mbps (LTE-FDD), 130 Mbps (LTE-TDD)
	Max UL Speed	50 Mbps (LTE-FDD), 30 Mbps (LTE-TDD)
	Advanced	DL 2×2 MIMO
	Cellular Bands	LTE-FDD: B1/2/3/4/5/7/8/28/66 LTE-TDD: B40 WCDMA: B1/2/4/5/8 GSM: B2/3/5/8
ME Version Cellular	Max DL Speed	150 Mbps (LTE-FDD), 130 Mbps (LTE-TDD)
	Max UL Speed	50 Mbps (LTE-FDD), 35 Mbps (LTE-TDD)
	Advanced	DL 2×2 MIMO
	Cellular Bands	LTE-FDD: B1/3/5/7/8/20/28 LTE-TDD: B38/40/41 WCDMA: B1/8 GSM: B3/8
Wireless	2.4 GHz Wi-Fi Speed	150 Mbps
	2.4 GHz Wi-Fi Streams	1T1R
	Wi-Fi Antennas	1× Detachable
	Detachable Wi-Fi Antennas Connector	RP-SMA Female
	FEM or PA/LNA	2.4 GHz: 1× Internal

Wireless	Range Performance	Max: 80 m (262 ft) Tested in open-space environments with minimal interference. Actual WiFi range may vary depending on layout and wall materials. Refer to the Wall Performance specifications for placement suggestions.
	Wall Performance	One wooden walls with thickness < 10 cm (4") One concrete wall with thickness < 10 cm (4")
Interfaces	Physical Buttons	Reset Button
	10/100 Mbps RJ45 Ports	2
	Ethernet Notes	Port 1 is WAN/LAN configurable, and the rest are LAN ports
	Industrial Sockets	1× 7-PIN IO / Serial, 1× 2-PIN DC Input
	IO	1× Digital Galvanically Isolated Input (0-4V for state 0 9-30V for state 1) 1× Normally Open contacts of the internal Non-Latching Relay (Max. 30V=250mA) 1× GND for Digital Input / Digital Output
	7-PIN Serial Protocols	RS232 RS485 2× RS485 (Only for Customized Model)
	LED	Power Cellular Cellular Signal Strength Link/ACT of Each Ethernet Port
	Power Input	2-Pin DC



Hardware Specs

Reliability	Grounding Methods	Grounding Point
	EMC	IEC/EN 61000-4-2 ESD Level 3:
		Contact 6kV, Air 8kV
		IEC/EN 61000-4-3 RS Level 3:
		80 MHz to 6 GHz: 10 V/m
		IEC/EN 61000-4-4 EFT Level 3:
		Power Ports 2kV, Data Ports 1kV
		IEC/EN 61000-4-5 Surge Level 3:
		CM 2kV, DM 1kV
		IEC/EN 61000-4-6 Level 3 CS: 10V
		IEC/EN 61000-4-8, Level 3 PFMF
		IEC/EN 61000-4-9, Level 3
		IEC/EN 61000-4-10, Level 3
	Power Protection	Polarity Protection
		Overvoltage Protection
		Surge Protection
	Shock	IEC/EC 60068-2-27
	Vibration	IEC/EN 60068-2-6
	Free Fall	IEC/EN 60068-2-32
	Ingress Protection Rating	IP30

Reliability	Environment	Operating Temperature:
		-40 °C ~ 75 °C (-40 °F ~167 °F)
		Storage Temperature:
		-40 °C ~ 75 °C (-40 °F ~167 °F)
		Operating Humidity:
		5% ~ 95% non-condensing
		Storage Humidity:
		5% ~ 95% non-condensing
Certifications	FCC, CE	
Mechanical	Casing Material	Metal
	Dimension	Device:
		104.4×103×28.3 mm
		4.11×4.06×1.11 inches
		Mounting Space:
		188×104.4×28.3 mm
		7.4×4.11×1.11 inches
	Installation	Wall-mount



Software Specs

Wireless	Wi-Fi Standards	Wi-Fi 4
	Max Wi-Fi Modulation	64-QAM
	Max Capacity	128
	Recommended Client Upper Limit	20
	Max Wi-Fi Channel Width	40 MHz
	Wi-Fi Security	WPA/WPA2/WPA3
	Guest Network	2.4 GHz
	WPS	True (In Web Management)
General	Operation Modes	Cellular Router / Wi-Fi Router
		WISP
	Cellular APN	Band Select (Band Lock)
		Cellular Mode Select
		Data Roaming
		APN Profile
		Manual APN Profile
		MTU Value
	Cellular Mode	4G Only / 3G Only / Auto
	WAN Mode	DHCP / Static IP / PPPOE
		L2TP / PPTP
	Internet Failover Sequence	WAN / WISP
		Cellular

Network	QoS	Per-User Rate Limiting
	DHCP	Address Reservation
		DHCP Client List
		Server
	IP Versions	IPv4 / IPv6
	IPv6 Protocols	Relay
		Dynamic (SLAAC/DHCPv6)
		Static (Fixed IP)
		Passthrough
		464XLAT
		MAP-E
		DS-Lite
	TTL Customization	Extend
		Spoof
		Custom
	IGMP	IGMP Proxy
		IGMP Snooping
	Forwarding	Port Forwarding
		Port Triggering
		UPnP
		DMZ



Software Specs

Network	Firewall	SPI Firewall
		DoS Protection
		Block PING
	Application Layer Gateway	IPSec Passthrough
		L2TP Passthrough
		PPTP Passthrough
		FTP Passthrough
		TFTP Passthrough
		H323 Passthrough
		SIP Passthrough
		RTSP Passthrough
Utilities	VPN Server & VPN Client	WireGuard
		OpenVPN
		ZeroTier
		PPTP, L2TP, IPSec
	DNS Options	Manual DNS
		Rebind Protection
		Override Clients' DNS

Utilities	DNS over TLS Providers	Cloudflare
		Google
		Quad9
		Custom
Input/Output	Wake on LAN	True
		Online Detection
	Status Panel	Input Status
		Relay Status Control
	Input Method Select	Digital Input
		Digital Input Trigger
		Rising
		Falling
		Both
	Input Rules	Type Select
		Delayed Execution
		Output Type
		Output State
		Revert Period
		Maintain Status after Reboot



Software Specs

Input/Output	Trigger Actions	Activate Output
		Send SMS
		SIM Switch
		Turn On Wi-Fi
		Turn Off Wi-Fi
		Reboot
	Output Schedulers	Output Type
		Target State
		Repeat
	Serial	Modes
		TCP Client
		TCP Server
		UDP
		Modbus TCP over Serial Gateway
Management	All Devices Management	Wi-Fi Time Schedule
		MAC Filter
		IP/MAC Binding
	Per-Devices Management	Internet On/Off
		VPN On/Off
		Online Time Schedule
		Device Rename
	Content Management	Domain Filter
		IP Filter

System	Local Control Method	Config Web Page		
		App Control		
	Remote Control Method	App Control		
		Config Page via HTTP		
		Config Page via HTTPS		
		TR069		
	Firmware Upgrade	Local Update		
		App (Over the Air)		
		Online Update		
	Diagnostic Tools	Diagnosis / Ping / Traceroute		
		NSLookup / System Log		
	Languages	English	Bengali	Catalan
		Czech	German	Greek
		Spanish	French	Hebrew
		Croatian	Hungarian	Italian
		Japanese	Khmer	Korean
		Dutch	Norwegian	Polish
		Portuguese	Romanian	Russian
		Slovak	Swedish	Thai
		Turkish	Ukrainian	Vietnamese
		Simplified Chinese	Traditional Chinese	
	Reliability	Timed Reboot		
		Backup and Restore		

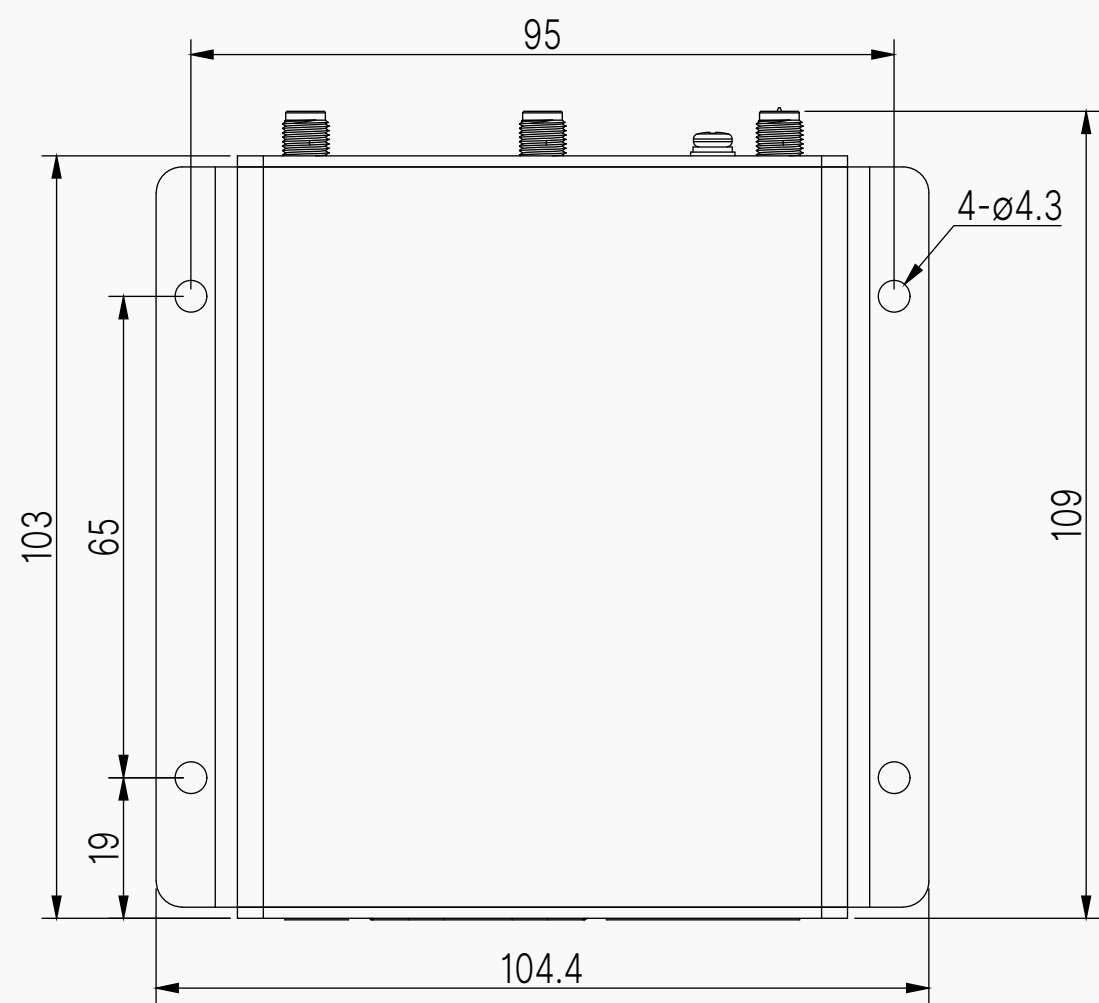


Software Specs

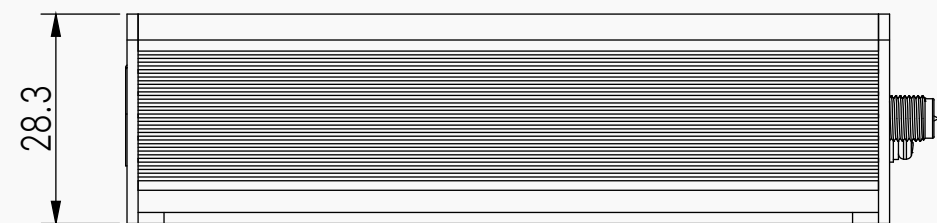
Dashboard	Panel	Internet Status
		Devices Management
		Cellular Status
		WAN Status
		LAN Status
		WISP Status
		Wi-Fi Status
		VPN Status
		DHCP Server Status
		System Version
	Charts	Cellular Speed
		Internet Speed
		WISP Speed
		Wi-Fi Speed

Spatial Measurements

TOP VIEW

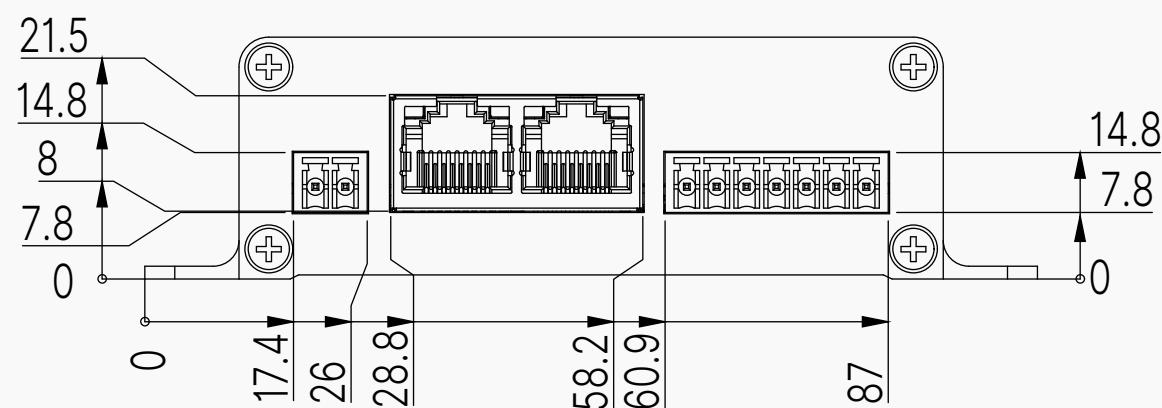


RIGHT VIEW

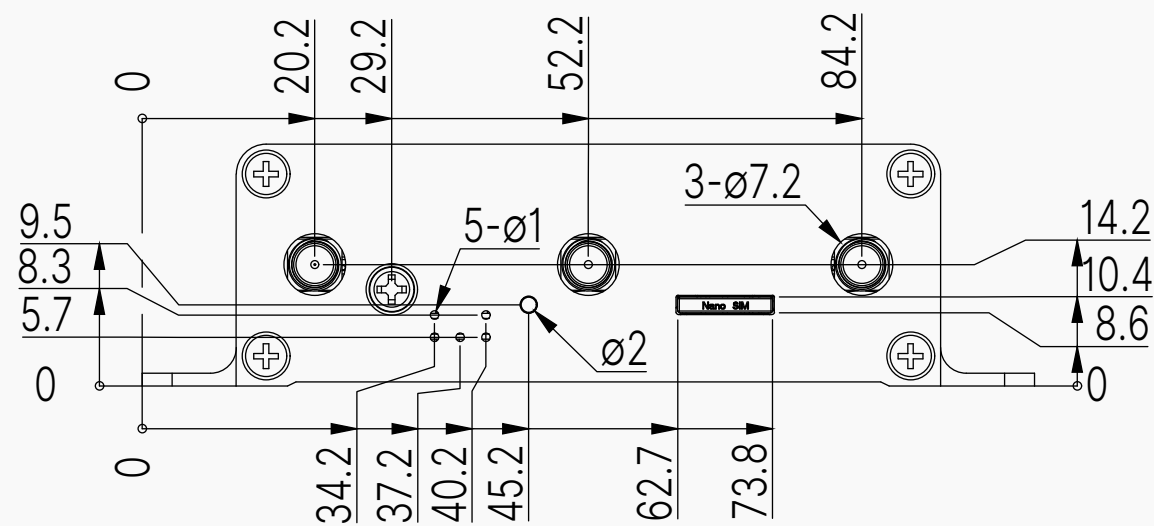


Spatial Measurements

FRONT VIEW



BACK VIEW



Spatial Measurements

MOUNTING SPACE

