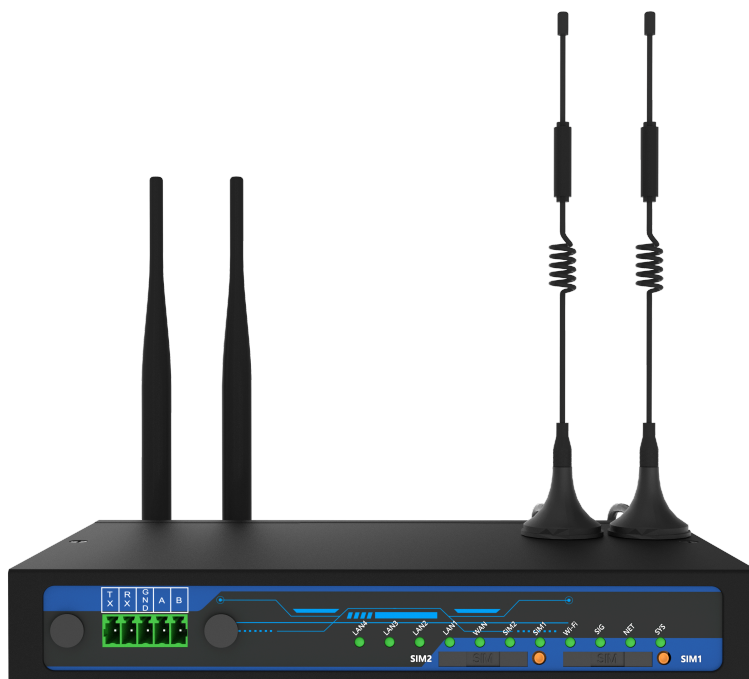


CN350W-4G

4G INDUSTRIAL ROUTER



Industrial
automation



Video surveillance



Building
automation



Energy & metering



Edge networking



4G LTE Cat-4



Dual SIM



5x Ethernet



RS232 + RS485

DATASHEET

DATASHEET

Features

Modem

Modem module	4G (LTE) Cat-4: LTE-FDD maximum downlink 150 Mbps / uplink 50 Mbps; LTE-TDD maximum downlink 130 Mbps / uplink 30 Mbps
Status	Signal strength (RSSI), SINR, RSRP, RSRQ, BAND, IMSI, ICCID
APN	Auto APN; Custom APN
PDP	Possibility to use different PDNs for multiple network access and services

Wireless

Wireless mode	IEEE 802.11b/g/n; Access Point (AP), Station (STA)
WiFi security	WPA2-PSK, WPA-PSK; AES, TKIP
SSID	SSID stealth mode
WiFi users	Up to 50 simultaneous connections

Ethernet

LAN	4 × LAN ports, 10/100 Mbps, compliance with IEEE 802.3, IEEE 802.3u, supports auto MDI/MDIX
WAN	1 × WAN port, 10/100 Mbps, compliance with IEEE 802.3, IEEE 802.3u, supports auto MDI/MDIX

Network

Routing	Static routing
Network protocols	TCP, UDP, IPv4, ICMP, NTP, DNS, HTTP, FTP, SSL v3, TLS 1.3, ARP, PPP, PPPoE, SSH (v1, v2), DHCP, Telnet client, MQTT
Connection monitoring	Scheduled tasks, ICMP for link inspection
DHCP	Static and dynamic IP allocation
Link backup	Modem, WiFi and WAN options, each of which can be used as backup, using automatic Failover

Security

Firewall	Pre-configured firewall rules can be enabled via WebUI; Port forward; DMZ; DNAT; SNAT; MASQ
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Attack prevention	DDOS prevention, IP Spoofing, port scan prevention, SYN flood protection, Multicast Restriction, IDENT Blocking
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Domain Filtering	Blacklist for blocking out unwanted websites, whitelist for specifying allowed sites only
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SD-WAN and VPN

OpenVPN	Client/Server mode switchable, 40 encryption methods.
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WireGuard	Based on a point-to-point encrypted tunnel.
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SD-WAN	CloakNet SD-WAN Supported
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IPsec	IKEv1, IKEv2, supports up to 10 × VPN IPsec tunnels (instances), with 5 encryption methods (DES, 3DES, AES128, AES192, AES256).
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L2TP	Client/Server mode switchable.
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m2mCloud	Supports both TCP and UDP protocols (Routing Mode / Bridging Mode), enables secure remote access through P2P tunneling or server-relay architecture.
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Modbus TCP/RTU Master

Supported functions	01, 02, 03, 04, 05, 06
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Supported data formats	16 bit: INT, UINT, HEX; 32 bit: Float, Float_Inverse, Long, Long_Inverse; 64 bit: Double, Double_Inverse
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MODBUSMQTT	MODBUS TCP/RTU status/control; MQTT publisher, MQTT Subscribe, MQTT Answer
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Web

WEB UI	HTTP, status, configuration, FW update, troubleshoot, system log, kernel log
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JSON-RPC	Management API over HTTP
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IoT Platforms

Clouds of things	Allows monitoring of: Device data, Modem data, Network info, Availability
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Hardware Features

CPU	MT7628AN / NN
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RAM	128 MB, DDR2
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FLASH storage	16 MB, SPI NOR Flash
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GPS	GPS optional
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Firmware

Update	Update without losing current configuration, support HTTP and CFE upgrade methods
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System Characteristics

Operating system	CloakNet Router OS
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Supported languages	Busybox shell, C, C++
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Power

Connector	Industrial 12 V round-hole interface
Input voltage range	9 – 36 V DC, reverse polarity protection
Power consumption	< 3.5 W

Physical Interfaces (Ports, LEDs, Antennas, Buttons, SIM)

Ethernet	5 × RJ45 ports, 10/100 Mbps, compliance with IEEE 802.3, IEEE 802.3u, supports auto MDI/MDIX
Serial	1 × RS232, 1 × RS485
Status LEDs	1 × Power SYS LED, 1 × Modem network status LED, 1 × Modem signal strength LED, 1 × WiFi status LED, 1 × SIM1 insertion detection LED, 1 × SIM2 insertion detection LED, 4 × LAN port status LEDs, 1 × WAN port status LED
SIM	2 × SIM slot, 3.3 V, external SIM holder
Power	Industrial 12 V round-hole interface, typical 12 V DC
Antennas	2 × SMA for 4G, 2 × SMA for WiFi (if GPS is selected, an SMA connector for GPS occupies the WiFi ANT-RES antenna as the GPS antenna, and WiFi will only have 1 antenna)
Reset	Reboot / Factory reset button

Physical Specification

Casing material	Metal casing
Dimensions (W × H × D)	174.00 × 97.70 × 27.00 mm
Weight	544 g
Mounting options	Ear-hook installation

Operating Environment

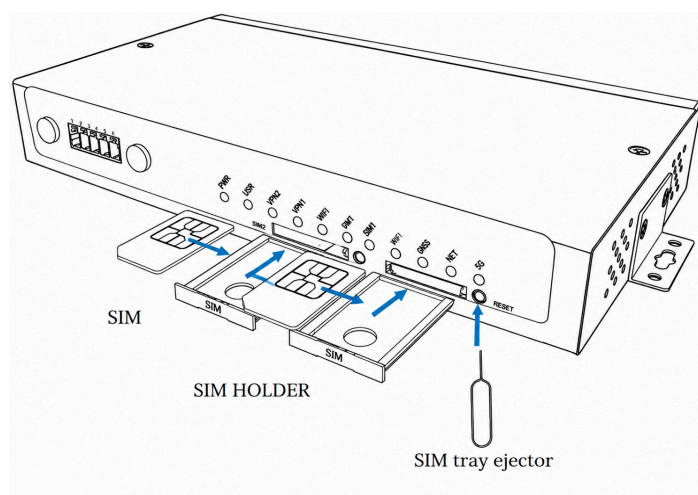
Operating temperature	–30 °C ~ 75 °C
Operating humidity	< 95 % non-condensing

EMI Immunity

Standards	Draft EN 301 489-1 V2.2.0, Draft EN 301 489-17 V3.2.0, Draft EN 301 489-52 V1.1.0 FCC 47 CFR Part 15B (2017), ANSI C63.4 (2014)
ESD	EN61000-4-2: 2009
RS	EN 61000-4-3: 2006 + A1: 2008 + A2: 2010
EFT	EN 61000-4-4: 2012
Surge immunity (AC Power Line)	EN 61000-4-5: 2006
Surge immunity (Ethernet ports)	EN 61000-4-5: 2014, clause 7.1 of ITU-T K21
CS	EN 61000-4-6: 2009
DIP	EN 61000-4-11: 2004

Hardware Installation

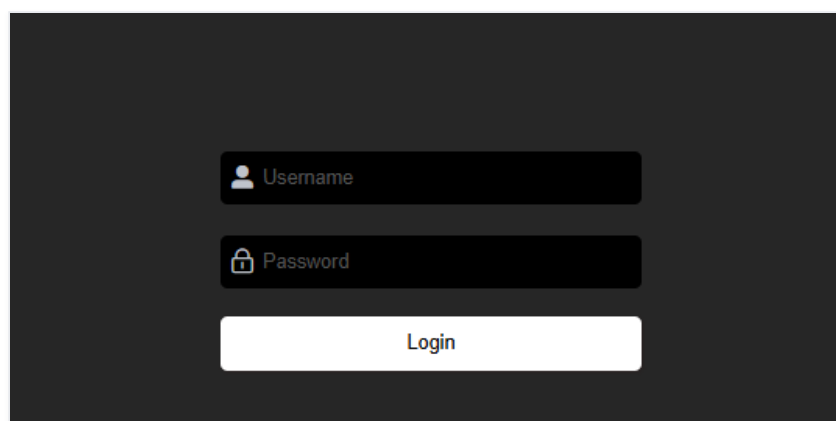
1. Push the SIM button with the SIM needle, pull out the SIM holder, insert your SIM card, and slide the holder back into the router (dual-SIM).
2. Attach the 4G and WiFi antennas to the SMA connectors on the device.
3. Connect the power adapter (9 – 36 V DC) to the 12 V round-hole socket on the front of the device, then plug the other end into a power outlet.
4. Connect to the device wirelessly using the SSID and password on the device information label, or use an Ethernet cable connected to the LAN port.



SIM card installation

■ Login to Device

1. To enter the router's Web interface (WebUI), type `http://192.168.8.1` into the URL field of your Internet browser.
2. Use the login information shown on the device information label when prompted for authentication.
3. Go to the Overview page and pay attention to the Signal Strength indication after login. To maximize the cellular performance try adjusting the antennas or changing the location of your device to achieve the best signal conditions.



Web management interface (WebUI)

Status	● Connected (1 day 5 hour 1 min)
Signal	📶 29[-55dbm]
Network Type	lte
Operator	CHINA MOBILE
SIM Status	SIM1 Ready
SIM ICCID	89860875102592713901
SIM IMSI	460130355343901
Module IMEI	867997075354786
Module Version	China-Mobile-ML307R (ML307R-DL-MBRH0S00)
IP	10.51.125.123/24

Overview page

■ Technical Information

Radio Specifications

RF technologies	4G, WiFi, GPS
Max RF power	25 dBm @ LTE, 15 – 30 dBm @ GPS, 20.5 dBm @ WiFi

Bundled Accessories Specifications*

Modem antenna	698~960 / 1710~2690 MHz, 50 Ω, gain** 5 dBi, SMA male connector
WiFi antenna	2400~2500 MHz, 50 Ω, gain** 3 dBi, SMA male connector

**Order code dependent. **Higher gain antenna can be connected to compensate for cable attenuation when a cable is used. The user is responsible for the compliance with the legal regulations.*

What's in the Box

Standard Package Contains*

- Router CN350W-4G
- 2 × 4G antenna (swivel, SMA male)
- 2 × WiFi antenna (swivel, SMA male; if GPS is selected, 1 × SMA for GPS & 1 × SMA for WiFi)
- 1 × Standard 12 V DC power adapter
- 1 × Ethernet cable (1 m)
- 1 × 5-pin terminal
- 1 × pair of mounting ears
- Packaging box



Router CN350W-4G



4G antenna



WiFi antenna



5-pin terminal



Mounting ears



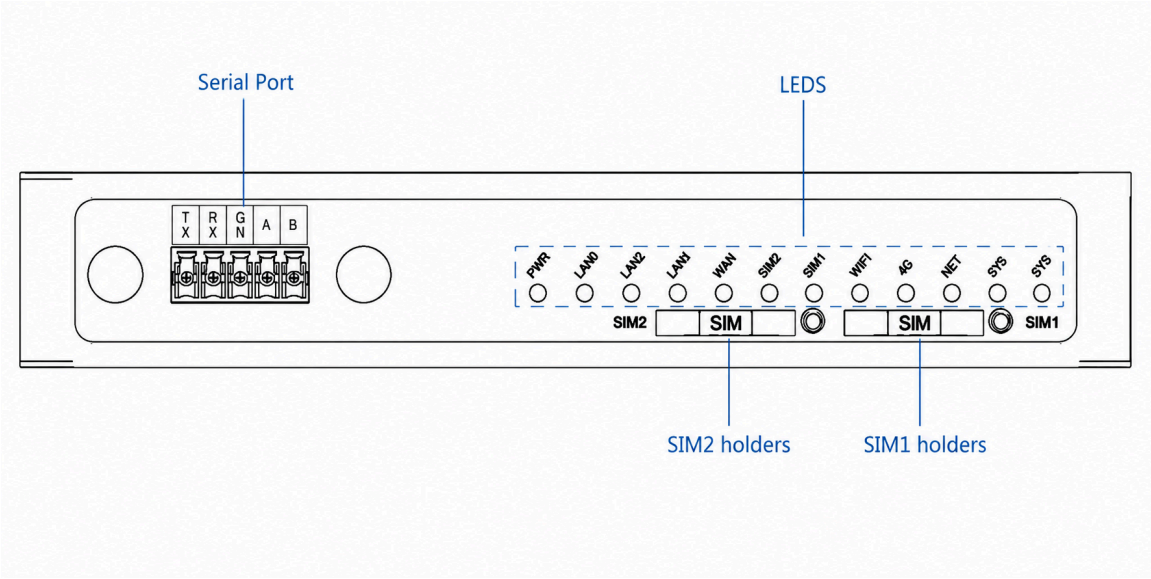
12V DC power adapter



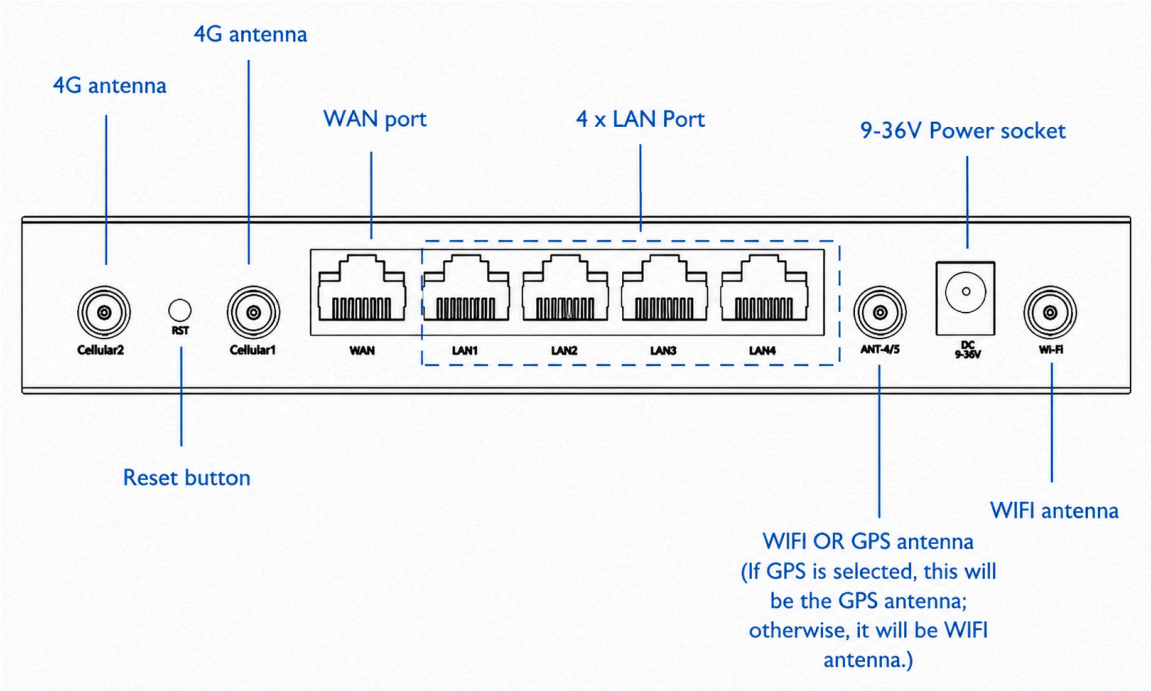
Ethernet cable (1 m)

* For all standard order codes standard package contents are the same, except for PSU.

Hardware



Front Panel



Rear Panel

CN350W-4G Spatial Measurements & Weight

Main Measurements

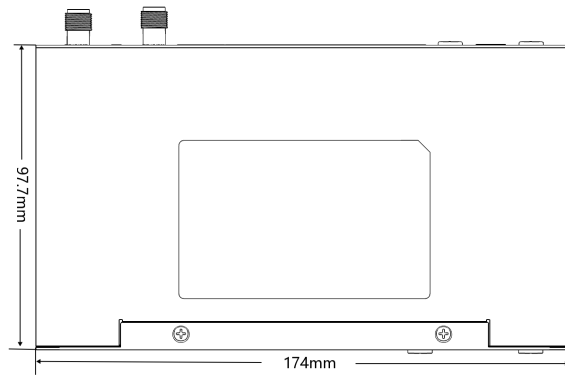
**W × H × D dimensions for
 CN350W — Device housing*** 174.00 × 97.70 × 27.00 mm

Box 262.00 × 125.00 × 85.00 mm

**Housing measurements are presented without antenna connectors and screws; for measurements of other device elements look to the sections below.*

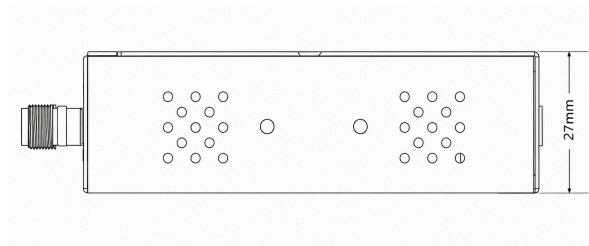
■ Top View

The measurements of CN350W-4G and its components are seen on the top:



■ Side View

Measurements of the CN350W-4G and its components are seen on the rear:



Mounting Space Requirements

The figure below depicts an approximation of the device's dimensions when cables and antennas are attached:

