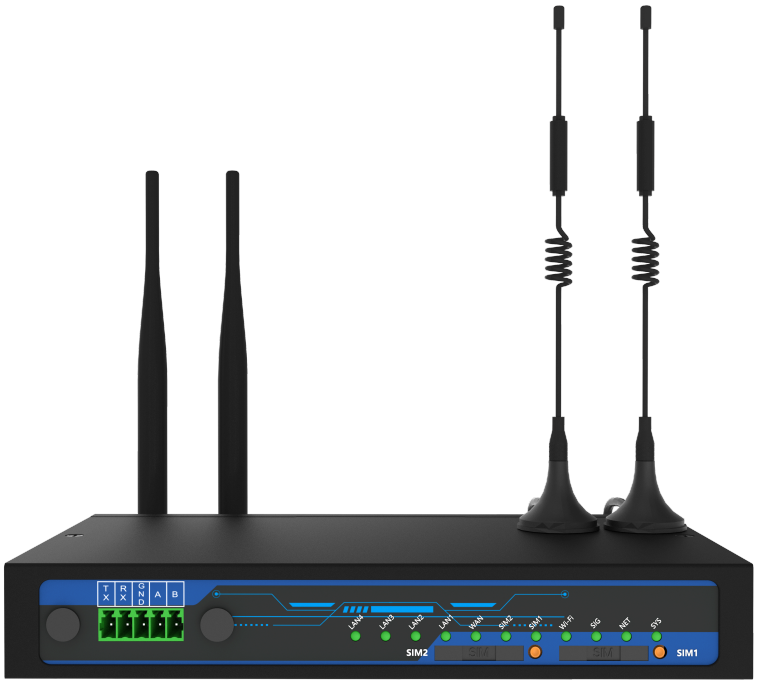
YZW350L

4G INDUSTRIAL ROUTER



Industrial automation

Video surveillance

Building automation

Energy & metering

Edge networking

4G LTE Cat-4

Dual SIM

5× Ethernet

On-board GPS option

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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	APN and account authentication settings, including NONE, PAP, CHAP and PAP+CHAP
PDP	PDP profile settings with IPv4, IPv6 or IPv4v6 selection

Wireless

Wireless mode	IEEE 802.11b/g/n; Access Point (AP), Station (STA)
WiFi security	WPA2-PSK, WPA-PSK; AES
SSID	SSID stealth mode
WiFi clients	Multiple wireless clients in AP mode

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 routes with destination network, gateway, outgoing interface and metric settings
WAN access	IPv4/IPv6 static addressing, DHCP and PPPoE, with gateway/DNS settings and configurable PPP authentication, LCP keepalive and MTU/MRU
Network protocols	TCP, UDP, IPv4/IPv6, ICMP, ARP, DHCP, DNS, NTP, HTTP/HTTPS, SSH2 and MQTT; FTP and Telnet clients
Connection monitoring	ICMP reachability checks with configurable primary/backup targets, source interface, interval, retry count and recovery action
DHCP	IPv4 DHCP server with address pool, lease time, gateway/DNS settings and static IP-to-MAC assignments; configurable stateful/stateless IPv6 address allocation

Link supervision	Cellular-link keepalive with configurable IPv4/IPv6 probe targets and connection status monitoring
NAT	IPv4 DNAT, SNAT, MASQ and DMZ rules for port forwarding and address translation
QoS	Upload/download traffic rules by interface, network and optional port, with rate, ceiling rate and priority settings
DDNS	Configurable DDNS provider, account/token, domain and update interval, with an IPv6 update option
Uplink failover	WAN/cellular link priorities with configurable ICMP keepalive and automatic failover/recovery according to configured, available links

Security

Firewall	Stateful packet filtering and management-service access permissions for available access zones such as LAN and VPN
Attack prevention	Configurable DDoS limiting, IP-spoofing, port-scan and SYN-flood rules, plus multicast and IDENT access restrictions
Address Filter	LAN Internet restriction switch with VPN/m2mCloud-only access; disable, blacklist and whitelist modes; IP-only, MAC-only and combined IP+MAC matching. Rules support input/forward direction, TCP/UDP/ICMP, source/destination IP or CIDR, ports and destination interface
Domain Filtering	Configurable disabled, blacklist or whitelist domain-filtering modes

VPN

OpenVPN	Supports dual client instances and a server instance operating independently
WireGuard	IPv4-only tunnels with public/private-key authentication and optional pre-shared keys; up to 4 peer configurations, remote-subnet routes, keepalive, full-tunnel routing and masquerading
ZeroTier	Joins multiple virtual networks by network ID, with independent controls for managed IP/routes and global routes; provides node and virtual-network connection status monitoring
IPsec	IKEv1/IKEv2 and PSK authentication; tunnel and transport modes; configurable local/remote subnets, encryption/authentication parameters and PFS for site-to-site connectivity
L2TP	Client and server operation with account authentication, client address pools, remote-subnet routes, LCP keepalive and MTU/MRU settings for remote access and site interconnection
m2mCloud	m2mCloud remote networking and access to on-site devices; supports PLC program upload/download with the corresponding programming software, without a fixed public IP or inbound port forwarding at the site
GRE	GRE tunnels with local/peer endpoints, virtual addresses and tunnel-key identifiers; GRE itself does not provide encryption
PPTP	PPTP client and server configuration with account authentication and PPP parameters for legacy-network compatibility

Modbus Acquisition & Reporting

Acquisition mode	Modbus TCP/RTU master acquisition with device and command configuration; RTU acquisition uses an available RS232 or RS485 port
Read function codes	01 Read Coils; 02 Read Discrete Inputs; 03 Read Holding Registers; 04 Read Input Registers
Data formats	16-bit signed/unsigned integers; 32-bit signed/unsigned integers (ABCD); 32-bit floating point (ABCD/CDAB)
Device and command management	Up to 16 devices, with up to 32 acquisition commands per device; supports RTU serial or TCP connections
Command configuration	Configurable command name, slave address, register start/count, mapping address, writable attribute and independent acquisition period
Acquisition and reporting timing	Per-command acquisition period: 1-86400 s; response timeout: 30-120000 ms; MQTT/TCP/UDP support optional periodic reporting at intervals of 1-86400 s
Data reporting	MQTT, TCP and UDP data reporting; IEC 60870-5-104 protocol integration
MQTT settings	Server address/port, account authentication and CA certificates; per-device publish/subscribe topics; writable commands accept downlink control through subscribed messages
IEC 60870-5-104 settings	Configurable communication port, common address and acquisition-command mapping addresses
Serial-port sharing	RTU acquisition and DTU services cannot own the same serial port simultaneously; Modbus TCP acquisition does not occupy the serial port

Application Services

DTU transparent transmission	Serial-to-TCP/UDP client or server operation, with primary/backup servers, login data, heartbeat and timeout settings
DTU MQTT	MQTT serial-data access with account authentication, client ID, publish/subscribe topics, QoS 0/1/2 and keepalive settings
Serial protocol gateway	Modbus RTU/ASCII master or slave modes and DNP3 master/outstation modes, using the device serial interface
MQTT Broker	Local MQTT broker with plain/TLS transport, listen address/port, anonymous or username/password authentication and server certificate/key settings
SNMP	SNMPv2c/SNMPv3 management and SNMPv2c Trap reporting; configurable community, Trap destination and SNMPv3 authentication/privacy parameters
Scheduled tasks	Scheduled device or cellular-modem restart by day of week and time
SMS	SMS sending with character-set selection and a trusted-number list
SMTP and event alarms	SMTP email with optional STARTTLS/TLS; email/SMS notifications for configured events such as weak signal, modem-status changes, failed logins and firewall attacks
Network diagnostics	Ping and traceroute diagnostics with configurable target and source IP

Management & Maintenance

WEB UI	HTTP/HTTPS management for status, configuration and maintenance; HTTPS is enabled through the management-access settings
CLI	SSH2/Telnet command-line access with configurable management-service permissions
Accounts and permissions	User-account and configuration-permission management
Configuration management	Configuration export/import and factory reset
Logs	Event/system logs, service runtime status and remote-log server/port settings
Time synchronization	NTP server and backup server, synchronization interval and time-zone settings, plus manual time entry

m2mCloud Remote Access

Cloud remote access	Remote access from an authorized m2mCloud client to the router and LAN-connected PLCs, HMIs and other devices for configuration, diagnostics and maintenance
PLC program upload/download	PLC program upload (PLC to engineering PC), download (engineering PC to PLC) and remote commissioning through m2mCloud using the corresponding programming software, reducing on-site service visits and travel costs
Remote networking	Cloud-controlled L3 routing or L2 bridging for remote-subnet or same-subnet access; L3 mode supports up to 10 remote IPv4 subnet routes
NAT traversal and relay	L3 mode supports P2P direct communication or server relay; L2 bridging uses relay. No fixed public IP or inbound port forwarding is required at the site, simplifying cellular and NAT network access
Remote serial access	Authorized remote access to an available RS232 or RS485 port through the platform serial-proxy client; the same port cannot be used concurrently by DTU or Modbus RTU acquisition
Cloud monitoring and maintenance	Reports device model, firmware version, uptime, cellular signal, dial-up state and tunnel status; supports cloud-issued device reboot commands for centralized monitoring and troubleshooting
Connection recovery	Automatically reconnects the cloud management session and restores the tunnel after a recoverable interruption, reducing the need for on-site manual reconnection
Communication security	TLS protects the cloud management connection; tunnel traffic is encrypted with a group key distributed by the platform
Requirements	Requires the corresponding m2mCloud platform, authorization, client and reachable IPv4/UDP service. PLC operations require compatible programming software, device permissions and correct site network settings

Hardware Features

CPU	MT7628AN / NN
RAM	128 MB, DDR2
FLASH storage	16 MB, SPI NOR Flash
GPS	Optional on-board GPS positioning module; specify when ordering. With GPS fitted, ANT-RES is used for the GPS antenna and Wi-Fi retains 1 antenna

Firmware

Update	Web firmware upload with a choice to retain the configuration or restore factory settings after upgrade

System Characteristics

Operating system	OpenWrt based Linux OS
Script runtime	Shell, Python 3.9.17

Power

Connector	Industrial 12 V round-hole interface
Input voltage range	9 – 36 V DC
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 round DC power socket, 9–36 V DC input (nominal 12 V DC); a dedicated power supply rated for ⩾ 1 A output is recommended
Antennas	2 × SMA for 4G and 2 × SMA for Wi-Fi; with on-board GPS fitted, ANT-RES is used for GPS, leaving 1 × Wi-Fi antenna connector
Reset	Short press to reboot; press and hold for 15 s to restore factory settings

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

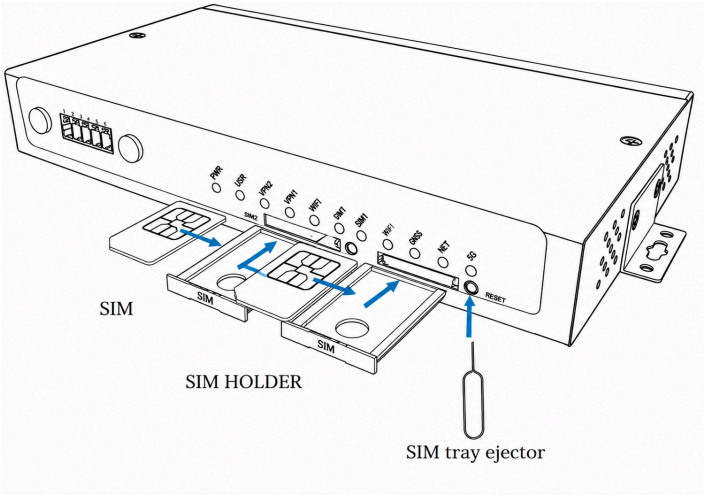
EMI Immunity

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

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Hardware Installation

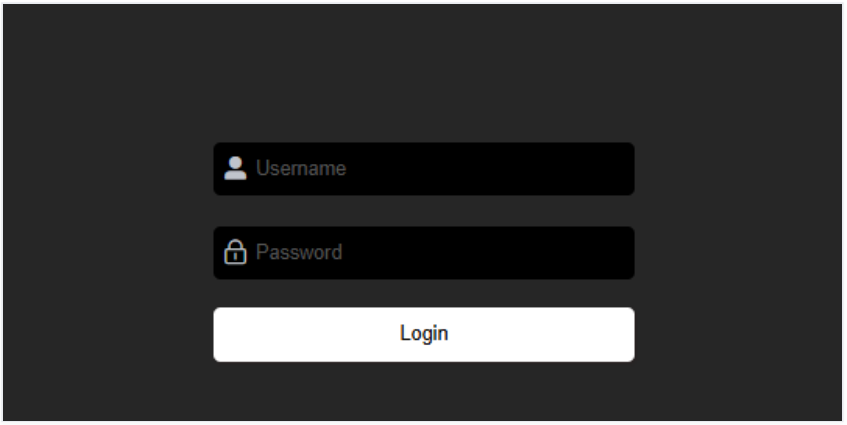
1. Push the SIM button with the SIM needle, pull out the SIM holder, insert your SIM card, and slide the holder back into the router (dual-SIM).
2. Attach the 4G and Wi-Fi antennas to their SMA connectors. With on-board GPS fitted, connect the GPS antenna to ANT-RES and use the other connector for Wi-Fi.
3. Connect the power adapter (9 – 36 V DC) to the round DC power socket on 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.



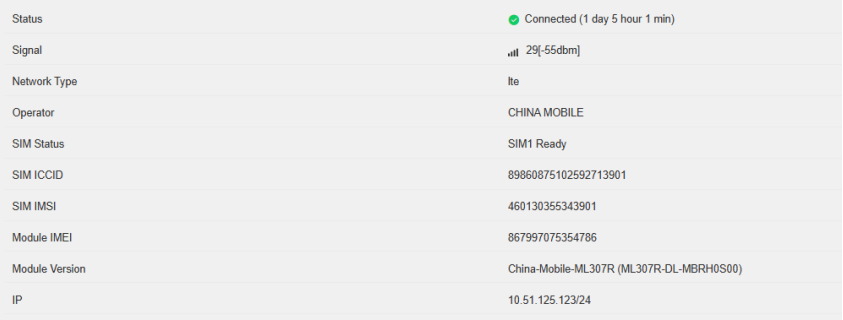
SIM card installation

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, Wi-Fi; GPS reception with the optional on-board GPS module
Max RF power	25 dBm @ LTE, 20.5 dBm @ Wi-Fi; GPS is receive-only (optional)

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.*

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What's in the Box

Package contents • YZW350L • optional GPS replaces one Wi-Fi antenna

- 1 × YZW350L device (Standard)
- 1 × Packaging box (Standard)
- 2 × 4G magnetic-mount antenna (Standard)
- 2 × Wi-Fi antenna (Standard)
- 1 × 12 V DC power adapter (Standard)
- 1 × Ethernet cable, 1 m (Standard)
- 1 × 5-pin screw terminal (Standard)
- 1 pair × Mounting ears (Standard)
- 1 × GPS antenna (Optional)





YZW350L
Standard • 1



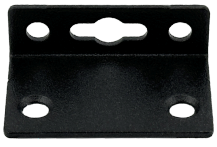
4G magnetic-mount antenna
Standard • 2



Wi-Fi antenna
Standard • 2



5-pin screw terminal
Standard • 1



Mounting ears
Standard • 1 pair



12 V DC power adapter
Standard • 1



Ethernet cable, 1 m
Standard • 1



GPS antenna
Optional • 1

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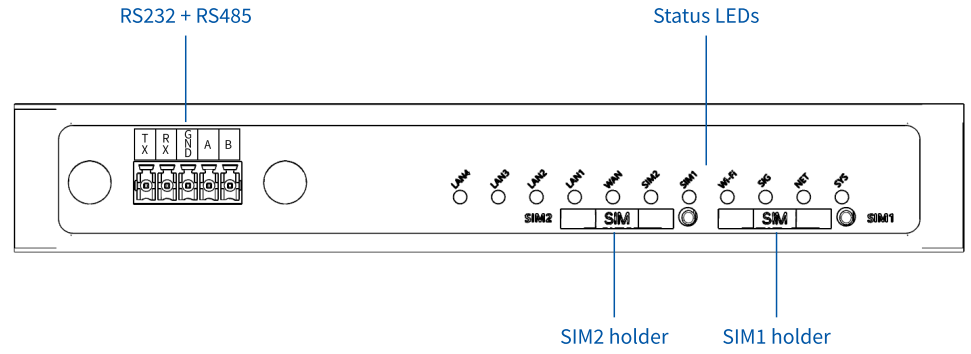
Available Versions

Product	Region (Operator)	Frequency
YZW350L	China, Southeast Asia	4G (LTE-FDD): B1, B3, B5, B8 4G (LTE-TDD): B34, B38, B39, B40, B41 WCDMA: B1, B5, B8 GSM / EDGE: B3, B8
YZW350L	Europe	4G (LTE-FDD): B1, B3, B5, B7, B8, B20, B28 4G (LTE-TDD): B38, B40, B41 WCDMA: B1, B5, B8 GSM / EDGE: B3, B8
YZW350L	Latin America, Australia, New Zealand	4G (LTE-FDD): B1, B2, B3, B4, B5, B7, B8, B28, B66 4G (LTE-TDD): B40 WCDMA: B1, B2, B4, B5, B8 GSM / EDGE: B2, B3, B5, B8
YZW350L	Europe, Asia Pacific	4G (LTE-FDD): B1, B3, B5, B7, B8, B20, B28 4G (LTE-TDD): B38, B40, B41 WCDMA: B1, B5, B8

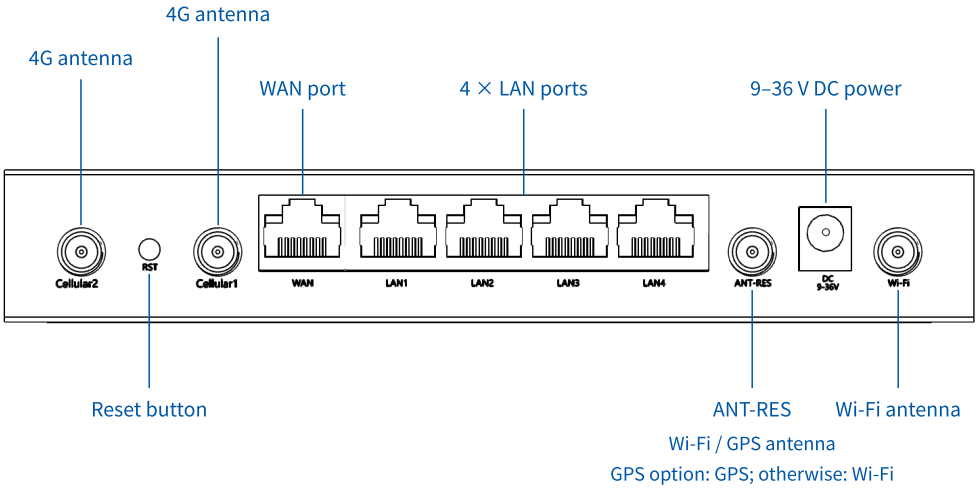
The price and lead-times for region (operator) specific versions may vary. For more information please contact us.

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Hardware



Front Panel



Rear Panel

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YZW350L Spatial Measurements & Weight

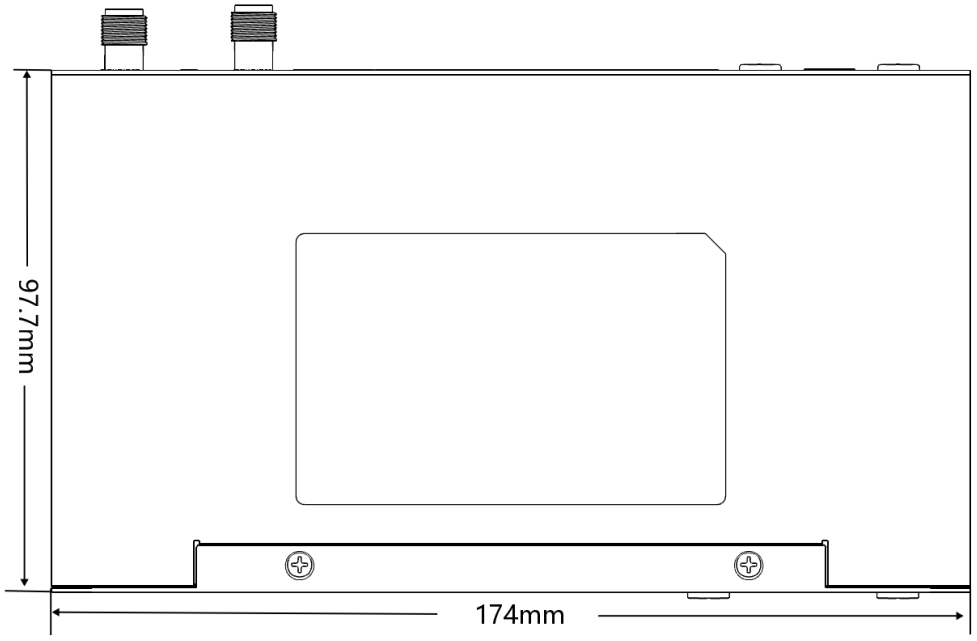
Main Measurements

Dimensions (W × H × D)*	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.*

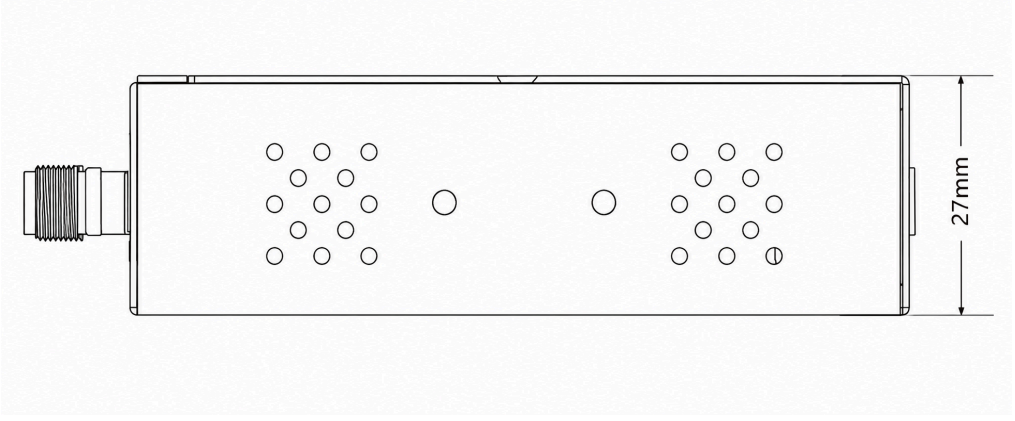
Top View

The measurements of YZW350L and its components are seen on the top:



Side View

Measurements of the YZW350L and its components are seen on the side:



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Mounting Space Requirements

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

