YZW400

INDUSTRIAL ROUTER • 4G STANDARD / 5G OPTIONAL



Industrial automation

Video surveillance

Building automation

Energy & metering

Edge networking

4G LTE Cat-4

9–36 V Wide Power

RS232 + RS485

Dual SIM

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Features

Modem

Modem module	4G standard: 4G (LTE) Cat 4, LTE-FDD maximum downlink 150 Mbps / uplink 50 Mbps, LTE-TDD maximum downlink 130 Mbps / uplink 30 Mbps 5G option: 5G (NR SA Sub-6) maximum downlink 2 Gbps / uplink 1 Gbps; 5G NSA Sub-6 maximum downlink 2.2 Gbps / uplink 575 Mbps; 4G (CAT 12 down / CAT 13 up) LTE maximum downlink 600 Mbps / uplink 150 Mbps; UMTS (WCDMA) maximum downlink 42.2 Mbps / uplink 11 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	2.4 GHz band 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

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

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
Kernel Version	Linux Router 4.9.87
Script runtime	Shell, Python 3.9.17

Power

Connector	MX3.0 2×2 industrial power 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 standards, supports auto MDI/MDIX
Serial	1 × RS232, 1 × RS485
Status LEDs	1 × Power LED, 1 × Modem network status LED, 1 × Modem signal strength LED, 1 × WiFi status LED
SIM	2 × SIM slot, 1.8 V / 3 V, external SIM holder
Power	MX3.0 2×2 industrial power interface, 9–36 V DC input (typical 12 V DC); a dedicated power supply rated for ⩾ 1 A output is recommended
Antennas	4G standard: 2 × SMA for 4G, 1 × SMA for WiFi 5G option: 4 × SMA for 5G, 1 × SMA for WiFi
Reset	Short press to reboot; press and hold for 15 s to restore factory settings

Physical Specification

Casing material	Metal casing, supporting DIN rail installation
Dimensions (W × H × D)	144.00 × 110.00 × 42.20 mm
Weight	544 g
Mounting options	Sideways DIN rail mounting slots

Operating Environment

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

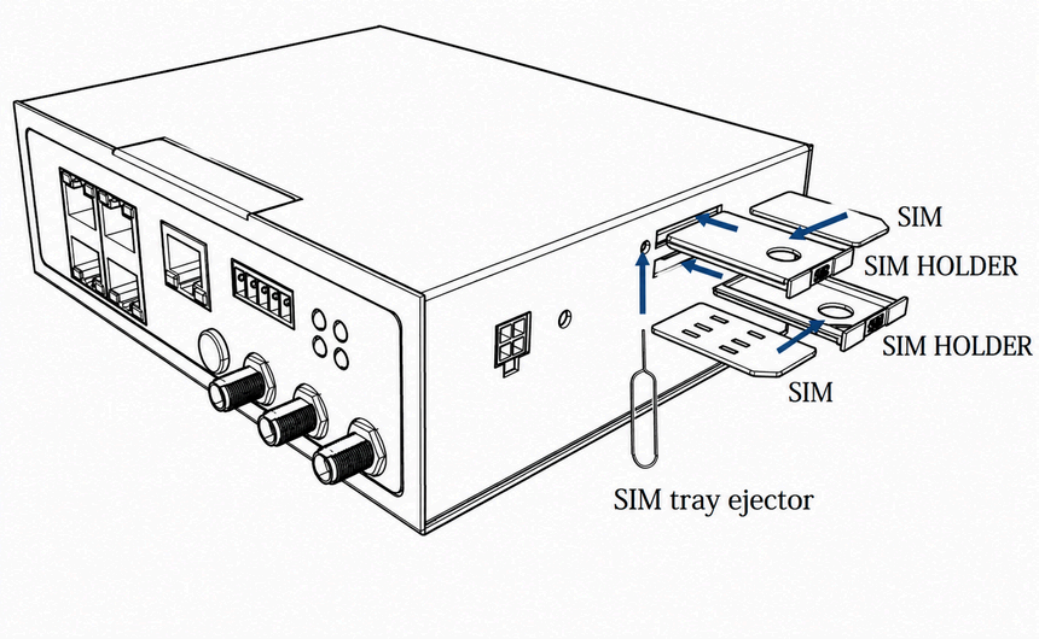
EMI Immunity

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

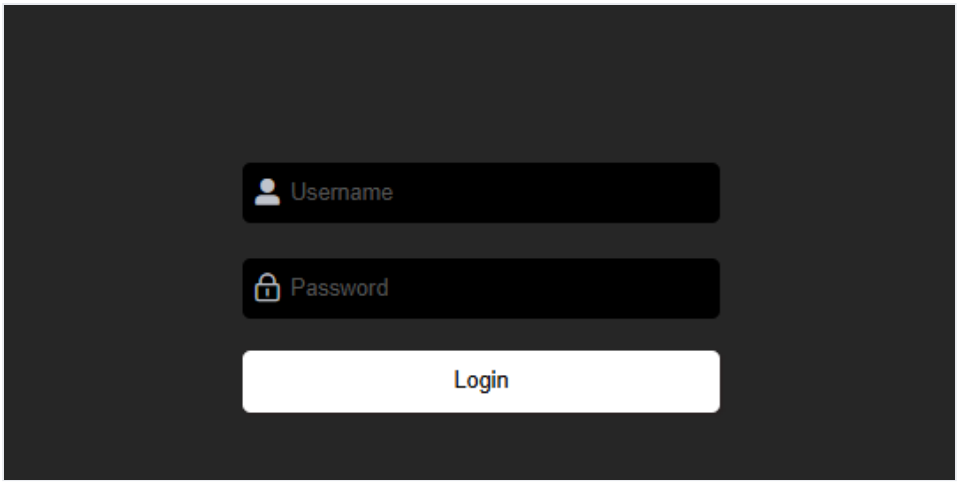
1. Push the SIM button with the SIM needle, pull out the SIM holder, insert your SIM card, and slide the holder back into the router (dual-SIM).
2. Attach the 4G and WiFi antennas to the SMA connectors on the device.
3. Connect the power adapter (9 – 36 V DC) to the MX3.0 2×2 power socket on the front 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.



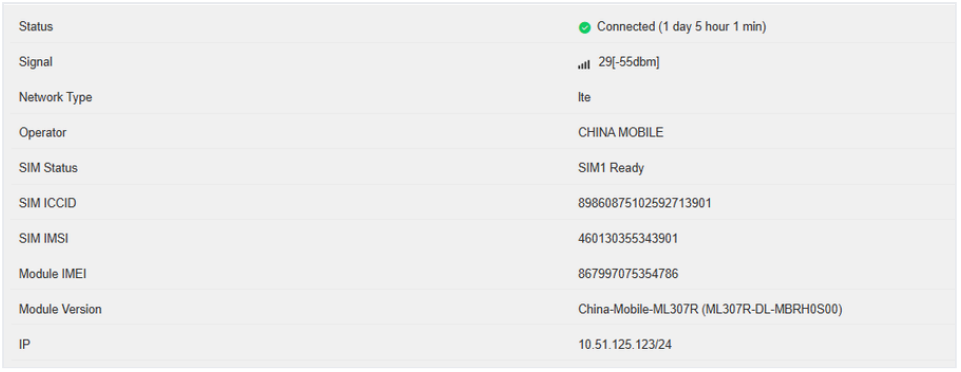
SIM card installation

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.



A. WebUI login



B. Overview page

Technical Information

Radio Specifications

RF technologies	4G standard: 4G, WiFi 5G option: 5G, WiFi
Max RF power	4G standard: 25 dBm @ LTE 5G option: 25 dBm @ 5G NR

Bundled Accessories Specifications*

Modem antenna	4G standard: 4G magnetic-mount antenna, 3 m cable (customizable when ordering); 698~960 / 1710~2690 MHz, 50 Ω, gain** 5 dBi, SMA male connector 5G option: Matched 5G Sub-6 antenna with SMA male connector; frequency coverage, gain and lead depend on the ordered module and antenna, not the 4G antenna band.
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 • YZW400

- 1 × YZW400 device (Standard)
- 1 × Packaging box (Standard)
- 2 × 4G/5G antenna (Standard)
- 1 × Wi-Fi antenna (Standard)
- 1 × 12 V DC power adapter (Standard)
- 1 × MX3.0 2×2 power lead (Standard)
- 1 × Ethernet cable, 1 m (Standard)
- 1 × 5-pin screw terminal (Standard)
- 1 × DIN-rail mounting hardware (Standard)
- 4 × 5G cellular antenna (With selected option)





YZW400
Standard • 1



4G/5G antenna
Standard • 2
5G optional (With selected option) • 4



Wi-Fi antenna
Standard • 1



5-pin screw terminal
Standard • 1



12 V DC power adapter
Standard • 1



Ethernet cable, 1 m
Standard • 1



DIN-rail mounting hardware
Standard • 1



MX3.0 2×2 power lead
Standard • 1

Standard accessories are supplied with the base configuration; optional accessories are selected separately. The 4G and 5G antennas share the same appearance. 5G is optional; use the quantity matched to the device, without adding the 4G set.

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Available Versions

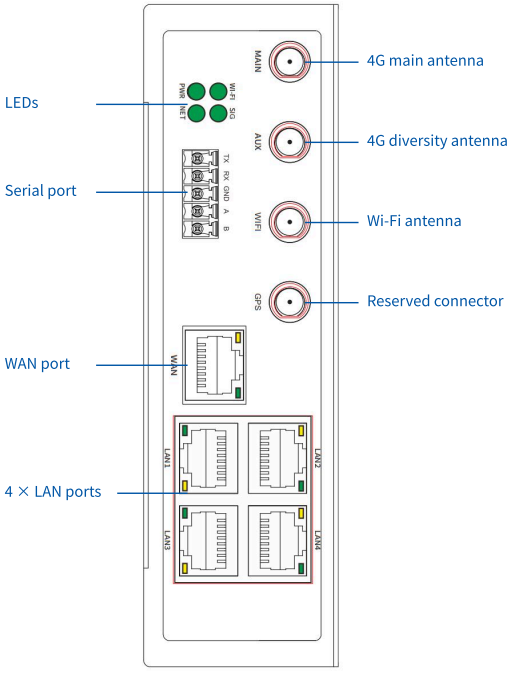
Product	Region (Operator)	Frequency
YZW400	4G standard • China / SE Asia	4G (LTE-FDD): B1, B3, B5, B8 4G (LTE-TDD): B34, B38, B39, B40, B41 WCDMA: B1, B5, B8 GSM / EDGE: B3, B8
YZW400	4G standard • Europe	4G (LTE-FDD): B1, B3, B5, B7, B8, B20, B28 4G (LTE-TDD): B38, B40, B41 WCDMA: B1, B5, B8 GSM / EDGE: B3, B8
YZW400	4G standard • 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
YZW400	4G standard • Europe, Asia Pacific	4G (LTE-FDD): B1, B3, B5, B7, B8, B20, B28 4G (LTE-TDD): B38, B40, B41 WCDMA: B1, B5, B8

Product	Region (Operator)	Frequency
YZW400	5G option • China / SE Asia	5G (NR SA): n1, n28, n41, n77, n78, n79 5G (NR NSA): n41, n78, n79 4G (LTE-FDD): B1, B2, B3, B5, B7, B8, B20, B28 4G (LTE-TDD): B34, B38, B39, B40, B41 WCDMA: B1, B2, B5, B8
YZW400	5G option • Europe	5G (NR NSA): n1, n3, n7, n28, n38, n40, n41, n77, n78 5G (NR SA): n1, n3, n5, n7, n8, n20, n28, n38, n40, n41, n66, n77, n78 4G (LTE-FDD): B1, B2, B3, B4, B5, B7, B8, B20, B28, B66 4G (LTE-TDD): B38, B40, B41 WCDMA: B1, B2, B5, B8
YZW400	5G option • Global	5G (NR NSA/SA): n1, n2, n3, n5, n7, n8, n12, n13, n14, n18, n20, n25, n26, n28, n29, n30, n38, n40, n41, n48, n66, n70, n71, n75, n76, n77, n78, n79 4G (LTE-FDD): B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B66, B71 4G (LTE-TDD): B34, B38, B39, B40, B41, B42, B43, B48 WCDMA: B1, B2, B4, B5, B8, B19
YZW400	5G option • China	5G (NR): n1, n3, n5, n8, n28, n41, n78, n79 4G (LTE-FDD): B1, B3, B5, B8 4G (LTE-TDD): B34, B38, B39, B40, B41 WCDMA: B1, B5, B8

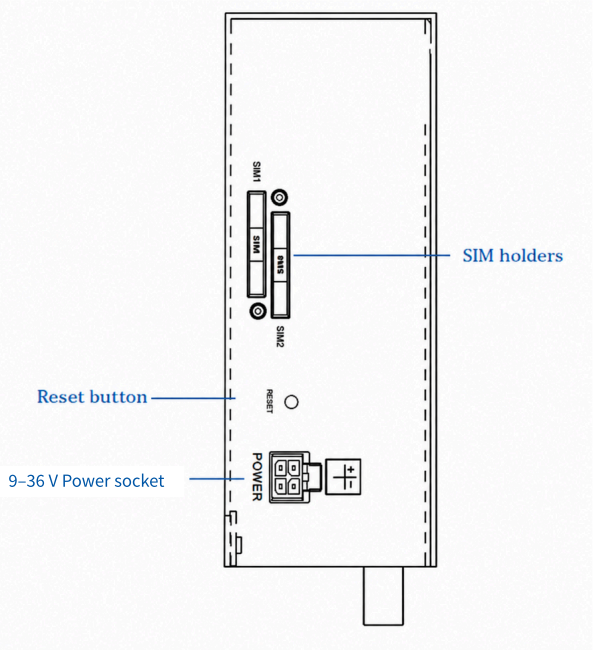
Product	Region (Operator)	Frequency
YZW400	5G option • Global, North America (optional), EMEA/APAC/Brazil (optional)	4G (LTE-FDD): B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B18, B19, B20, B25, B26, B28, B29, B30, B32, B66, B71 4G (LTE-TDD): B34, B38, B39, B40, B41, B42, B43, B46 (LAA), B48 (CBRS) WCDMA: B1, B2, B3, B4, B5, B6, B8, B19
YZW400	5G option • Global	4G (LTE-FDD): B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B66, B71 4G (LTE-TDD): B34, B38, B39, B40, B41, B42, B43, B46 (LAA), B48 (CBRS) WCDMA: B1, B2, B3, B4, B5, B6, B8, B19

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Hardware



Front Panel



Side Panel

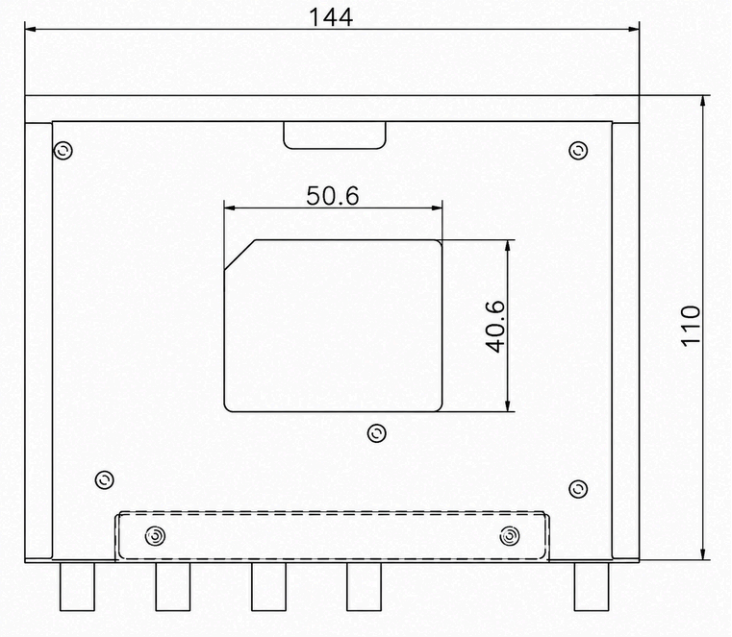
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YZW400 Spatial Measurements & Weight

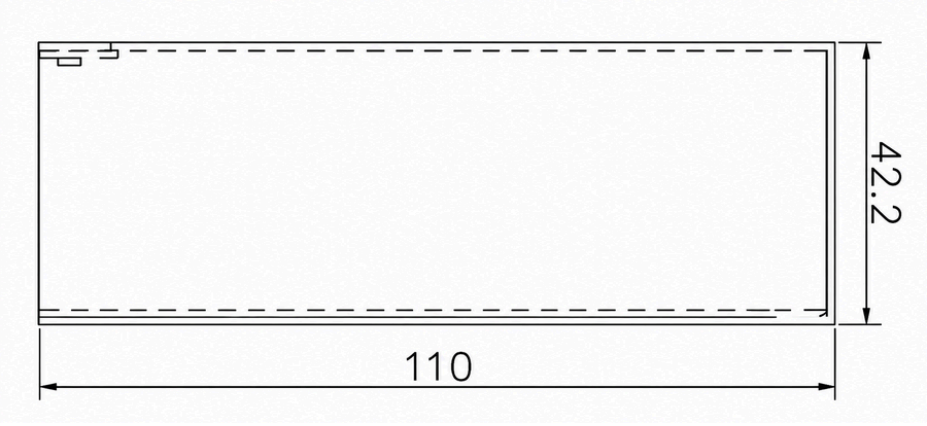
Main Measurements

W × H × D dimensions for YZW400 — Device housing*	144.00 × 110.00 × 42.20 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 YZW400 and its components are seen on the top:



Side View Measurements of the YZW400 and its components are seen on the rear:



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Mounting Space Requirements

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

