

A510U

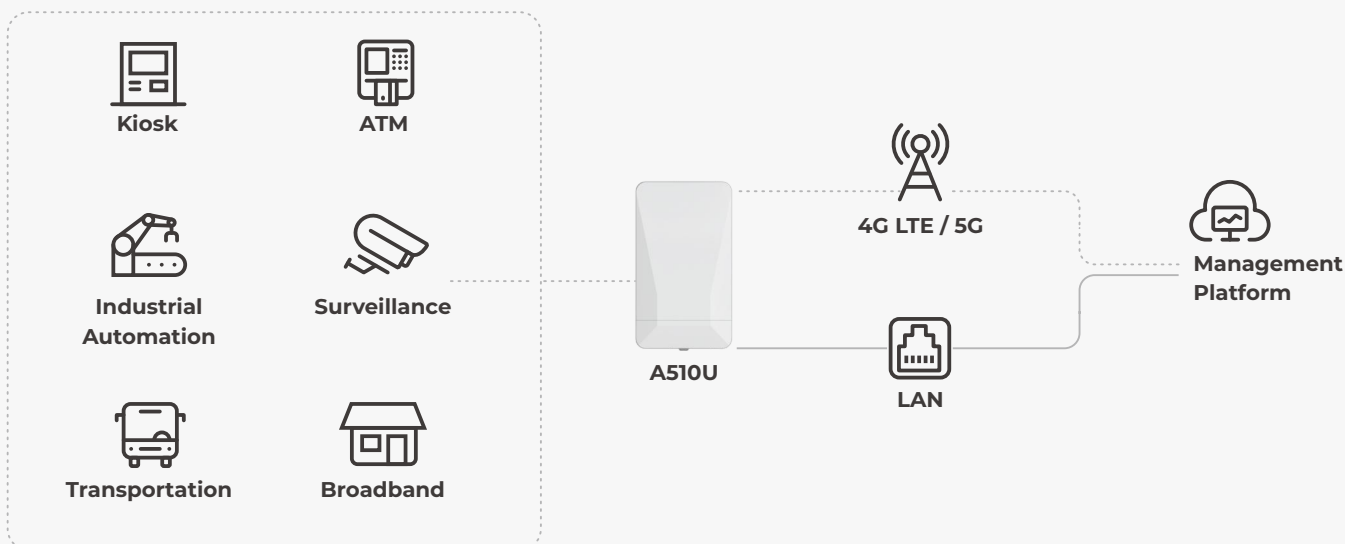
4G/5G Outdoor CPE



Overview

A510U 4G/5G outdoor router is a wireless communication product developed based on 3G/4G LTE/5G network requirements. Supports 3G/4G LTE/5G global frequency bands. Supports 3G/4G LTE/5G global frequency bands. Supports 3G/4G LTE/5G internet high speed access. Support 5G NSA up to 5.47Gbps (DL)/825Mbps (UL). 5G SA maximum 4.67Gbps (DL)/1.25Gbps (UL) access bandwidth service. It supports one 2.5Gbps Ethernet port. The equipment is designed to meet waterproof and dustproof requirements. Protection class IP65. At the same time, it meets the requirements of 5KA lightning protection. Meet the needs of families, enterprises, and chain stores to provide 3G/4G/5G high-speed Internet access services.

Typical Application



Features



Wireless Connectivity

- Wireless Mobile Broadband 3G/4G LTE/5G connection.
- Supports 3G/4G/5G global frequency bands.



High System Reliability

- System crashes and automatically recovers.
- The system automatically maintains the data link and is permanently online.



Easy User Interaction & Maintenance

- Supports Central Management Platform.
- User friendly web interface for user interaction.
- Supports local web UI and remote FOTA update firmware.



Industrial-Grade Hardware Design

- POE power supply input, DC +24V/1.5A~48V/0.5A.
- Industrial design for harsh environment.
- ABS plastic material shell, Protection class. IP65.



Network Security

- Supports Multiple VPN tunnels for data encryption.



Operating System

- Built-in OpenWRT 24.10 operating system.

Specification

CELLULAR	
3G/4G/5G data connectivity	It provides data connectivity on 5G NR SA and NSA, LTE-FDD, LTE-TDD, DC-HSDPA, HSPA+, HSDPA, HSUPA and WCDMA networks.
3G/4G/5G frequency bands	<div><div>5G NR</div><div>5G Sub-6: n1/3/5/7/8/20/28/38/40/41/77/78 LTE FDD: B1/3/5/7/8/20/28/32 LTE TDD: B38/40/41/42/43 WCDMA: B1/5/8</div></div> <div><div>MIMO</div><div>5G NR: DL 4×4 MIMO: n1/3/7/28/38/40/41/77/78 UL 2×2 MIMO: n40/41/77/78 LTE: DL 4×4 MIMO: B1/3/7/28/32/38/40/41/42/43</div></div> <div>*Remarks: More frequency bands, please feel free to contact us.</div>
3G/4G/5G data rates	5G NSA: Max 5.47Gbps (DL)/825Mbps (UL) 5G SA: Max maximum 4.67Gbps (DL)/1.25Gbps (UL) LTE: Max 1.6Gbps (DL)/211Mbps (UL) WCDMA: Max 42Mbps (DL)/ 11.5Mbps (UL)
5G NR features	3GPP Release 16 Supported modulations: - Uplink: $\pi/2$ -BPSK, QPSK, 16QAM, 64QAM and 256QAM, 200MHz 2 UL CA - Downlink: QPSK, 16QAM, 64QAM and 256QAM, 200MHz 2 DL CA Supported SCS: 15 kHz and 30 kHz Option 3x, 3a, 3 and Option 2

LTE features	3GPP Release 16 LTE Category: DL Cat 19/ UL Cat 18 Supported modulations: - Uplink: QPSK, 16QAM and 64QAM and 256QAM, 40MHz 2 ULCA - Downlink: QPSK, 16QAM and 64QAM and 256QAM, 100MHz 5 DLCA, Supports 1.4/3/5/10/15/20 MHz RF bandwidth
UMTS features	Compliant with 3GPP Rel-8 DC-HSDPA, HSPA+, HSDPA, HSUPA and WCDMA Modulations: - DL: QPSK, 16QAM and 64QAM - UL: BPSK, QPSK, 16QAM
3G/4G/5G Receiving Sensitivity	5G NR-FDD n1(20MHz), -94.3 dBm 5G NR-FDD n3(20MHz), -94.5 dBm 5G NR-FDD n5(10MHz), -95.5 dBm 5G NR-FDD n7(20MHz), -94.7 dBm 5G NR-FDD n8(20MHz), -96.2 dBm 5G NR-FDD n20(20MHz), -96.9 dBm 5G NR-FDD n28(20MHz), -96 dBm 5G NR-TDD n38(20MHz), -93.4 dBm 5G NR-TDD n40(20MHz), -93.8 dBm 5G NR-TDD n41(100MHz), -85.8 dBm 5G NR-TDD n77(100MHz), -87.4 dBm 5G NR-TDD n78(100MHz), -87.8 dBm
	LTE-FDD B1(10MHz), -97.3 dBm LTE-FDD B3(10MHz), -97.6 dBm LTE-FDD B5(10MHz), -100.3 dBm LTE-FDD B7(10MHz), -97.1 dBm LTE-FDD B8(10MHz), -99.7 dBm LTE-FDD B20(10MHz), -100.5 dBm LTE-FDD B28(10MHz), -99.7 dBm LTE-FDD B32(10MHz), -97.3 dBm LTE-TDD B38(10MHz), -95.7 dBm LTE-TDD B40(10MHz), -96.6 dBm LTE-TDD B41(10MHz), -95.7 dBm LTE-TDD B42(10MHz), -96.8 dBm LTE-TDD B43(10MHz), -97.1 dBm
	WCDMA B1, -109 dBm WCDMA B5, -111 dBm WCDMA B8, -112dBm
3G/4G/5G Transmitting Power	Class 3 (24dBm±1.5dB) for WCDMA bands Class 3 (23dBm±2dB) for LTE-FDD bands Class 3 (23dBm±2dB) for LTE-TDD bands Class 3 (23dBm±2dB) for NR bands Class 2 (26dBm±2dB) for NR N41/77/78 Class 1.5 (29dBm±2dB) for NR N41/77/78
Antennas	8* 4G/5G internal antenna, 4*4 MIMO, with 50 Ω impedance.
SIM CARD	
SIM card	Supports 1* SIM slot (4FF,Nano SIM card), 1.8V / 3V . Or 1* eSIM card. (Optional)
HARDWARE	
CPU	Quad-core ARM Cortex-A55 up to 2.0 GHz, Unisoc V620
Memory	4Gb LPDDR4x + 2Gb NAND Flash
Hardware interface	1* LAN 2.5G Ethernet port, 1* USB2.0 port
Watchdog	Built-in watchdog feature
Key button	Reset
Protection level	Ethernet port, contact electric shock, +/-4KV, air discharge: +/-8KV
LED status indicator	PWR, SYS, Net, LAN
Standard supply	POE power supply input, DC 24V/1A
Power supply	POE power supply input, DC +24/1.5A~48V/0.5A

Peak current	Max current, 1A@24V
Working current	Max 750mA, 16.8W@24V
Power consumption	Idle: 60mA, 1.44W@24V Data link: Max 255mA, 5.4W@24V Peak: Max 360mA, 8.64W@24V
Temperature	Operating Temperature: -30°C ~+70°C, Storage Temperature: -35~+75°C
Environment humidity	5%~95%, no condensation
Ingress protection	IP65
Housing	ABS plastic material, white shell
Dimensions	250mm*145mm*67.5mm
Installations	Wall or pole mounted
Weight	670g
SOFTWARE FEATURE	
Parameter settings	Supports automatic detection of MNC and MCC parameters of global operators. Built-in global operator APN, user name, password and other network parameters. At the same time, manual setting of network parameters is supported
Dial method	After the device is powered on, the system automatically dials up to connect to the network
Protocol	Supports PPTP, L2TP, TCP, UDP, DHCP, HTTP, DDNS, TR-069, HTTPS, SSH etc protocol
Routing	Supports static routing, multiple routing tables
Bridge	Supports 4G/5G bridge mode feature
Multiple APN	Supports multiple APN access network
System Assurance	Supports system automatic detection mechanism, automatic recovery of system abnormality or crash
Data link maintenance	Built-in link maintenance and self-recovery mechanism
Firewall	Supports flexible access control of TCP, UDP, ICMP packets Supports port Mapping, NAT etc feature
DDNS	Supported some service providers, others can be configured manually
Firmware update	Supports local WebUI and remote OTA update firmware
Embedded system	OpenWRT 24.10
Application development	Supports secondary development of application functions based on our device software
VPN	
VPN features	Supports PPTP, L2TP etc VPN protocols
MONITORING & MANAGEMENT	
Web GUI	HTTP, Firmware Upgrade
Command line interface	SSHv2
Management platform	Support remote management protocol

Appearance

