Pro Series

Industrial Router

UR32

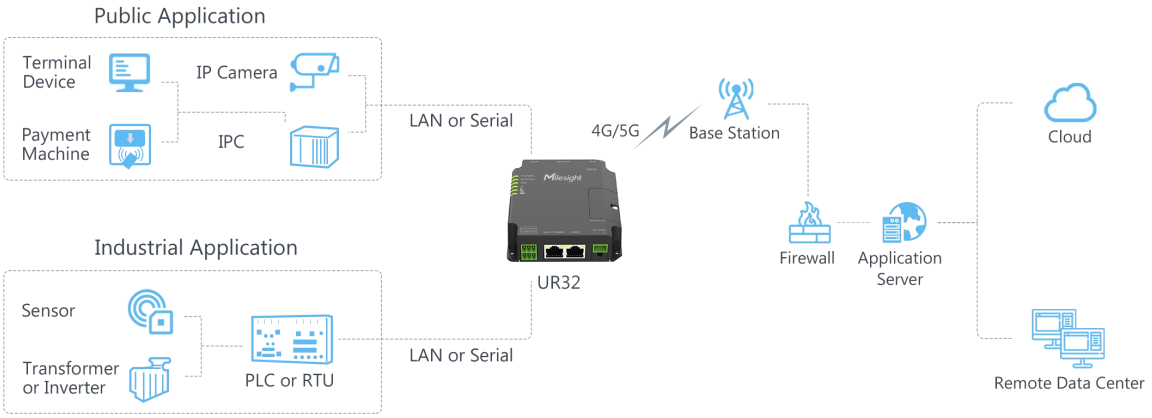


UR32 is a cost-effective industrial cellular router with embedded intelligent features that are designed for multifarious M2M/IoT applications. Global WCDMA and 4G LTE carrier supported make this drop-in connectivity a great help for operators in maximizing uptime.

Integrating embedded cellular modem and dual SIM function, the UR32 provides 3G/4G cellular network with maximum 150 Mbps download and 50 Mbps uplink, it also has 2 fast Ethernet ports and supports Wi-Fi that compliance with 802.11b/g/n standard. All these capabilities deliver users an uninterrupted internet access.

Easy deployment and comprehensive remote device management makes UR32 versatile in most of IoT/M2M applications.

◆ Application Example



◆ Benefits

- NXP industrial grade processor
- Global 4G LTE CAT4/3G network with dual SIM cards for backup between multiple carrier networks
- Multiple APN interfaces for simultaneous access to different network services
- Embedded Python SDK for secondary development
- Flexible modular design provides users with different connection modules like Ethernet, I/O, serial port, Wi-Fi, GPS for connecting diverse field assets
- Rugged enclosure, optimized for DIN rail or shelf mounting
- 3-year warranty included

◆ Security & Reliability

- Automated failover/failback between Ethernet, Cellular (dual SIM) and Wi-Fi
- Secure transmission with VPN tunnels like IPsec/OpenVPN/GRE/L2TP/PPTP/DMVPN /WireGuard/ZeroTier
- Embeds hardware watchdog to automatically recover from various failures, ensure highest level of availability
- Establishes a secured mechanism on centr alized authentication and authorization of device access by supporting AAA (Radius, TACACS+, LDAP, local Authentication) and multiple levels of user authority

◆ Capabilities

- Link remote devices in an environment where communication technologies are constantly changing
- Support 802.11 b/g/n, as AP or client mode, to establish versatile wireless network or be the backup WAN link for 4G/3G
- Support rich protocols like SNMP, TR069, MQTT, Modbus bridging, RIP, OSPF
- Provide power to 802.3af/at PoE devices and support power management (optional)
- Support wide operating temperature rangi ng from -40°C to +70°C/-40℉ to +158℉

◆ Easy Maintenance

- DeviceHub and Milesight Development Platform provides easy setup, mass configuration, and centralized management of remote devices
- The user-friendly web interface design and more than one option of upgrade help administrator to manage the device as easy as pie
- Network & Cellular status visualization
- WEB GUI and CLI enable the admin to achieve simple management and quick configuration among a large quantity of devices
- Efficiently manage the remote routers on the existing platform through the industrial standard SNMP and TR069

◆ Hardware Specifications

Hardware System	
CPU	ARM Cortex-A7， 528 MHz
Memory	128 MB DDR3 RAM and 128MB Flash
Extendable Storage	1 × Micro SD Slot
Cellular Interface	
Network	4G LTE (CAT 4)/WCDMA/GSM (Differ as regions)
Antenna Connector	2 × 50 Ω SMA Connectors (Center PIN: SMA Female)
SIM Slots	2 × SIM Slot (Mini SIM-2FF), 1.8V/3V
Tx Power	LTE: Class 3 (23 dBm ± 2 dB)
Ethernet Interface	
Numbers	2 × RJ45 10/100 Mbps
Property	1 × WAN + 1 × LAN or 2 × LAN
Mode	Full or half duplex (Auto-Sensing)
Ethernet Isolation	1.5 kV RMS
PoE (Optional)	2 × 802.3 af/at PoE PSE on LAN Ports
Wi-Fi Interface (Optional)	
Antenna Connector	1 × 50 Ω SMA Connector (Center PIN: RP-SMA Female)
Standards	IEEE 802.11 b/g/n， 2.4GHz
Tx Power	802.11b: 16 dBm +/-1.5 dBm (11 Mbps) 802.11g: 14 dBm +/-1.5 dBm (54 Mbps) 802.11n: 13 dBm +/-1.5 dBm (65 Mbps, HT20/40 MCS7)
GNSS (Optional by Region)	
Antenna Connector	1 × 50 Ω SMA Connector (Center PIN: SMA Female)
Technology	GPS/GLONASS/BDS/Galileo/QZSS
Positioning Accuracy	2.5m CEP (Open Air)
Serial Port	
Numbers	1 × RS232 (RS485 Hardware Optional)
Connector	3.5mm Terminal Block
Baud Rate	300bps to 230400bps
DI/DO	
Numbers	1 × DI + 1 × DO, Galvanic Isolation
Connector	3.5mm Terminal Block
Digital Input	Dry Contact

Digital Output	Wet Contact, maximum 0.3A@30VDC
Others	
Reset Button	1 × RESET
LED Indicators	1 × POWER, 1 × SYSTEM, 1 × SIM, 3 × Signal strength
Power Connector	1 × 2-pin 5.08 mm Terminal Block, with Surge-Protection and Reverse Polarity Protection
Built-in	Watchdog, Timer
Power Supply and Consumption	
Power Input	9-48 VDC (48V is needed for PoE output)
Power Output (Optional)	2 × 802.3 af/at PoE PSE on LAN Ports Per Port 30W Max., Total 60W Max.
Power Consumption	Typical 1.9 W, Max 2.4 W (In Non-PoE mode)
Physical Characteristics	
Ingress Protection	IP30
Housing & Color	Metal, Black
Weight	271 g
Dimension	108 x 90 x 26 mm (4.25 x 3.54 x 1.02 in)
Installation	Desktop, Wall or DIN Rail Mounting
Environmental	
Operating Temperature	-40°C to +70°C (-40℉ to +158℉) Reduced Cellular Performance Above 60°C
Storage Temperature	-40°C to +85°C (-40℉ to +185℉)
Relative Humidity	0% to 95% (non-condensing) at 25°C/77℉
Approvals	
Regulatory	CE, FCC, RCM, NBTC, JATE, Telec
Carrier	Verizon
Environmental	RoHS
EMC	EN 55032, EN 55035
EMS	IEC 61000-4-2 Level 3 IEC 61000-4-3 Level 2 IEC 61000-4-4 Level 2 IEC 61000-4-5 Level 2 IEC 61000-4-6 Level 3 IEC 61000-4-8 Level 1 IEC 61000-4-11 Level 3

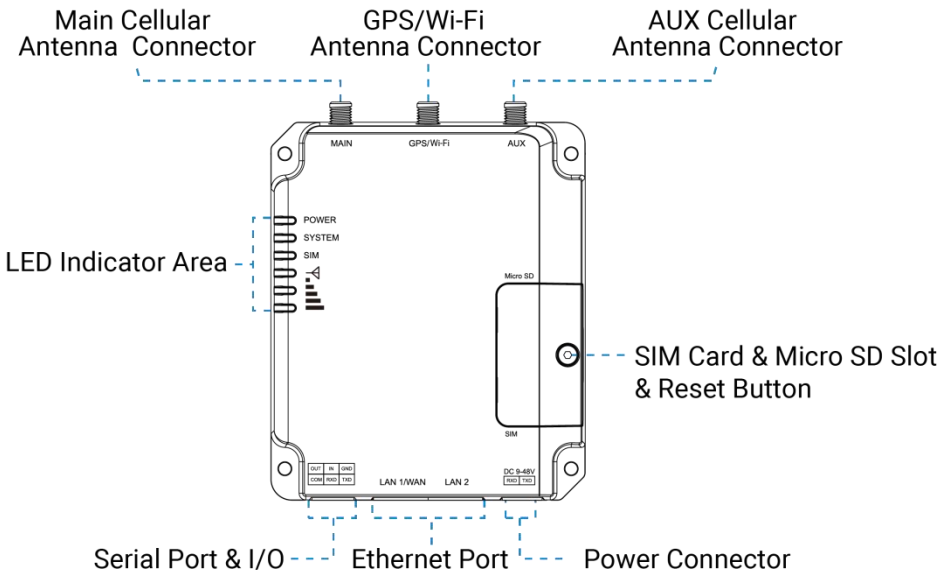
Radio Frequency	EN 301 489-1/17/19/52, EN 301 511, EN 301 908-1/2/13, EN 303 413, EN300 328
Safety	EN62368-1

◆ Software Specifications

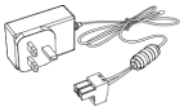
Network	
Network Protocols	IPv4/IPv6, PPP, PPPoE, SNMP v1/v2c/v3, TCP, UDP, DHCP, RIPv1/v2, OSPF, DDNS, VRRP, HTTP, HTTPS, DNS, ARP, QOS, SNTP, Telnet, VLAN, SSH, MQTT, MQTTS, TR069, etc.
Routing	Static Routing, Priority Based Routing, RIP, OSPF
DDNS	Supported >16 service providers, others can be configured manually
QoS	Upload/Download Bandwidth Limit
IP Passthrough	Support to assign Cellular IP address to the device
Reliability	VRRP, WAN Failover, Dual SIM Backup
Diagnostics Tools	Ping, Traceroute, TCPDUMP, QXDM, Log Server, Cellular AT Command Debugger, Firewall iptables Debugger
Wi-Fi Interface (Optional)	
Modes	AP or Client mode
Security	WEP/WPA-PSK/WPA2-PSK/WPA-EAP/WPA2-EAP authentication, TKIP/AES encryption
Wi-Fi Users	Up to 15 simultaneous connections
MAC Filter	Blacklist, Whitelist
GNSS (Optional by Region)	
Protocol	NMEA0183, PMTK
Mode	Support reading by Serial Port, MQTT, TCP Client/Server, UDP Server
Security	
Firewalls	Access Control, DMZ, Port Mapping, MAC Binding, SPI Firewalls, DoS&DDoS Protection, Filtering(IP&Domain)
VLAN	Port and tag-based VLAN separation
AAA	Radius, Tacacs+, LDAP, Local Authentication, 802.1x
Multilevel Authority	Multiple Levels of User Authority
VPN	
OpenVPN	Multiple Clients and a Server Support
IPsec	Multiple Clients and a Server Support
GRE	GRE Tunnel Support

L2TP	L2TP Client Support
PPTP	PPTP Client Support
DMVPN	DMVPN Spoke Support
WireGuard	Support
ZeroTier	Support
Others	
Serial Mode	Transparent(TCP Client/Server, UDP Server, MQTT Client), Modbus Server/Client, Modbus Gateway (Modbus RTU to Modbus TCP), DLMS Client
Digital Input	Support reading by SMS, Email, CLI, Modbus TCP/RTU Server, MQTT
Digital Output	Support triggering by DI, SMS, CLI, Modbus TCP/RTU Server, MQTT
App	Python SDK
Management	
Configuration	Web, CLI (SSH/Telnet), SMS, On-demand dial up, SNMP v1/v2c/v3, TR069, DeviceHub, Milesight Development Platform, HTTP(s) API
Update	Web, DeviceHub, Milesight Development Platform
Device Management	DeviceHub, Milesight Development Platform, MilesightVPN
SNMP	SNMP v1/v2/v3, Support SNMP Trap
TR069	Support
SMS	Send/Receive SMS, SMS Control, SMS Configuration
Event Alarm	System Restart/Reboot, Network Up/Down, Link Switch, etc.

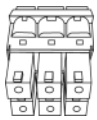
◆ Hardware Overview



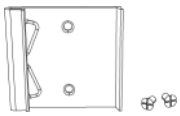
◆ Accessories



1 × Power Adapter



1 × 6-Pin Pluggable Terminal



1 × DIN Rail Clip Kit



4 × Wall Mounting Kits



2 × Magnetic Cellular Antennas



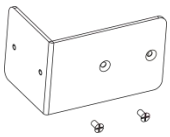
1 × Wi-Fi Antenna **(Wi-Fi Version Only)**



1 × GPS Antenna **(GPS Version Only)**



2 × Stubby Cellular Antennas **(Optional)**



1 × DIN Mounting Bracket Kit **(Optional)**

***Note:** Contact us if you need any other special accessories or customized accessories.

◆ Dimensions(mm)

