UR35

Industrial Router

UR35 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 UR35 provides 3G/4G cellular network with 150 Mbps download and 50 Mbps uplink, it also has 5 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 UR35 versatile in most of IoT/M2M applications.

◆ Benefits

- NXP industrial grade processor
- Global 4G LTE CAT4/3G network with dual SIM cards for backup between multiple carrier networks
- 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
- FXS port for telephone communication
- Rugged enclosure, optimized for DIN rail or shelf mounting
- 3-year warranty included

◆ Easy Maintenance

- DeviceHub 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
- 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

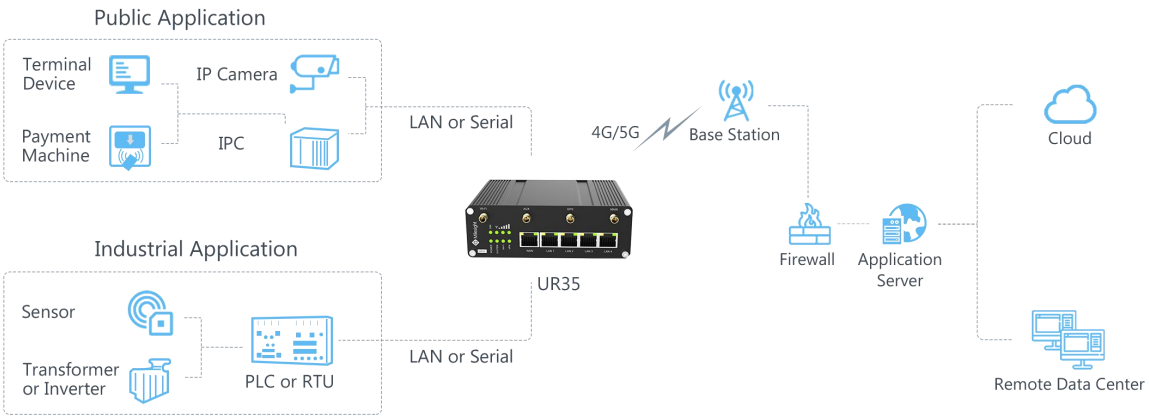
◆ Security & Reliability

- Automated failover/failback between Ethernet, Cellular (dual SIM) and Wi-Fi
- Secure transmission with VPN tunnels like IPsec/OpenVPN/GRE/L2TP/PPTP/DMVPN
- Embeds hardware watchdog to automatically recover from various failure, 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

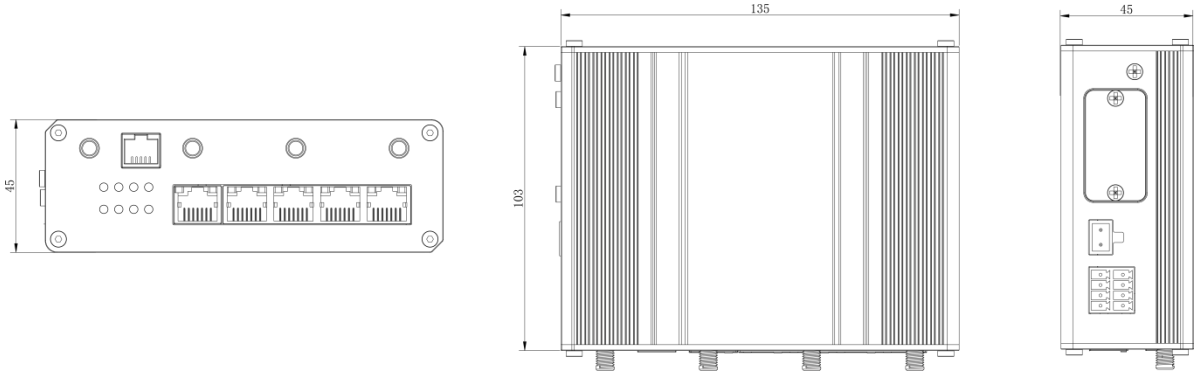
◆ Capabilities

- Link remote devices in an environment where communication technologies are constantly changing
- Support 802.11 a/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, Modbus bridging, RIP, OSPF
- Support wide operating temperature rangi ng from -40°C to +70°C/-40℉ to +158℉

◆ Application Example



◆ Dimensions(mm)



◆ Specifications

Hardware System	
CPU	ARM Cortex-A7， 528 MHz
Memory	128 MB DDR3 RAM and 128MB Flash
Extendable Storage	1 × Micro SD
Cellular Interface	
Antenna Connector	2 × 50 Ω SMA Connectors (Center PIN: SMA Female)
SIM Slots	2 （Mini SIM-2FF）
Ethernet Interface	
Numbers	5 × 10/100 Mbps
Property	1 × WAN + 4 × LAN
Mode	Full or half duplex (Auto-Sensing)
PoE	4 × 802.3 af/at PoE PSE on LAN Ports (Optional)
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)
Modes	AP or Client mode
Security	WPA/WPA2 authentication, WEP/TKIP/AES encryption
GPS (Optional)	
Antenna Connector	1 × 50 Ω SMA Connector (Center PIN: SMA Female)
Sensitivity	-167dBm@Tracking, -149dBm@Acquisition, -161dBm@Re-acquisition
Position Accuracy	<2.5m CEP
Protocol	NMEA0183, PMTK
Voice Interface (Optional)	
Port	1 × RJ-11 (also be used for landline telephone’s power supply)
Standards	ITU Q.512 (SLIC), ITU K.20 (overcurrent and overvoltage protection)
Subscriber line interface circuit (SLIC)	
Ring voltage	40 to 90 Vpk configurable
Ring frequency	20 to 25 Hz
Ring waveform	sine wave
Maximum ring load	2 ringer equivalence numbers (RENs)
On-hook voltage (tip/ring)	-46 to -56V
Off-hook current	18 to 20mA
Terminating impedance	configurable
Serial Interface	
Numbers	1 × RS232 + 1 × RS485 (2 × RS485 Optional)
Connector	3.5mm Terminal Block
Baud Rate	300bps to 230400bps
DI/DO	
Numbers	1 × DI (dry contact) + 1 × DO (wet contact), galvanic isolation
Connector	3.5mm Terminal Block
Maximum V/A	0.3A@30VDC (DO)
Others	
Reset Button	1 × RESET
LED Indicators	1 × POWER, 1 × SYSTEM, 1 × SIM, 1 × Wi-Fi, 1 × VPN, 3 × Signal strength
Built-in	Watchdog, Timer

Software	
Network Protocols	PPP, PPPoE, SNMP v1/v2c/v3, TCP, UDP, DHCP, RIPv1/v2, OSPF, DDNS, VRRP, HTTP, HTTPS, DNS, ARP, QOS, SNTP, Telnet, VLAN, SSH, etc.
VPN	DMVPN, IPsec, OpenVPN, PPTP, L2TP, GRE
Security	Access Control, DMZ, Port Mapping, MAC Binding, SPI Firewalls, DoS&DDoS Protection, Filtering(IP&Domain), IP Passthrough
Management	Web, CLI, SMS, On-demand dial up, SNMP v1/v2/v3, DeviceHub
AAA	Radius, Tacacs+, LDAP, Local Authentication
Multilevel Authority	Multiple Levels of User Authority
Reliability	VRRP, WAN Failover, Dual SIM Backup
Serial Port	Transparent(TCP Client/Server, UDP), Modbus Master/Slave, Modbus Gateway (Modbus RTU to Modbus TCP)
Power Supply and Consumption	
Power Connector	2-pin 5.08 mm Terminal Block
Input Voltage	9-48 VDC, with Surge-Protection and Reverse Polarity Protection
Power Consumption	Typical 3.9 W, Max 4.6 W (In Non-PoE mode)
Physical Characteristics	
Ingress Protection	IP30
Housing & Weight	Metal, 485 g
Dimension	135 x 103 x 45 mm (5.31 x 4.06 x 1.77 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℉)
Ethernet Isolation	1.5 kV RMS
Relative Humidity	0% to 95% (non-condensing) at 25°C/77℉
Approvals	
Regulatory	CE, FCC, RCM
Environmental	RoHS
EMC	EN 55032, EN 55035
EMS	IEC 61000-4-2 Contact Level 2; Air Level 3 IEC 61000-4-3 Level 2 IEC 61000-4-4 Level 3 IEC 61000-4-5 Level 3

	IEC 61000-4-6 Level 3 IEC 61000-4-8 Level 4
Radio Frequency	EN 301 489-1/17/19/52, EN 301 511, EN 301 908-1/2/13, EN 303 413, EN300 328
Safety	EN60950-1

◆ Ordering Information

Model	Wi-Fi	GPS	PoE	Frequency Bands*	Others
UR35-L0xx	-	-	-	**-L04EU:** B1/B3/B7/B8/B20/B28A@LTE FDD,B38/B40/B41@LTE TDD, B1/B8@WCDMA, B3/B8@GSM **-L04AF:** B2/B4/B5/B12/B13/B14/B66/B71@ LTE FDD, B2/B4/B5@WCDMA **-L04AU:** B1/B2/B3/B4/B5/B7/B8/B28@LTE FDD, B40@LTE TDD,B1/B2/B4/B5/ B8@WCDMA, B2/B3/B5/B8@GSM	**Serial Port:** <NA>: 1 × RS232 + 1 × RS485 -485: 1 × RS232 + 1 × RS485 or 2 × RS485 Switchable **FXS Port:** <NA>: No FXS port -S: 1 × FXS port
UR35-L0xx-P			√		
UR35-L0xx-W	√		-		
UR35-L0xx-P-W			√		
UR35-L0xx-G	-	√	-		
UR35-L0xx-G-P			√		
UR35-L0xx-G-W	√	√	-		
UR35-L0xx-G-W-P	√	√	√		

*Please contact Milesight IoT for more information about frequency bands.