



UR75 5G

Industrial Cellular Router

Reliable and Remote-Manageable
for Large Scale M2M Deployment

High Speed 5G Networking Platform



Adopting high-performance industrial platform of quad-core CPU and cellular module, UR75 is capable of providing wire-speed network and ultra-small package to ensure the extremely safe and reliable connection to the wireless network. Upgraded to the latest cellular technology - 5G, the UR75 makes it possible to enjoy ultra-fast broadband access with 5G cellular network.

Meanwhile, UR75 also supports 5-port Gigabit Ethernet switch, Serial port (RS232/RS485) and DI/DO (Digital input/Digital output), which enable you to scale up M2M application combining data and video in limited time and budget.

UR75 is particularly suitable for smart grid, digital media installations, industrial automation, telemetry equipment, medical device, digital factory, finance, payment device, environment protection, water conservancy and so on.

► Benefits

- Qualcomm quad-core CPU and big memory; SSD is available to support further development and customize requirements
- 4G LTE/5G (NSA/SA) network with dual SIM cards for backup between multiple carriers networking
- Gigabit Ethernet is applied to all models of Ursalink routers for lightning transmission of data
- Embed Ursalink SDK (Python) 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

- Quickly develop functions with Function Compute and deploy them seamlessly to edge nodes
- Automated failover/failback between Ethernet and Cellular (dual SIM)
- Enable unit with security frameworks like IPsec/OpenVPN/GRE/L2TP/PPTP/DMVPN
- Embed hardware watchdog, able to automatically recover from various failure, ensure highest level of availability
- Ursalink DeviceHub provides easy setup, mass configuration, and centralized management of remote devices

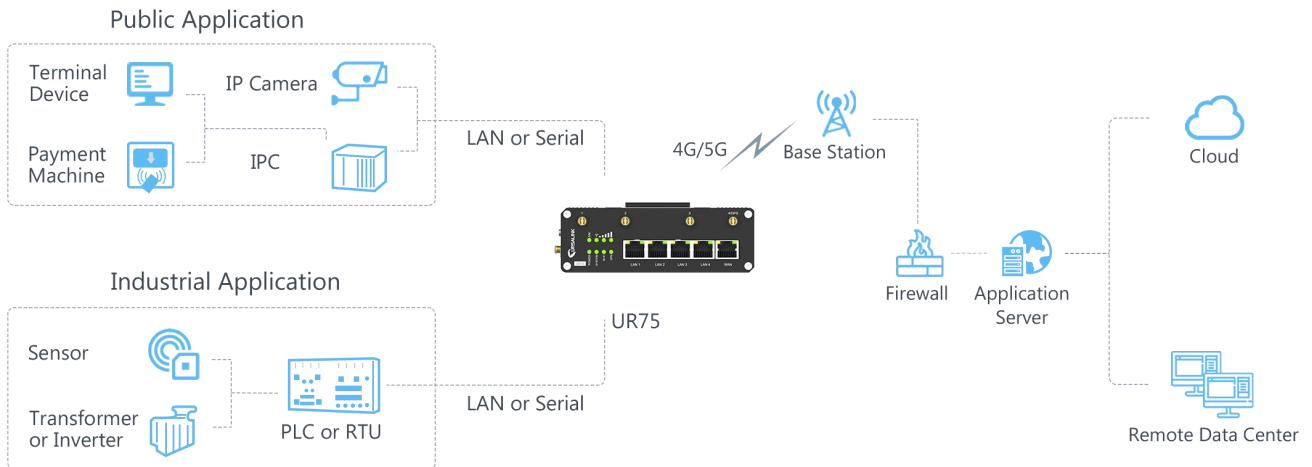
► Easy Maintenance

- 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

► Capabilities

- The device data can be aggregated and cleaned locally, and the processed data can be transmitted to the Cloud for storage and analysis.
- It can be continuously running in a broken or weak network environment, and the latest data can be synchronized to the Cloud after the network is restored
- Link remote devices in an environment where communication technologies are constantly changing
- Support 802.11 a/b/g/n/ac, as AP or client mode, to establish versatile wireless network or be the backup WAN link for 5G/4G
- Support rich protocols like SNMP, MQTT, Modbus bridging, RIP, OSPF

Application Example



Specifications

Hardware System	
CPU	Qualcomm Quad-core ARM Cortex A7, 716.8 MHz
Memory	512 MB DDR3 RAM
Storage	8 GB Flash and M.2 NVMe SSD interface for Expansion
Ethernet Interface	
Ports	5 × RJ-45
Property	1 × WAN +4 × LAN (PoE PSE Optional on LAN ports)
Physical Layer	10/100/1000 Base-T (IEEE 802.3)
Data Rate	10/100/1000 Mbps (Auto-Sensing)
Interface	Auto MDI/MDIX
Mode	Full or half duplex (Auto-Sensing)
Cellular Interfaces	
Connectors	UR75-5G: 4 × 50 Ω SMA (Center PIN: SMA Female) UR75-4G: 2 × 50 Ω SMA (Center PIN: SMA Female)
SIM Slots	2(Mini SIM-2FF)
GPS*	
Connectors	1 × 50 Ω SMA (Center PIN: SMA Female)
Sensitivity	-167dBm@Tracking, -149dBm@Acquisition, -161dBm@Re-acquisition
Position Accuracy	<2.5m CEP
Protocol	NMEA 0183, PMTK

*1. For 5G model, GPS is supported by default; for 4G model, GPS is optional;

2. For 5G model, GPS antenna is combined with one cellular antenna; for 4G model, GPS antenna is standalone.

Wi-Fi Interface

Connectors	2 × 50 Ω SMA (Center PIN: RP-SMA Female)
Standards	IEEE 802.11 a/b/g/n/ac
Tx Power	2.4G: 26dBm(max) 5G: 26.4dBm(max)
Rx Sensitivity	
2.4G	802.11b: ≤ -92dBm@11Mbps 802.11g: ≤ -78dBm@54Mbps 802.11ac VHT20: ≤ -91dBm@MCS0 802.11ac VHT20: ≤ -66dBm@MCS8 802.11ac VHT40: ≤ -88.5dBm@MCS0 802.11ac VHT40: ≤ -64dBm@MCS8
5G	802.11a: ≤ -91dBm@6Mbps 802.11a: ≤ -76dBm@54Mbps 802.11ac VHT20: ≤ -90dBm@MCS0 802.11ac VHT20: ≤ -68dBm@MCS8 802.11ac VHT40: ≤ -87dBm@MCS0 802.11ac VHT40: ≤ -65dBm@MCS9 802.11ac VHT80: ≤ -84dBm@MCS0 802.11ac VHT80: ≤ -60dBm@MCS9
Modes	AP and Client mode
Security	WPA/WPA2 authentication, WEP/TKIP/AES encryption

Serial Interface

Ports	1 × RS232 + 1 × RS485
Connector	Terminal block
Baud Rate	300bps to 230400bps

IO

Connector	Terminal block
Digital	1 × DI + 1 × DO

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 Tunnel	DMVPN/IPsec/OpenVPN/PPTP/L2TP/GRE
Access Authentication	CHAP/PAP/MS-CHAP/MS-CHAPV2
Firewall	ACL/DMZ/Port Mapping/MAC Binding/SPI/URL Filter/IP Passthrough
Management	Web, CLI, SMS, On-demand dial up, 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 Gateway (Modbus RTU to Modbus TCP)

Power Supply and Consumption

Power Connector	2-pin with 5.08 mm terminal block
Input Voltage	9-48 VDC (48 V power input is needed for PoE output)
Power Consumption	≤ 7.9W (In Non-PoE mode)
Power Output	4 × 802.3 af/at PoE output

Physical Characteristics

Ingress Protection	IP30
Housing	Metal
Dimensions	135 x 118 x 45 mm (5.31 x 4.65 x 1.77 in)
Mounting	Desktop, Wall or DIN Rail Mounting

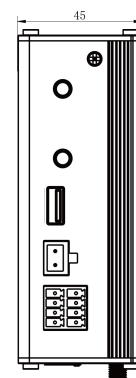
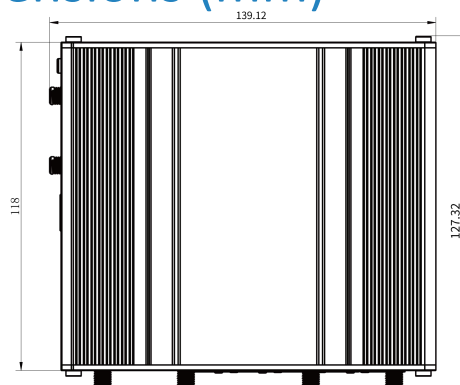
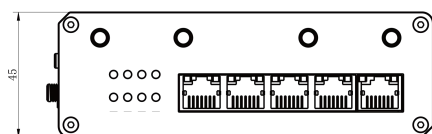
Others

USB	1 × USB 2.0 (Reserved)
Reset Button	1 × RESET
LED Indicators	1 × POWER, 1 × SYSTEM, 1 × SIM, 1 × Wi-Fi, 1 × VPN, 3 × Signal strength
Certifications	RoHS, CE, FCC
EMC	IEC 61000-4-2 Level 3 IEC 61000-4-3 Level 3 IEC 61000-4-4 Level 4 IEC 61000-4-5 Level 4 IEC 61000-4-6 Level 3 IEC 61000-4-8 Level 4

Environmental

Operating Temperature	-40°C to +70°C (-40°F to +158°F) Reduced Cellular Performance Above 60°C
Storage Temperature	-40°C to +85°C (-40°F to +185°F)
Ethernet Isolation	1.5 kV RMS
Relative Humidity	0% to 95% (non-condensing) at 25°C/77°F

Product Images/Dimensions (mm)



► Ordering Information

Model	UR75
5G NR	-500GL: N1/N2/N3/N5/N7/N8/N12/N20/N28/N41/N66/N71/N77/N78/N79
4G	-500GL: B1/B2/B3/B4/B5/B7/B8/B9/B12/B13/B14/B17/B18/B19/B20/B21(TBD) /B25/B26/B28/B29/B30/B32/B66/B71@FDD LTE, B34/B38/39/B40/B41 /B42/B48@TDD LTE -E: B1/B3/B5/B7/B8/B20@FDD LTE, B38/B40/B41@TDD LTE -AF: B2/B4/B5/B12/B13/B14/B66/B71@FDD LTE -AU: B1/B2/B3/B4/B5/B7/B8/B28@FDD LTE, B40@TDD LTE -J: B1/B3/B8/B18/B19/B26 @FDD LTE, B41@TDD LTE -CE: B1/B3/B5/B8@FDD LTE, B38/B39/B40/B41@TDD LTE
3G	-E: B1/B5/B8@WCDMA -AF: B2/B4/B5@WCDMA -AU: B1/B2/B5/B8 WCDMA -J: B1/B6/B8/B19@WCDMA -CE: B1/B8@WCDMA, B34/B39@TD-SCDMA, BC0@CDMA2000 1x/EVDO
2G	-E: B3/B8@GSM -AU: B2/B3/B5/B8@GSM -CE: 900/1800@GSM