



UR51 Industrial Cellular Router

Reliable and Remote-Manageable
for Large Scale M2M Deployment

High Speed LTE Networking Platform



The Ursalink UR51 is a cost-effective industrial cellular router with embedded intelligent software 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 UR51 provides 3G/4G cellular network with 150 Mbps download and 50 Mbps uplink. It also has 1 PoE port (optional), 1 serial port (RS232/485) to connect various end devices and supports dual-band Wi-Fi that compliance with 802.11b/g/n/ac standard, which makes UR51 versatile.

Easy deployment and comprehensive remote device management makes UR51 particularly suitable for light industrial and business applications like ATMs, kiosk, digital signage and so on.

► Benefits

- Dual SIM cards for backup between multiple carriers networking and global 2G/3G/LTE options make it easy to get connected
- 802.3af PoE output offers fast and easy deployment
- Flexible modular design provides users with different connection modules like Ethernet, serial port, GPS, Wi-Fi 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 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
- To establish a secured mechanism on centralized authentication and authorization of device access by supporting AAA (Radius, Tacacs+, LDAP, local Authentication) and multiple levels of user authority

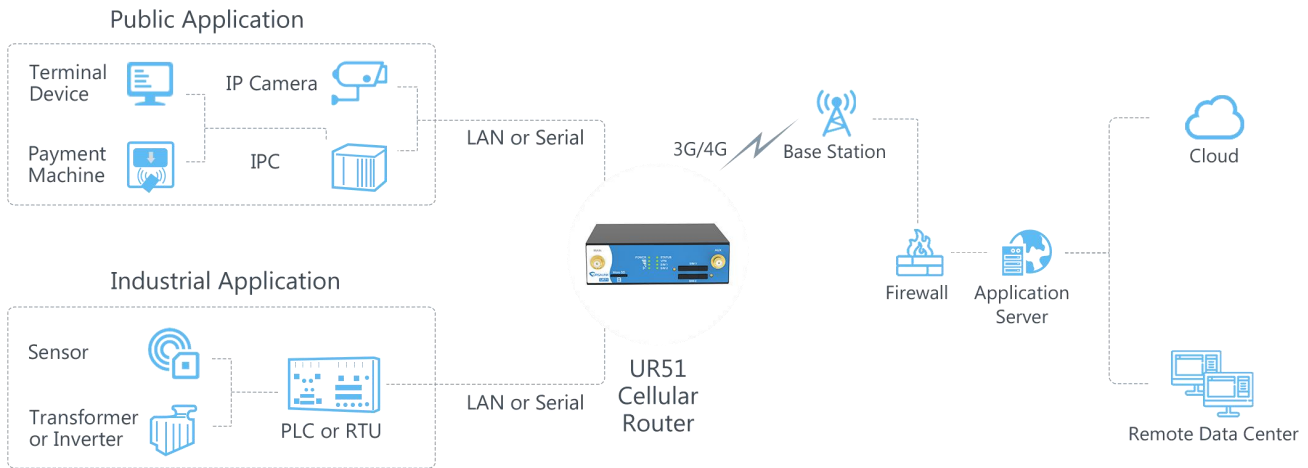
► Easy Maintenance

- Uralink 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

► Capabilities

- Link remote devices in an environment where communication technologies are constantly changing
- Support 802.11b/g/n/ac, as AP or client mode to establish versatile wireless network
- Support rich protocols like SNMP, Modbus bridging, RIP, OSPF
- Support wide operating temperature ranging from -40°C to +70°C/-40°F to +158°F

Application Example



Specifications

| Cellular Interfaces | |
|----------------------------|---|
| Connectors | 2 × 50 Ω SMA (Center PIN: SMA Female) |
| SIM Slots | 2 |
| Wi-Fi Interface (Optional) | |
| Connectors | 1 × 50 Ω SMA (Center PIN: SMA Female) |
| Standards | IEEE 802.11b/g/n/ac |
| Tx Power | 802.11b: 16 dBm +/-1.5 dBm (11 Mbps) 802.11g: 15 dBm +/-1.5 dBm (54 Mbps) 802.11n@2.4 GHz: 14 dBm +/-1.5 dBm (HT20 MCS7) 802.11ac@5 GHz: 10 dBm +/-2 dBm (HT80 MCS9) |
| Rx Sensitivity | 802.11b: ≤ -76 dBm (11 Mbps) 802.11g: ≤ -68 dBm (54 Mbps) 802.11n@2.4 GHz: ≤ -67 dBm (HT20 MCS7) 802.11n@2.4 GHz: ≤ -64 dBm (HT40 MCS7) 802.11n@5 GHz: ≤ -67 dBm (HT20 MCS7) 802.11n@5 GHz: ≤ -65 dBm (HT40 MCS7) 802.11ac@5 GHz: ≤ -54 dBm (HT80 MCS9) |
| Modes | Support for multiple SSID, AP and Client mode |
| Security | WPA/WPA2 authentication, WEP/TKIP/AES encryption |
| Hardware System | |
| CPU | 528 MHz, ARM Cortex A7 |
| Memory | 128 MB Flash, 128 MB DDR3 RAM |
| Storage | 1 × Micro SD |

| Ethernet Interface | |
|-------------------------------------|---|
| Ports | 1 × RJ-45 |
| Property | 1 × LAN (Optional: PoE Output) |
| Physical Layer | 10/100 Base-T (IEEE 802.3) |
| Data Rate | 10/100 Mbps (Auto-Sensing) |
| Interface | Auto MDI/MDIX |
| Mode | Full or half duplex (Auto-Sensing) |
| Serial Interface | |
| Ports | 1 × RS232 or 1 × RS485 |
| Connector | DB9 female terminal block |
| Baud Rate | 300bps to 230400bps |
| GPS (Optional) | |
| Connectors | 1 × 50 Ω SMA (Center PIN: SMA Female) |
| Sensitivity | -167dBm@Tracking, -149dBm@Acquisition, -161dBm@Re-acquisition |
| Position Accuracy | <2.5m CEP |
| Protocols | NMEA 0183, PMTK |
| 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/URL Filter/DMZ/Port Mapping/MAC Binding |
| Management | Web, CLI, SMS, On-demand dial up |
| AAA | RADIUS, TACACS+, LDAP, Local Authentication |
| Multilevel Authority | Multiple Levels of User Authority |
| Reliability | VRRP, Dual SIM Backup |
| Serial Port | Transparent (TCP Client/Server, UDP), Modbus Gateway (Modbus RTU to Modbus TCP) |
| Power Supply and Consumption | |
| Connector | 2-pin with 5.08 mm terminal block |
| Input Voltage | 9-48 VDC |
| Power Output | 1 × 802.3af PoE Output |
| Power Consumption | Typical 1.3 W, Max 2.8 W (In Non-PoE mode) |

Physical Characteristics

| | |
|--------------------|--|
| Ingress Protection | IP30 |
| Housing & Weight | Metal, 365 g |
| Dimensions | 100 x 96.1 x 30 mm (3.94 x 3.78 x 1.18 in) |
| Mounting | Desktop, Wall or DIN Rail Mounting |

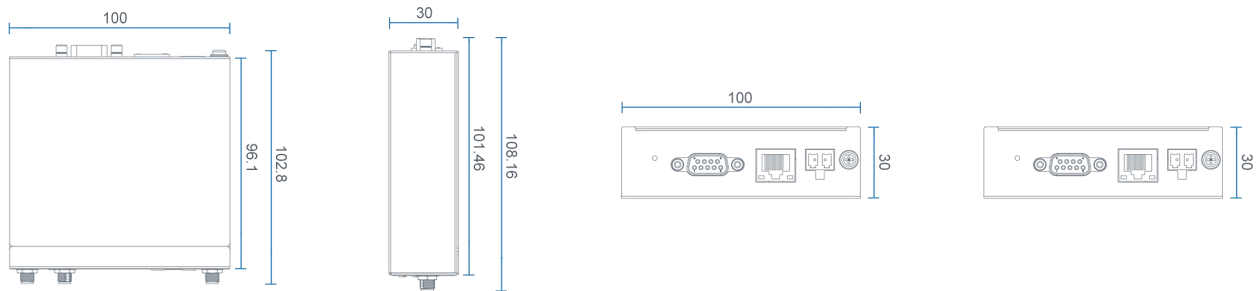
Others

| | |
|----------------|--|
| Reset Button | 1 × RESET |
| LED Indicators | 1 × POWER, 1 × STATUS, 1 × VPN, 1 × SIM1, 1 × SIM2, 3 × Signal strength |
| Built-in | Watchdog, RTC |
| 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 | UR51 | |
|-------------------|--|--|
| Router Type | LTE Router | HSPA+ Router |
| Air Interface | LTE(LTE-FDD/LTE-TDD)/CDMA(CDMA 1x/EVDO)/TD-SDMA/DC-HSPA+/HSPA+ /HSUPA/HSDPA/WCDMA/EDGE/GPRS/GSM | HSPA+/HSUPA/HSDPA/EDGE/GPRS/GSM |
| Frequency Band 4G | -E: B1/B3/B5/B7/B8/B20@FDD LTE, B38/B40/B41@TDD LTE -V: B4/B13@FDD LTE -A: B2/B4/B12@FDDLTE -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/B8@FDD LTE, B38/B39/B40/B41@TDD LTE | |
| 3G | -E: B1/B5/B8@WCDMA -A: 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 | -E: 900/2100@UMTS -A: 850/1900@UMTS -G: 800/850/900/1900/2100@UMTS |
| 2G | -E: B3/B8@GSM -A: B2/B3/B5/B8@GSM -AU: B2/B3/B5/B8@GSM -CE: 900/1800@GSM | -E: 850/900/1800/1900@GSM -G: 850/900/1800/1900@GSM |

Xiamen Ursalink Technology Co., Ltd.

4/F, No. 63-2 Wanghai Road, 2nd Software Park Xiamen 361008, China

Phone: +86-592-5023060

Fax: +86-592-5023065

Website: www.ursalink.com

Email: sales@ursalink.com

