URSALINK

WE CONNECT THINGS TO CLOUD

Customer-Centric   R & D Strength   Innovation-Driven   Global Readiness
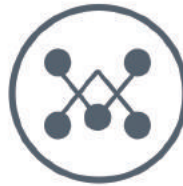
LoRaWAN

▌Who We Are

At Ursalink we are passionate about the connectivity of "things" to the Cloud. We leverage the value of the top trending technologies that transform the world we live in and are committed to our partners who share the same passion. We believe that the complexity of data collection, storage and retrieval can be simplified into the Cloud-intelligence. Our development and distribution of these appliances and services demonstrates our commitment to the digital transformation and continues to deliver compelling connectivity for IoT world.

▌Why You Should Choose Ursalink

Global Readiness

Customer-oriented, Ursalink delivers services with a worldwide network of distributors and resellers, from well-rounded before/after sale services to the real time technical support, from east to west. Along the way we build up long-lasting and trustworthy relationship with our customers.

Execute with Excellence

We spare no effort in quality control and product innovation to deliver both reliability and usability. The strong experience of Ursalink' s research and development team allows the integration of proven technologies and open customizable functionality to the user for enhanced solutions to an ever-changing world of IoT & M2M challenges, without sacrificing stability and security .

Gear up Your Business with Ursalink

Our products range from M2M/IoT communication device to Cloud service. The defined distribution channel will be an assurance that everyone stands in line and drives a desired profit increase to our partners. With the future in mind, we also design and deliver customer-tailored products and services with an emphasis on the most minor details that enhance our products longevity. Wherever device talks, Ursalink connects.
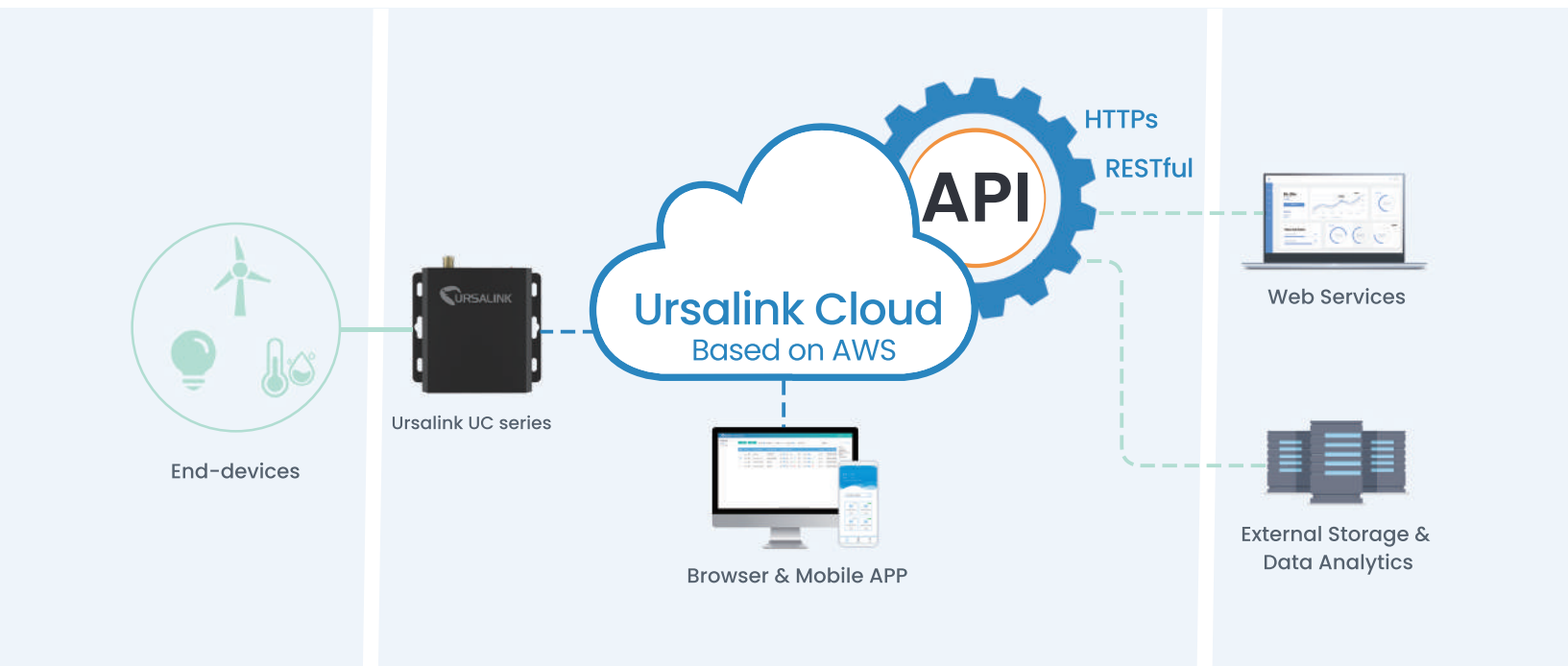
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We **Connect** Things to Cloud

The Ursalink Cloud provides unparalleled levels of vertical integration
with Ursalink UC series and links vertical, back-end applications to remote assets.

- ➤ Configure Ursalink UC series without going to site

- ➤ Control your field devices from anywhere

- ➤ Monitor both Ursalink UC series and end-devices

- ➤ Transform data into developer accessible APIs

HTTPs
RESTful

API

Ursalink Cloud
Based on AWS

Web Services

Ursalink UC series

End-devices

Browser & Mobile APP

External Storage &
Data Analytics

Reduce Time & Cost

Control and monitor field
devices On Web or App

Facilitate Cloud Integration

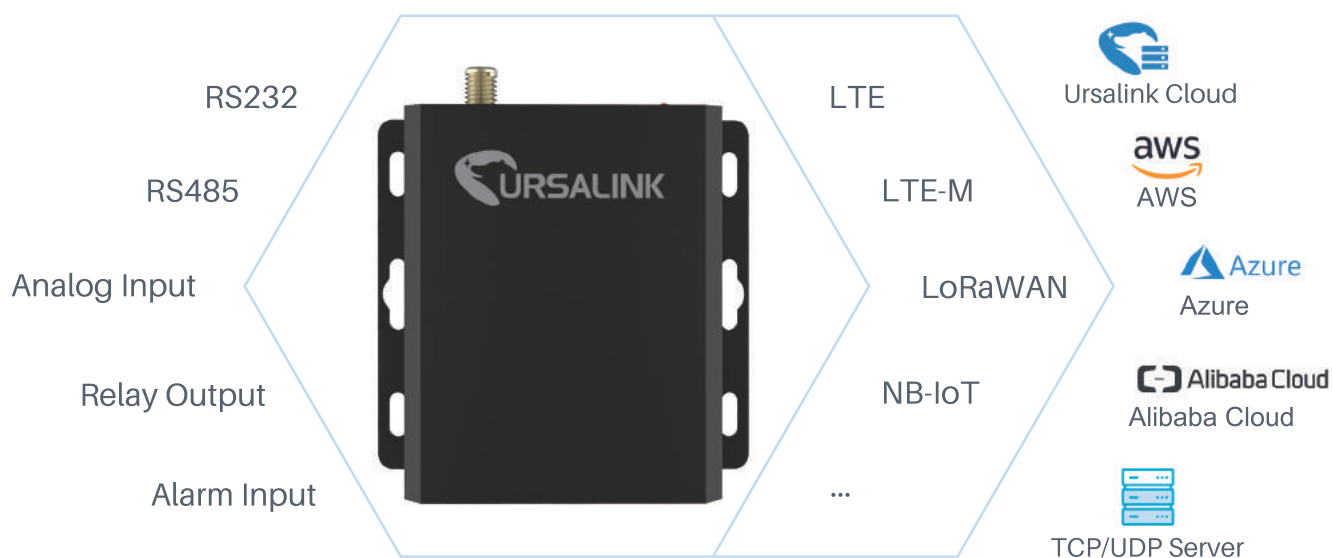Reduce the complexity of
network design

Merge Legacy Asset

Retrofit legacy equipments
into IoT initiatives

Ursalink UC Series

The compact Ursalink UC series is designed for monitoring and controlling field devices, and collecting data to cloud.

➤ Synchronize configuration from Ursalink Cloud

➤ Controlled by custom logic formula

➤ Operate autonomously while network is unavailable

RS232		LTE	Ursalink Cloud
RS485		LTE-M	AWS
Analog Input		LoRaWAN	Azure
Relay Output		NB-IoT	Alibaba Cloud
Alarm Input		...	TCP/UDP Server

Model	Analog Input	Digital Input	Relay Output	RS232	RS485	Network
UC1114	/	2	2	/	/	LoRaWAN
UC1122	2	1	1	/	/	LoRaWAN
UC1152	/	1	1	1	1	LoRaWAN
UC3x14	/	2	2	/	/	2G/3G/4G LTE-M[*] NB-IoT[*]
UC3x22	2	1	1	/	/	2G/3G/4G LTE-M[*] NB-IoT[*]
UC3x52	/	1	1	1	1	2G/3G/4G LTE-M[*] NB-IoT[*]

[*] On the roadmap

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UR75 EDGE

Cloud-Ready
Edge Computing Gateway

The easy integration with edge computing service such as AWS Greensgrass, Azure IoT Edge, and Alibaba Cloud Link IoT Edge makes UR75 an intelligent gateway for data acquisition and computing at field as well as a reliable networking communication platform for large scale deployment.

64-bit ARM Cortex™-A53 Processor

512 MB DDR3 RAM

M.2 SSD for Extended Storage

CERTIFIED EDGE COMPUTING CAPABILITY

AWS Greengrass   Azure IoT Edge   Link IoT Edge

Accelerate Your IoT Deployment

Edge-to-Cloud Data Acquisition

✔ Data converter for Modbus-to-MQTT conversion

✔ Various interfaces for connecting end-devices

Cloud-Ready

✔ Easy to access cloud service with built-in IoT client/SDKs

✔ Certified by Azure, AWS, Exosite and Alibaba Cloud

Secure Transmission

✔ Multiple VPN protocols for remote access

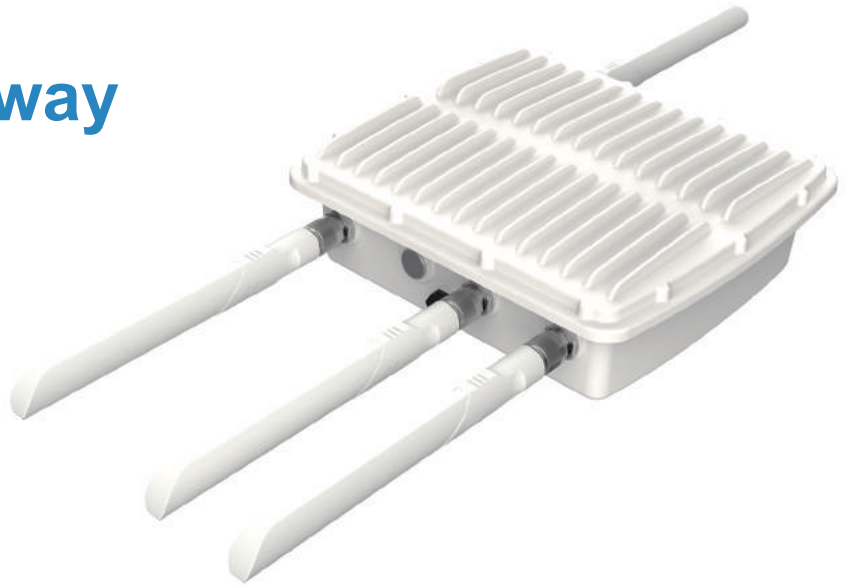✔ Stateful firewall for secure data transmission

Reliable Connectivity

✔ Fail-over between cellular and Ethernet

✔ Store and resend data when the network is available

Sensor

Terminal

Machine

UR75 Edge

aws Azure Alibaba Cloud

Applications
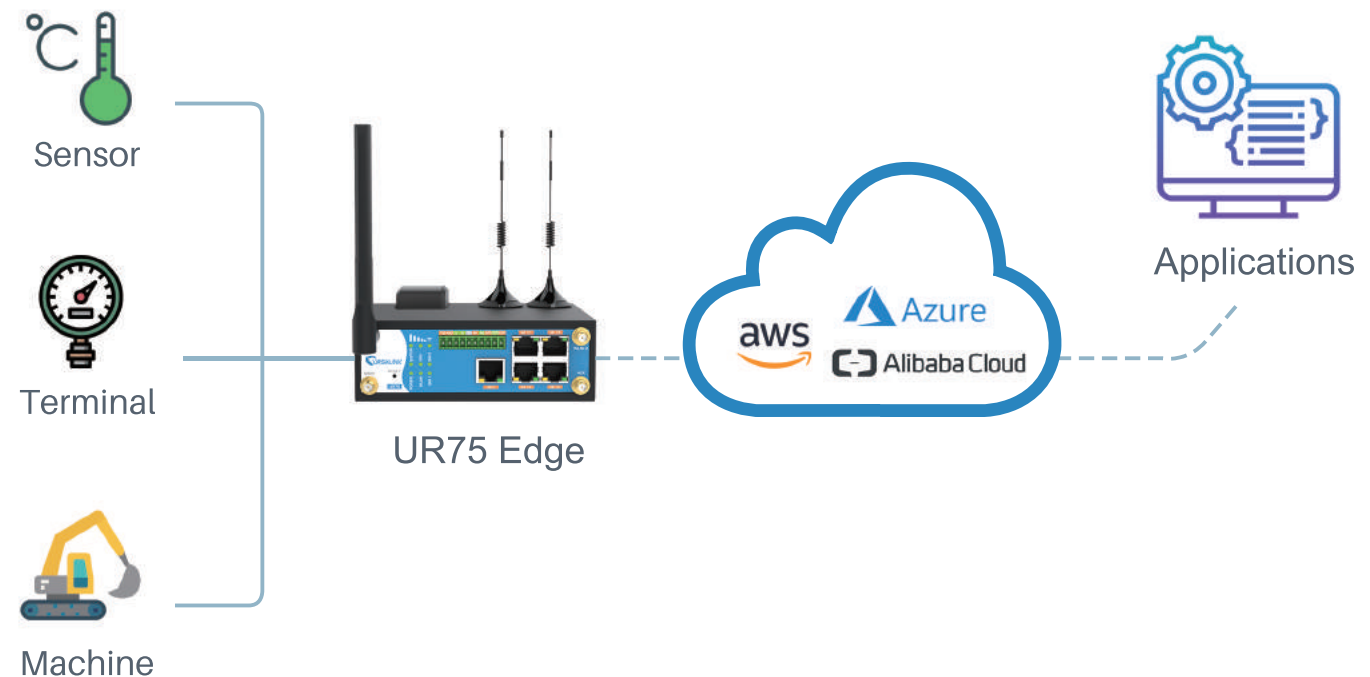
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Ursalink UG87 LoRaWAN Gateway

- Scalable
- Manageable
- Customizable

Introduction

Ursalink UG87 is an Industrial Gateway based on LoRaWAN technology, built perfectly for developing Internet of Things applications. It features Edge and Fog computing capabilities with Python programming supported to match different use cases in the field. This customizable device is designed to bring hardware and software flexibility for overcoming the IoT technical challenges.

Highlights

➢ IP67 Waterproof

➢ Supporting 8 Simultaneous Channels

➢ Complying with LoRaWAN Protocol V1.0/V1.0.2

➢ LoRa Band Available at 433/470/868/902/920 MHz

➢ Long Range over 5 Kilometers Radius

➢ Flexible Backhaul Connectivity (Eth/3G/4G)

➢ Built-in Serial Ports, DI/DO and GPS Capability

➢ Fully Interoperable with Multiple LoRaWAN™ Compliant Network Servers

Application Example

UG87 LoRaWAN Gateway

Network Server

Application Server

Metering

Smart Building

Smart Parking

Industrial Automation

Tracking

Fleet Management

3G/4G/Ethernet Backhaul Connectivity
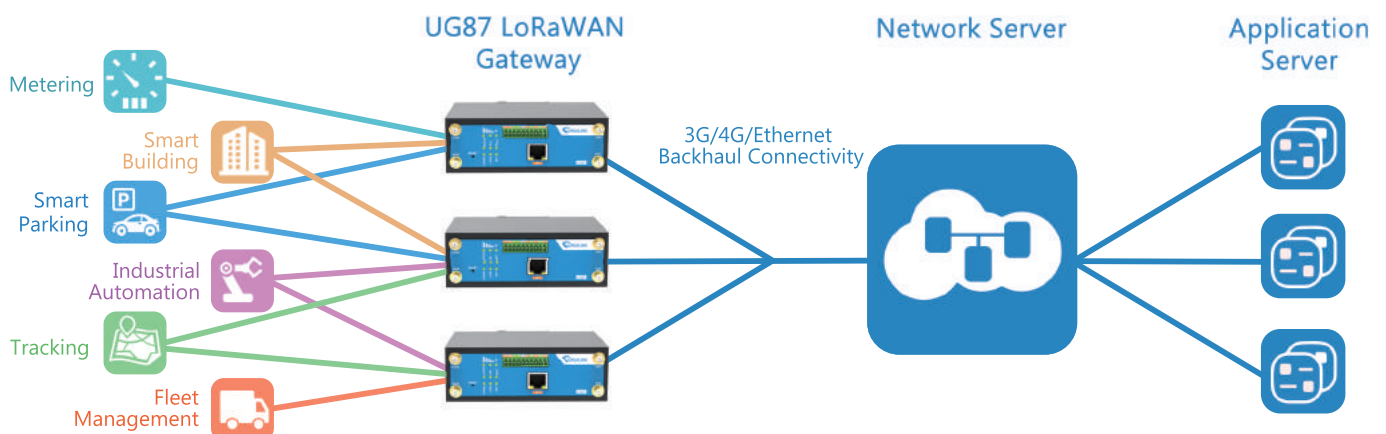
Specifications

Model	UG87-In	UG87-Out
Hardware		
Processor	800 MHz, 64-bit ARM Cortex-A53	
Memory	4 GB Flash, 512 MB DDR3 RAM	
Power Supply	9-48 VDC Input	
Dimensions	132 x 103.8 x 45 mm (5.20 x 4.09 x 1.77 in)	254 x 222 x 89 mm (10 x 8.75 x 3.5 in)
Software		
Network Protocol	PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP, HTTPs, DNS, ARP, NTP, SMTP, Telnet, VLAN, SSH2, DDNS, etc.	
VPN Tunnel	OpenVPN, IPsec, PPTP, L2TP, DMVPN, GRE	
Serial Port	Transparent, TCP Client/Server, UDP, Modbus Gateway	
Connectivity		
Ethernet	1 × WAN or 1 × LAN	
Cellular	2 × SIM Slot, Support for Global GSM/3G/4G LTE Frequency Bands	

Frequency Band*			
E	LTE: B1/B3/B5/B7/B8/B20/B38/B40/B41	3G: B1/B5/B8 GSM: B3/B8
EU	LTE: B1/B3/B7/B8/B20/B28A/B38/B40/B41	3G: B1/B8 GSM: B3/B8
AF	LTE: B2/B4/B5/B12/B13/B14/B66/B71	3G: B2/B4/B5
AU	LTE: B1/B2/B3/B4/B5/B7/B8/B28/B40	3G: B1/B2/B5/B8 GSM: B2/B3/B5/B8

Serial	1 × RS232	
Digital	2 × DI + 2 × DO	
LoRaWAN		
Channel	8	
Frequency Band	EU433, EU868, US902, AU915, CN470, AS923, KR920	
Sensitivity	-140dBm Sensitivity @292bps	
Output Power	27dBm Max	
Protocol	V1.0 Class A/Class C and V1.0.2 Class A/Class C	
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)	
Relative Humidity	0% to 95% (non-condensing) at 25°C/77°F	
Ingress Protection	IP30	IP67
Mounting	Desktop, Wall or DIN Rail Mounting	Wall or Pole Mounting

*Can't find your frequency bands? Contact us.

URSALINK

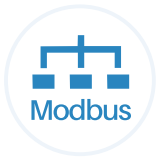# UR7x Series Industrial Cellular Router

Reliable and Remote-Manageable for Large Scale M2M Deployment

Embedded Processor 800MHz 64-bit and 256 MB RAM

Features Gigabit Ethernet Port(s) for Fast Data Transmission

Supports Modbus Gateway, Modbus Master/Slave

Supports Python SDK for Secondary Development

Remote Management Platform Supported

AWS, Azure, ThingWorx IoT Platform Readiness

Specifications

		UR71	UR72	UR75
Capabilities	CPU	800 MHz, 64-bit ARM Cortex-A53		
	Flash	64 MB		
	Memory	256 MB DDR3		
	Built-in	Watchdog, RTC		
	GPS	GPS + GLONASS		
	SSD	N/A	M.2 slot supports SATA M.2 SSD (22 x 42 mm) up to 512 GB	
	Micro SD	Supports micro SD card up to 128 GB		
Interfaces	SIM Slots	2		
	Ethernet Ports	1 × 10/100/1000 Mbps	2 × 10/100/1000 Mbps	5 × 10/100/1000 Mbps
	Serial Ports	1 × RS232 or 1 × RS485	1 x RS232 + 1 x RS485 or 2 x RS232 or 2 x RS485	
	Digital (I/O)	N/A	2 × DI + 2 × DO	
	Antenna Connectors	2 x Cellular Connectors (Center Pin: SMA Female)	2 x Cellular Connectors, 2 x Wi-Fi Connector, 1 x GPS Connector (Center Pin: SMA Female)	
Network	Network Protocols	PPP, PPPoE, SNMP v1/v2c/v3, TCP, UDP, DHCP, RIP v1/v2, OSPF, DDNS, VRRP, HTTP, HTTPS, DNS, ARP, QoS, SNTP, Telnet, VLAN, SSH		
	AAA	RADIUS, TACACS+, LDAP, Local Authentication		
	Firewall	ACL/DMZ/Port Mapping/MAC Binding		
	Wi-Fi	N/A	IEEE 802.11b/g/n/ac (2 x 2 MIMO)	
	Serial Port	Transparent (TCP Client/Server, UDP), Modbus Gateway (Modbus RTU to Modbus TCP), Modbus Master		
	VPN	OpenVPN, IPsec, PPTP, L2TP, DMVPN, GRE		
	Reliability	VRRP, WAN Failover, Dual SIM Backup		
Maintenance	Management	Web, CLI, SMS, Watchdog, On-demand Dial Up		
	Multilevel Authority	Multiple Levels of User Authority		
Hardware	Power Input	9-48 VDC		
	Power Consumption	Typical 2.0 W (Max 3.0 W)	Typical 2.6 W (Max 4.5 W)	Typical 3.0 W (Max 5.5 W)
	Ingress Protection	IP30		
	Housing & Weight	Metal, 369 g (0.81 lb)	Metal, 471 g (1.04 lb)	Metal, 492 g (1.08 lb)
	Dimensions	100 x 96.1 x 30 mm (3.94 x 3.78 x 1.18 in)	132 x 103.8 x 45 mm (5.20 x 4.09 x 1.77 in)	
	Mounting	Desktop, Wall or DIN Rail Mounting		
Others	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)		
	Relative Humidity	0% to 95% (non-condensing) at 25°C/77°F		
	Certifications	RoHS, CE, FCC		
	Frequency Band * — E	LTE: B1/B3/B5/B7/B8/B20/B38/B40/B41	3G: B1/B5/B8	GSM: B3/B8
	EU	LTE: B1/B3/B7/B8/B20/B28A/B38/B40/B41	3G: B1/B8	GSM: B3/B8
	AF	LTE: B2/B4/B5/B12/B13/B14/B66/B71	3G: B2/B4/B5	
	AU	LTE: B1/B2/B3/B4/B5/B7/B8/B28/B40	3G: B1/B2/B5/B8	GSM: B2/B3/B5/B8

*Can't find your frequency bands? Contact us.

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UR5x Series Industrial Cellular Router

Cost-Effective Networking Platform for M2M Applications
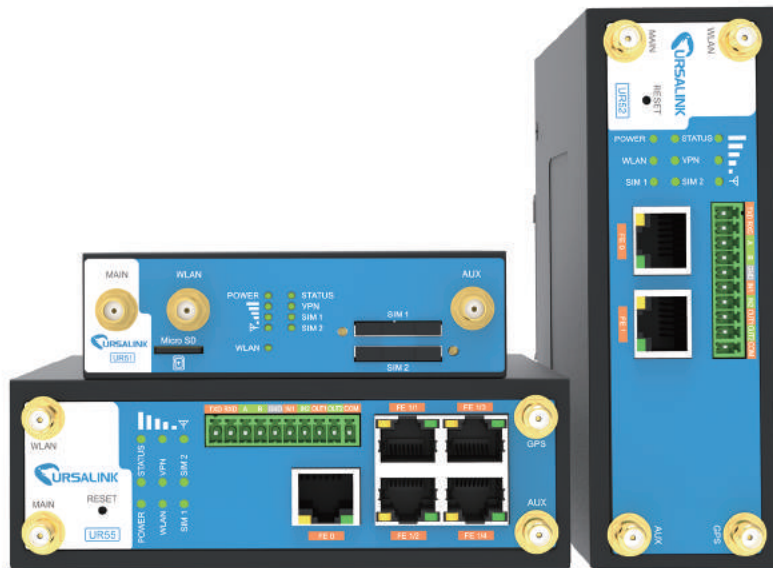
Dual SIM Backup with High-Speed LTE Network

Establishes Connections between Remote PLC and SCADA

Dual-Band Wi-Fi Compliance with 802.11b/g/n/ac

Comprehensive Industrial Interfaces: Serial Port, DI/DO

Multiple Encryption Tunnels for Data Transmission Security

Integrated GPS with High Accuracy Positioning

Specifications

		UR51	UR52	UR55
Capabilities	CPU	528 MHz, 32-bit ARM Cortex-A7		
	Flash	128 MB		
	Memory	128 MB DDR3		
	Built-in	Watchdog, RTC		
	GPS	GPS + GLONASS		
	Micro SD	Supports micro SD card up to 128 GB		
Interfaces	SIM Slots	2		
	Ethernet Ports	1 x 10/100 Mbps (Optional: PoE Output)	2 x 10/100 Mbps	5 x 10/100 Mbps
	Serial Ports	1 × RS232 or 1 × RS485	1 x RS232 + 1 x RS485 or 2 x RS232 or 2 x RS485	
	Digital (I/O)	N/A	2 × DI + 2 × DO	
	Antenna Connectors	2 x Cellular Connectors, 1 x Wi-Fi Connector, 1 x GPS Connector (Center Pin: SMA Female)		
Network	Network Protocols	PPP, PPPoE, SNMP v1/v2c/v3, TCP, UDP, DHCP, RIP v1/v2, OSPF, DDNS, VRRP, HTTP, HTTPS, DNS, ARP, QoS, SNTP, Telnet, VLAN, SSH		
	AAA	RADIUS, TACACS+, LDAP, Local Authentication		
	Firewall	ACL/DMZ/Port Mapping/MAC Binding		
	Wi-Fi	IEEE 802.11b/g/n/ac		
	Serial Port	Transparent (TCP Client/Server, UDP), Modbus Gateway (Modbus RTU to Modbus TCP), Modbus Master		
	VPN	OpenVPN, IPsec, PPTP, L2TP, DMVPN, GRE		
	Reliability	VRRP, WAN Fail-over, Dual SIM Backup		
Maintenance	Management	Web, CLI, SMS, Watchdog, On-demand Dial Up		
	Multilevel Authority	Multiple Levels of User Authority		
Hardware	Power Input	9-48 VDC (48 V Power Input is Needed for 802.3af PoE Output)	9-48 VDC	
	Power Output	1 × 802.3af PoE Output	N/A	
	Power Consumption	Typical 1.8 W (Max 2.7 W) in non-PoE mode	Typical 2.5 W (Max 4.1 W)	Typical 2.8 W (Max 5.0 W)
	Ingress Protection	IP30		
	Housing & Weight	Metal, 365 g (0.80 lb)	Metal, 460 g (1.01 lb)	Metal, 481 g (1.06 lb)
	Dimensions	100 x 96.1 x 30 mm (3.94 x 3.78 x 1.18 in)	132 x 103.8 x 45 mm (5.20 x 4.09 x 1.77 in)	
	Mounting	Desktop, Wall or DIN Rail Mounting		
Others	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)		
	Relative Humidity	0% to 95% (non-condensing) at 25°C/77°F		
	Certifications	RoHS, CE, FCC		
	Frequency Band* — E	LTE: B1/B3/B5/B7/B8/B20/B38/B40/B41 3G: B1/B5/B8 GSM: B3/B8		
	Frequency Band* — EU	LTE: B1/B3/B7/B8/B20/B28A/B38/B40/B41 3G: B1/B8 GSM: B3/B8		
	Frequency Band* — AF	LTE: B2/B4/B5/B12/B13/B14/B66/B71 3G: B2/B4/B5		
	Frequency Band* — AU	LTE: B1/B2/B3/B4/B5/B7/B8/B28/B40 3G: B1/B2/B5/B8 GSM: B2/B3/B5/B8		

*Can't find your frequency bands? Contact us.

Ursalink DeviceHub

Ursalink DeviceHub is a web-based platform that lets you manage all your Ursalink routers from a single location at anytime.

The Ursalink DeviceHub is now able to monitor all critical parameters of remote routers, perform configuration, upgrade firmware, analyze system log, create graphic reports and more. It helps to improve productivity, reduce costs, and enhance the intelligence of your network and business operations.

Device Configuration
Configure device and synchronize profiles

Firmware Upgrade
Upgrade firmware in bulk remotely

Real-Time Monitoring
Acquire device's temp, location, signal strength and more

Comprehensive Report
Generate reports of failed connection, profile updates, firmware upgrade, etc.

Alternative Hosting
Hosted by Ursalink or on your own server

UrsalinkVPN

The UrsalinkVPN is the core component of UrsalinkVPN solution. Typically it is offered as a service hosted by Ursalink, or by our distributors, but you can also choose to host your own UrsalinkVPN.

The UrsalinkVPN acts as a secure termination point for all Ursalink routers and offers seamless communication originated by the customers to their machines. It is generally used in the industrial M2M communication sector. The key of architecture is the central server, which handles all connections and the encrypted traffic between customers and devices controlled by Ursalink routers. Through the web-based UrsalinkVPN portal, you can manage account, routers and devices, etc.

- Centralized Management

- Multi-users Access Simultaneously

- Up to 1000 Devices

- Connection Status Overview

- Secure Internet Access to Remote Stations

Software Requirements

✔ OS: Ubuntu 16.04   ✔ Supports installation package   ✔ Browser: Chrome, Firefox

Hardware Requirements

Your host hardware must meet the following minimum requirements:

For 500 devices

✔ RAM: 16 GB   ✔ CPU: 2 Cores, 2.0 GHz
✔ Disk: 512 GB   ✔ Bandwidth: ≥100 Mbps

For 1000 devices

✔ RAM: 32 GB   ✔ CPU: 8 Cores, 3.2 GHz
✔ Disk: 1 TB   ✔ Bandwidth: ≥100 Mbps