

# Pro Series

## Industrial Router

### UR35

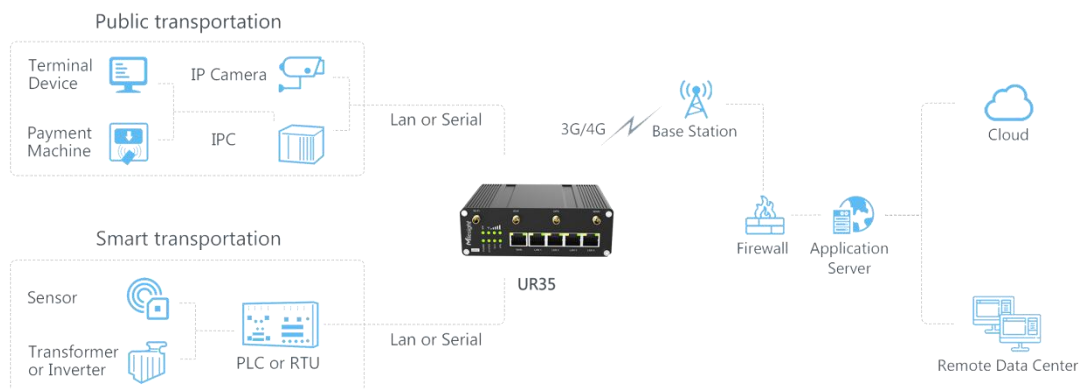



UR35 is a cost-effective industrial cellular router with embedded intelligent features that are designed for multifarious M2M/IoT applications. Global WCDMA and 4G LTE carrier supported make this drop-in connectivity a great help for operators in maximizing uptime.

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.

### ◆ Application Example



## ◆ 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

## ◆ 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 centralized authentication and authorization of device access by supporting AAA (Radius, TACACS+, LDAP, local Authentication) and multiple levels of user authority

## ◆ 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

## ◆ 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 ranging from -40°C to +70°C/-40°F to +158°F

## ◆ 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)
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
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Terminating impedance	configurable
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### Serial Interface

Numbers	1 × RS232 + 1 × RS485 (2 × RS485 Optional)
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Connector	3.5mm Terminal Block
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Baud Rate	300bps to 230400bps
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### DI/DO

Numbers	1 × DI (dry contact) + 1 × DO (wet contact), Galvanic Isolation
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Connector	3.5mm Terminal Block
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Maximum V/A	0.3A@30VDC (DO)
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### Others

Reset Button	1 × RESET
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LED Indicators	1 × POWER, 1 × SYSTEM, 1 × SIM, 1 × Wi-Fi, 1 × VPN, 3 × Signal strength
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Built-in	Watchdog, Timer
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### Software

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, etc.
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VPN	DMVPN, IPsec, OpenVPN, PPTP, L2TP, GRE
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Security	Access Control, DMZ, Port Mapping, MAC Binding, SPI Firewalls, DoS&DDoS Protection, Filtering(IP&Domain), IP Passthrough
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Management	Web, CLI, SMS, On-demand dial up, SNMP v1/v2/v3, DeviceHub
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AAA	Radius, Tacacs+, LDAP, Local Authentication
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Multilevel Authority	Multiple Levels of User Authority
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Reliability	VRRP, WAN Failover, Dual SIM Backup
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Serial Port	Transparent(TCP Client/Server, UDP), Modbus Master/Slave, Modbus Gateway (Modbus RTU to Modbus TCP)
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### Power Supply and Consumption

Power Connector	2-pin 5.08 mm Terminal Block
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Input Voltage	9-48 VDC, with Surge-Protection and Reverse Polarity Protection
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Power Consumption	Typical 3.9 W, Max 4.6 W (In Non-PoE mode)
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### Physical Characteristics

Ingress Protection	IP30
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Housing & Weight	Metal, 485 g
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Dimension	135 x 103 x 45 mm (5.31 x 4.06 x 1.77 in)
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Installation Desktop, Wall or DIN Rail Mounting

## 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

## Approvals

Regulatory	CE, FCC, RCM
Environmental	RoHS
EMC	EN 55032, EN 55035  IEC 61000-4-2 Level 3 IEC 61000-4-3 Level 2 IEC 61000-4-4 Level 3
EMS	IEC 61000-4-5 Level 3 IEC 61000-4-6 Level 3 IEC 61000-4-8 Level 4 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

## ◆ Dimensions(mm)

