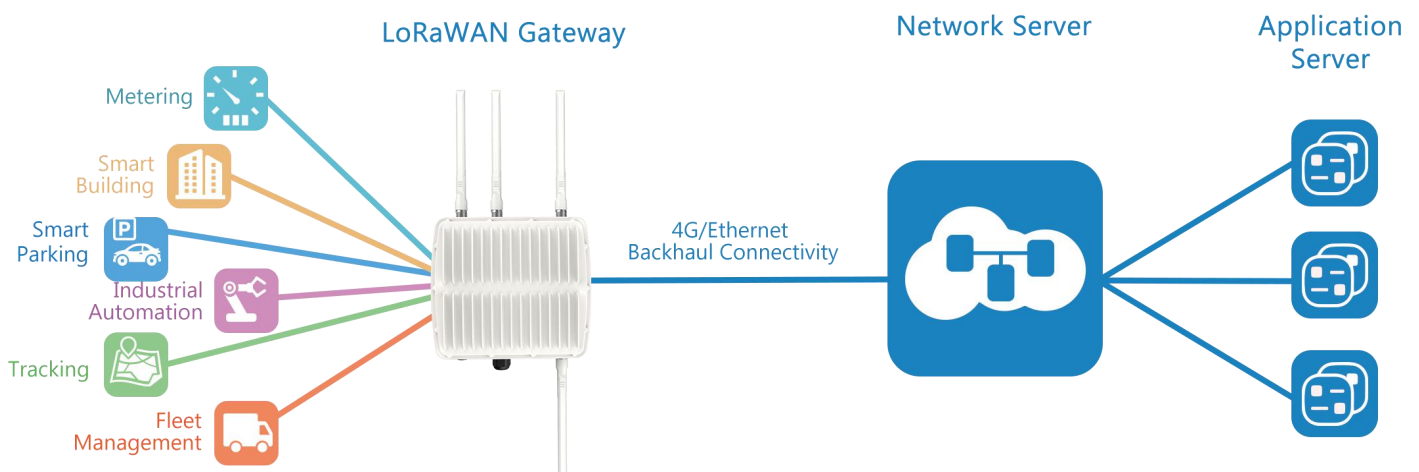


## Programmable Gateway for the Internet of Things

### ► Features

- 8 or 16 Simultaneous channels optional
- Backhaul Connectivity (Eth/3G/4G/WIFI)
- Long Range over 10 km Radius
- Ursalink Cloud compliant
- Compliance to LoRaWAN Class A and Class C
- IP67 Waterproof Casing
- Embedded Network Server and MQTT transmission
- Support GPS for high-precision time synchronization

### ► Application Example



## ► Specifications

<b>Model</b>	<b>UG87</b>
<b>Hardware System</b>	
CPU	800 MHz, 64-bit ARM Cortex-A53
Memory	512 MB DDR3 RAM
Flash	8 GB eMMC
Storage	1 × M.2 slot supports SATA M.2 SSD
<b>LoRaWAN</b>	
Connector	1 or 2× 50 Ω N-Type (Center PIN: Female)
Channel	8 (Up to 16)
Frequency Band	EU 863-870, US 902-928, EU 433, AU 915-928, CN 470-510, IN865 and KR 920-923 Band
Sensitivity	-140dBm Sensitivity @292bps
Output Power	27dBm Max
Protocol	V1.0 Class A/Class C and V1.0.2 Class A/Class C
<b>Ethernet Interface</b>	
Port	1 (PoE PD Default)
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)
<b>Cellular Interface (Optional)</b>	
Connectors	1 × 50 Ω N-Type (Center PIN: Female)
SIM Slots	2
<b>Wi-Fi (Optional)</b>	
Connectors	1 × 50 Ω N-Type (Center PIN: Female)
Standards	IEEE 802.11 b/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 (MCS7) 802.11n@5 GHz: 11 dBm +/-2 dBm (MCS7) 802.11ac@5 GHz: 10 dBm +/-2 dBm (MCS9)
<b>GPS</b>	
Connectors	1 × 50 Ω N-Type (Center PIN: Female)

<b>Software</b>	
Network Protocols	PPPoE, SNMP v1/v2c/v3, TCP, UDP, DHCP, DDNS, HTTP, HTTPS, DNS, ARP, SNTP, Telnet, SSH, MQTT, etc.
VPN Tunnel	OpenVPN/IPsec/PPTP/L2TP/GRE/DMVPN
Access Authentication	CHAP/PAP/MS-CHAP/MS-CHAPV2
Firewall	ACL/DMZ/Port Mapping/MAC Binding/URL Filter
Management	Web, CLI, SMS, On-demand dial up, DeviceHub
Reliability	WAN Failover, Dual SIM Backup
Serial Port	Transparent (TCP Client/Server, UDP), Modbus Gateway (Modbus TCP to Modbus RTU), Modbus Master
<b>Power Supply and Consumption</b>	
Connector	Default: 1 × 802.3 af/at PoE input Optional: 9-48 VDC/220 VAC Circular Connector
Power Consumption	Max 8.2 W
<b>Physical Characteristics</b>	
Ingress Protection	IP67
Dimensions	256 x 226 x 90.5 mm
Mounting	Wall or Pole Mounting
<b>Others</b>	
Reset Button	1 × RST
LED Indicators	1 × PWR, 1 × SYS, 1 × L1, 1 × L2
Built-in	Watchdog, RTC, Timer
<b>Environmental</b>	
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