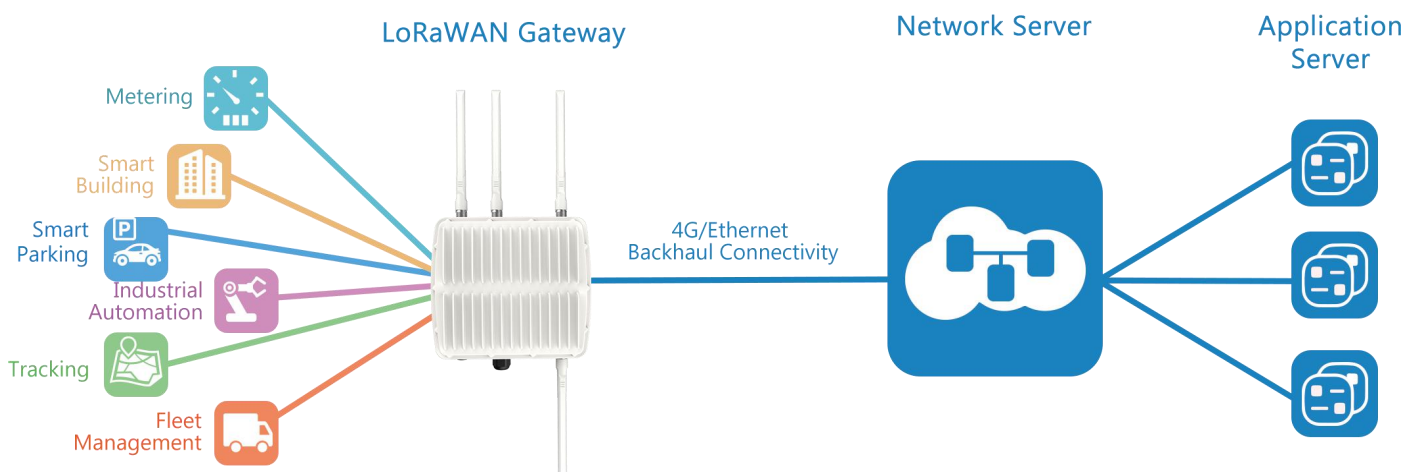


## Programmable Gateway for the Internet of Things

### ► 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 × 50 Ω N-Type (Center PIN: Female) for 8-channel model 2 × 50 Ω N-Type (Center PIN: Female) for 16-channel model
Channel	8 (Up to 16)
Frequency Band	EU433, CN470-510, EU863-870, IN865, US902-928, AU915-928 and KR920-923 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 × RJ45 (PoE PD)
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
<b>Power Supply and Consumption</b>	
Connector	1 × 802.3 af/at PoE input
Power Consumption	Typical 4.9 W, Max 6.5W (8 channels) Typical 6 W, Max 8.2W (16 channels)
<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 × LoRa, 1 × Cellular
Built-in	Watchdog, RTC, Timer
Certification	CE, FCC
<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

## ► Ordering Information

Model	UG87
Air Interface	LTE(LTE-FDD/LTE-TDD)/CDMA(CDMA 1x/EVDO)/TD-SDMA/DC-HSPA+/HSPA+ /HSUPA/HSDPA/WCDMA/EDGE/GPRS/GSM
4G	-E: B1/B3/B5/B7/B8/B20@FDD LTE, B38/B40/B41@TDD LTE -V: B4/B13@FDD LTE -A: B2/B4/B12@FDD LTE -AU: B1/B2/B3/B4/B5/B7/B8/B28@FDD LTE, B40@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 -CE: B1/B8@WCDMA, B34/B39@TD-SCDMA, BC0@CDMA2000 1x/EVDO
2G	-E: 900/1800@GSM -AU: 850/900/1800/1900@GSM -CE: 900/1800@GSM

\*: Any other frequency band requirements please contact us.