

# Ursalink UG 85 LoRaWAN Gateway

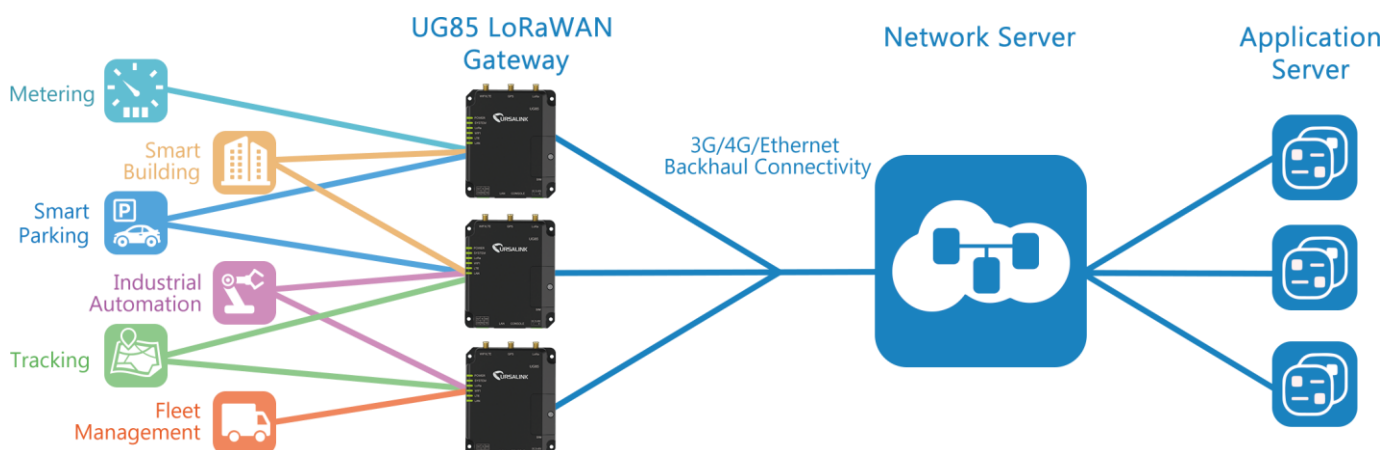


## LoRaWAN Gateway for the Internet of Things

### ► Features

- Up to 8 Simultaneous channels
- Backhaul Connectivity (Eth/WIFI/3G/4G)
- Long Range over 10 km Radius
- Compliance to LoRaWAN Class A and Class C
- Build-in DI/DO, Serial Port and GPS
- Embedded Network Server

### ► Application Example

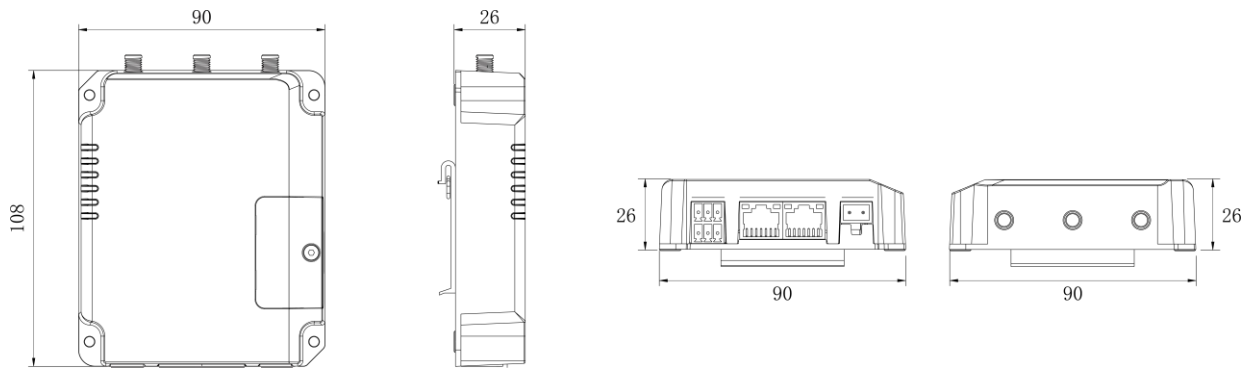


## ► Specifications

<b>Model</b>	<b>UG85</b>
<b>Hardware System</b>	
CPU	800 MHz, 64-bit ARM Cortex-A53
Memory	512 MB DDR3 RAM
Flash	8 GB eMMC
<b>LoRaWAN</b>	
Connector	1 × 50 Ω SMA (Center PIN: SMA Female)
Channel	8
Frequency Band	Supports EU 863-870, US 902-928, EU 433, AU 915-928, CN 470-510, IN865 ,AS923 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>	
Ports	1 × RJ-45 (PoE PD Optional)
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 Interfaces (Optional)</b>	
Connectors	1 × 50 Ω SMA (Center PIN: SMA Female)
SIM Slots	2
<b>Wi-Fi (Optional)</b>	
Connectors	1 × 50 Ω SMA (Center PIN: SMA Male)
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 (Optional)</b>	
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

<b>Serial Interface</b>	
Ports	1 × RS232
Connector	Terminal Block
Band Rate	300 bps to 230400 bps
<b>IO</b>	
Connector	Terminal Block
Digital	1 × DI + 1 × DO
<b>Console Interface</b>	
Connector	1 × RJ45
<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>	
Power Input	2-pin with 5.08 mm terminal block (Optional: 1 × 802.3 af/at PoE PD)
Input Voltage	9-48 VDC
Power Consumption	Typical 2.3 W, Max 6.5 W
<b>Physical Characteristics</b>	
Ingress Protection	IP30
Dimensions	108 x 90 x 26 mm
Mounting	Desktop, Wall or DIN Rail Mounting
<b>Others</b>	
Reset Button	1 × RESET
LED Indicators	1 × POWER, 1 × SYSTEM, 1 × LoRa, 1 × Wi-Fi, 1 × LTE, 1 × LAN
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

## ▶ Product Images/Dimensions (mm)



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