



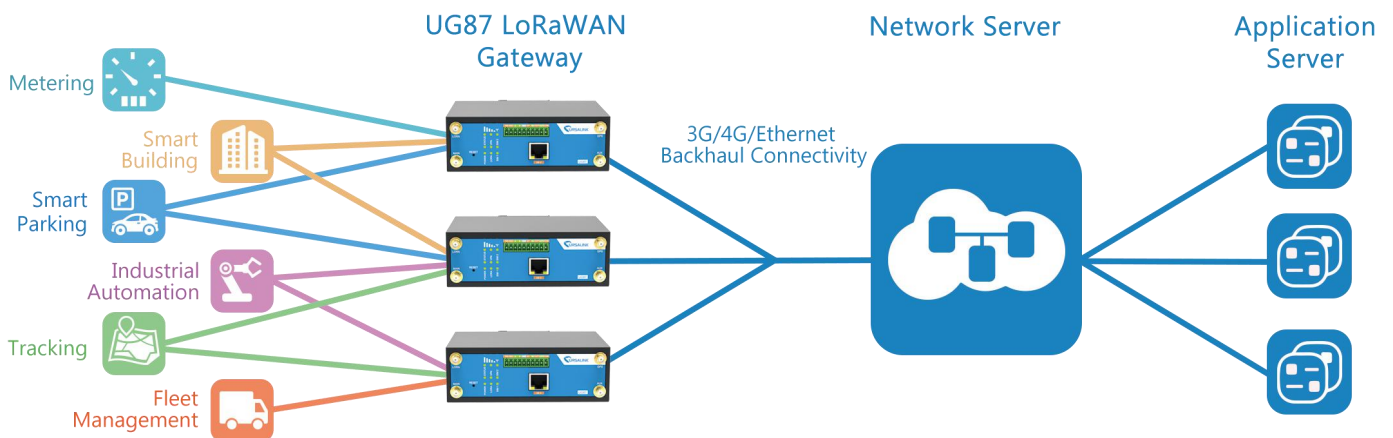
Programmable Gateway for the Internet of Things



Introduction

Ursalink UG87 is an industrial-grade 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 IoT technical challenges.

Application Example

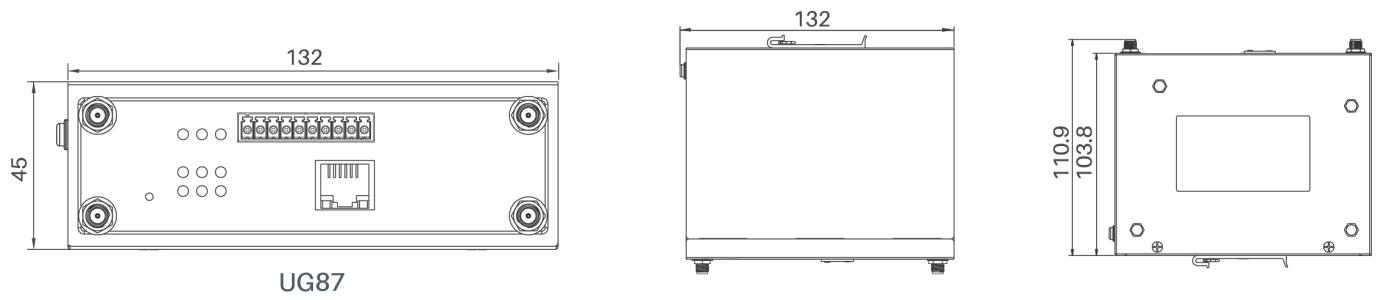


► Specifications

Model	UG87-Indoor	UG87-Outdoor
Cellular Interfaces		
Connectors	2 × 50 Ω SMA (Center PIN: SMA Female)	
SIM Slots	2	
LoRaWAN		
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 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	
Hardware System		
CPU	800 MHz, 64-bit ARM Cortex-A53	
Memory	512 MB DDR3 RAM	
Flash	4 GB Flash	
Ethernet Interface		
Ports	1 × RJ-45	
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)	
Serial Interface		
Ports	1 × RS232	
Connector	Terminal Block	
Baud Rate	300 bps to 230400 bps	
IO		
Connector	(4) pin screw down terminal block	
Digital	2 × DI + 2 × DO	
GPS		
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	

Software		
Network Protocols	PPPoE, SNMP v1/v2c/v3, TCP, UDP, DHCP, DDNS, HTTP, HTTPS, DNS, ARP, SNTP, Telnet, SSH, etc.	
VPN Tunnel	OpenVPN/IPsec/PPTP/L2TP/GRE/DMVPN	
Access Authentication	CHAP/PAP/MS-CHAP/MS-CHAPV2	
Firewall	ACL/DMZ/Port Mapping/MAC Binding	
Management	Web, CLI, SMS, On-demand dial up	
Reliability	WAN Failover, Dual SIM Backup	
Serial Port	Transparent (TCP Client/Server, UDP), Modbus Gateway (Modbus TCP to Modbus RTU), Modbus Master	
Power Supply and Consumption		
Connector	2-pin with 5.08 mm terminal block	
Input Voltage	9-48 VDC	
Power Consumption	Typical 2.4 W (Max 4.8 W)	
Physical Characteristics		
Ingress Protection	IP30	IP67
Weight	471 g (1.04 lb)	1874 g (4.13 lb)
Dimensions	132 x 103.8 x 45 mm	254 x 222 x 89 mm
Mounting	Desktop, Wall or DIN Rail Mounting	Wall or Pole Mounting
Others		
Reset Button	1 × RESET	
LED Indicators	1 × POWER, 1 × STATUS, 1 × LORA, 1 × VPN, 1 × SIM1, 1 × SIM2, 3 × Signal strength	
Built-in	Watchdog, RTC, Timer	
Certifications	RoHS, CE, FCC	
EMC	IEC 61000-4-2 Level 3 IEC 61000-4-3 Level 4 IEC 61000-4-4 Level 3 IEC 61000-4-5 Level 4 IEC 61000-4-6 Level 3 IEC 61000-4-8 Level 4	
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	

▶ Product Images/Dimensions (mm)



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