



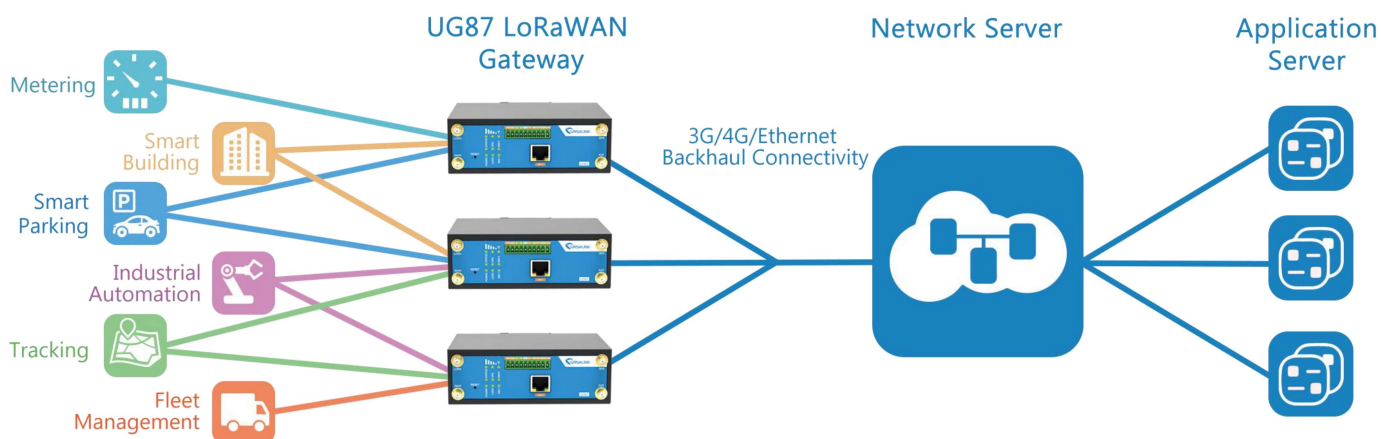
Programmable Gateway for the Internet of Things



Features

- Up to 8 Simultaneous channels
- Backhaul Connectivity (Eth/3G/4G)
- Long Range over 10 km Radius
- Integrated with Multiple Network Servers
- Compliance to LoRaWAN Class A and Class C
- Build-in DI/DO, Serial Port and GPS
- Optional Embedded Network Server
- IP67 Waterproof Casing (Outdoor Version)

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	
Wi-Fi (Optional)		
Connectors	1 × 50 Ω SMA (Center PIN: SMA Female)	
Standards	IEEE 802.11b/g/n/ac	
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)	
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 3.3 W (Max 6.4 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

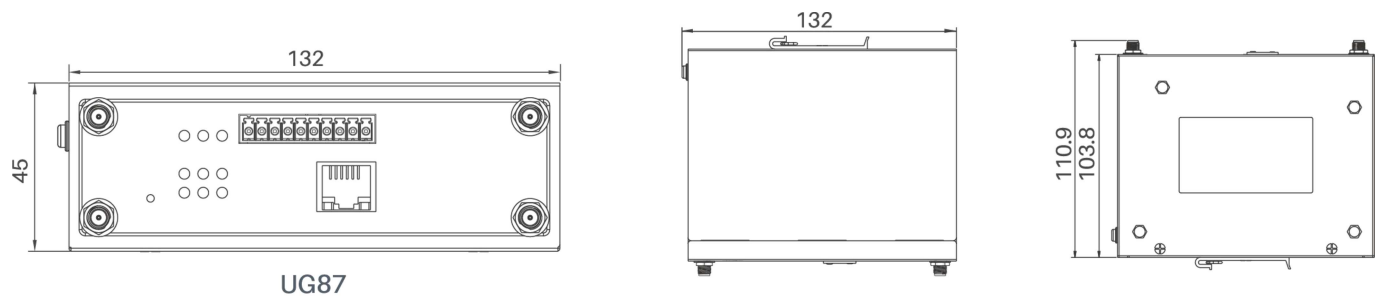
Others

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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