TECHNICAL SPECIFICATION

ATREYO®
SOLUTIONS THAT SIMPLIFY

LoRa WAN Gateway | ALWG-1638

Features

- LoRaWAN® Class A/B/C
- Multi-channel
- LTE and GSM with dual SIM support
- PoE Ethernet, GNSS and WiFi
- ARM Cortex-A7 quad core processor
- High gain LoRa antenna
- USB for debug
- SuperCAP backup
- Aluminium IP67 housing resistant to all weather
- conditions

Multichannel LoRaWAN® gateway, powered by ARM Cortex-A7 processor with an IP67 enclosure to handle tough environments. Standout features include an isolated power supply for protection and power backup. The gateway's dual SIMs ensures network connectivity redundancy. Moreover, its multiple VPN support adds an extra layer of security, serving to diverse communication needs.

Description	Parameter
Processor	
ARM	Cortex-A7 quad core
L1 cache	32KB for data, 32KB for instruction
L2 cache	512KB, 8 ways
Target frequency	960MHz
RAM	
Memory size	512MB DDR3
Memory speed	1066max
Storage	
eMMC	8Gb
USB	
USB number	1
USB type	1x C-type for debug, on bottom of the enclosure
USB protection	Surge protection

Description	Parameter
LoRaWAN®	
Compatibility	LoRaWAN, Class A/B/C
Frequency	IN865 (other country option available. Refer modem selection chart)
LoRa demodulators	8 x 8 channels LoRa packet detectors 8x SF5-SF12 LoRa 8x SF5-SF10 LoRa 1x 125/250/500 kHz high-speed 1x (G)FSK
Demodulation paths	Up to 10 parallel
Uplinks channel	8
Downlink channel	1
TX power	Up to 27 dBm @ SF12, BW 125 kHz
RX sensitivity	Down to -139 dBm @ SF12, BW 125 kHz
Data-rate	Dynamic data-rate adaptation (ADR)
Module certification	USB-IN865 (other country option available. Refer selection chart)

Description	Parameter
LoRaWAN®	
Antenna connector	N-type
Cellular	
GPRS channels	GSM850, EGSM900, DCS1800, PCS1900
TE channels	LTE-FDD B1/B3/B5/B7/B8/B20/B28 LTE-TDD B38/B40/B41
SIM card	Dual nanoSIM, tray type anti-loss holder. Support 3V/1.8V SIM
Antenna	Inbuilt inside the enclosure
GNSS	
GNSS Systems	BeiDou, Galileo, GLONASS, GPS, QZSS
Protocol	NMEA
Antenna	Inbuilt inside the enclosure
WiFi	
Data speed	Up to150Mbps
Bands	2.4 GHz ISM
Standards	802.11 b/g/n, 802.3, 802.3u 802.11e-compatible bursting and I standards
Modulation schemes	BPSK, QPSK, 16 QAM, 64 QAM
Security	WEP, TKIP, and AES, WPA, WPA2
Antenna	Inbuilt inside the enclosure
Ethernet	
Number	1
Type	10/100M port
Technology Support	Support full and half duplex Support Daisy Chain and NIC mode for different application scenarios Support MAC clone and MAC security Support 4 traffic classes (compatible with IEEE802.1D-2004)
PoE	PoE class A (18-70V DC)
Connector	RJ45 with IP67 gland

Description	Parameter
Security	
VPN	Multiple VPN support
Indicators	
Multifunction	1 RGB LED outside on bottom of the housing for all functions indication
Operating system	
OS	OpenWRT Linux
Forwarder	UDP forwarder ChirpStack MQTT forwarder
LNS	ChirpStack server
Other options	Node-RED with ChirpStack support
Power supply	
Power	18-60V DC by isolated PoE
Connector type	RJ45 (cable through gland)
Power consumption	Up to 10W Average 5W (approx)
SuperCAP	Inbuilt
Backup time	Approx 20s
Physical characteristics	
Installation	Pole / wall mounting with attached stainless steel clamp.
Housing back	Back – aluminium alloy ADC-12 – Surtec 650, salt spray duration 96hrs
Housing front	Polycarbonate – UV stabilized, UL94 V0 rated, Sabic943(f1)
Cooling	Passive
Dimensions	220×122×70mm (without antennas and cable gland)
Weight	920g (without antenna and clamp)
Environmental specification	
Operating Temp.	-25 ~ 70°C (-13 ~ 158°F)
Storage Temp.	-40 ~ 85°C (-40 ~ 176°F)
Ambient RH	5% to 95% (non-condensing)
Protection class	IP67

Ordering information

Model structure ALWG-1638- IN- LT- EU

Base model name

ALWG-1638

LoRa frequency/country

IN (IN865)
US (US915) US, Canada, Mexico, Bolivia, Peru, Uruguay, Venezuela, Colombia, Ecuador, Panama, Paraguay
EU (EU868) EU, Mauritius, Mozambique, Namibia, Saudi Arabia, South Africa, Turkey, UAE, UK, Finland, Madagascar, Malta, Switzerland, Tanzania
AU (AU915) Australia, Brazil, Argentina, New Zealand, Chile
AS (AS923) Hong-Kong, Singapore, Taiwan, Vietnam, Cambodia, Japan, Malaysia
RU (RU864) Russia

Cellular communication modem

LT (LTE communication module present)

LTE/GSM module regional information

IN (certification of LTE module for India and China)
EU (certification of LTE module for Europe)
GL (global certification of LTE module)

For more details scan or click on QR code

Disclaimer

- All dimensions mentioned in the drawings are not to scale and may vary/differ due to construction contingencies and site conditions which are subject to change as may be decided by the company.
- The specifications and amenities mentioned in this document and promotional documents are only representational and informative. The descriptions in this specification are based on the default configuration of your device.
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