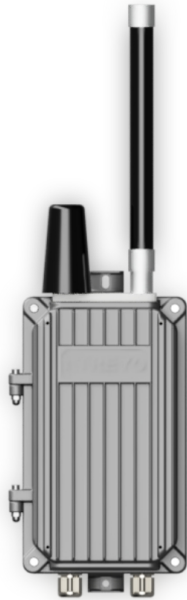


# TECHNICAL SPECIFICATION

## LoRa WAN Gateway

## AG-1630



### Features

- LoRaWAN<sup>®</sup> 1.0.2 compatible
- Multi-channel
- LTE and GSM with dual SIM support
- Ethernet, GNSS and WiFi
- ARM Cortex-A7 quad core processor
- High gain LoRa antenna
- 2 USB host (internal)
- HDMI display support (internal)
- MicroSD card (internal)
- 3 Phase internal power supply
- Battery backup
- Aluminium housing resistant to all weather conditions

Multichannel LoRa WAN<sup>™</sup> outdoor gateway with ARM Cortex-7 processor, and harsh environment resistant aluminium enclosure. Powered from 90V to 500V AC with 1 of 2 or 3

phases. It also has an emergency battery power supply. For professional LoRa WAN network applications and industrial control systems.

Description	Parameter
<b>Processor</b>	
ARM	Cortex-A7 quad core
L1 cache	32KB for data, 32KB for instruction
L2 cache	512KB, 8 ways
Target frequency	960MHz
Multimedia processing	NEON engine with SIMDv2/VFPv4 ISA support
<b>RAM</b>	
Memory size	512MB DDR3
Memory speed	1066max
<b>Graphics</b>	
HDMI	TX 1.4, resolution up to 720P
<b>Storage</b>	
MicroSD card	Up to 356Gb (SD 2.0) (inside the housing)
eMMC	8Gb (optional 16 and 32Gb)
<b>USB</b>	

Description	Parameter
USB number	2 (inside the housing)
USB type	2.0
USB overload	1.6A common to 2 port and
<b>LoRa WAN<sup>™</sup></b>	
Compatibility	LoRaWAN 1.0.2 protocol
Frequency	IN865
LoRa demodulators	x 49
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
<b>GNSS</b>	
GNSS Systems	GPS, BAIDOU

Description	Parameter
Protocol	NMEA
WiFi (Optional)	
Data speed	Up to 150Mbps
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
Ethernet	
Number	2 (1 inside the housing and one on external connector)
Type	10/100M ports
Technology Support	Support full and half duplex
	Support Daisy Chain and NIC mode for different application scenarios
	Support MAC clone and MAC security
PoE	Support 4 traffic classes (compatible with IEEE802.1D-2004)
	PoE class A (15-60V DC)
Security	
Crypto Engines	PKA Engine (RSA)
	Hash Engine (SHA3, MD5)
	Bulk Encryption/decryption Engine (AES)
Indicators	
Working	1 LED (inside)
LTE level indicator	4 LED (inside)
LTE/GSM	Active and Internet (inside)

Description	Parameter
Connected to server	1 LED (inside)
WiFi ON	1 LED (inside)
Multifunction	1 LED outside on bottom of the housing
Software	
OS support	Linux
Power supply	
Power	90-230V 1, 2 or 3 phase, or 90-500V AC single phase.
Connector type	Wire by gland
Power consumption	Up to 10W without battery charging ON (average 5W)
Battery	Battery 7.4V lithium 2200mAh (optional 4400mAh)
Backup time	Approx 3 hour continuous working and 12 hour in sleep mode (on 2200mAh battery)
Physical Characteristics	
Installation	Pole mounting
Housing	Aluminium
Cooling	Passive
Dimensions	260×150×100mm (without antennas)
Weight	3k (approx)
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)



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