GW-Multinet

IoT Outdoor Gateway

KEY POINTS

Heart of wireless networks, parallel supporting of several smart metering, IoT applications, protocols and frequencies, it is designed by Helioty to encourage the expansion of Smart City projects. The implementation of several radio technologies modules and power supply methods, allows Helioty Gateway and Data Concentrator to have a high installing flexibility and to become the concentration point of all interactive households and municipalities services

TECHNICAL SPECIFICATIONS

PRODUCT N° 63776-0015

Model	GW UNI	GW UNI + LoRa	GW LoRa
MAIN HW CARATTERISTICS			
Backhaul	-Up to two LTE 4G (fallback UMTS/HSDPA/HSUPA EDGE/GPRS/GSM; TDD CAT4) module -External 10/100 Mbit Ethernet port		
Local Connectivity	-External ZVEI–IEC1107 optical port EN 62056-21 compliant -Serial console		-Serial Console
LPWAN UNI	Up to two 169MHz 500mW radio modules UNI/TS 11291-11-4. Compliant- HT and HR features (sensitivity ≤ -112 dBm @4800 bps and ≤ -115 dBm @2400 bps) The radios can be installed in remote site up to 500/ 800 mt distance using Helioty Patent SMartCable (SMC) module in order to increase radio coverage. Both local and remote radio are provided with RF connector type N		

LPWAN LoRa™	LoRa GW 868 MHz module (Semtech Reference Design 1.5) -LoRa™ modulation technology -Public/Private LoRa Network -Frequency band 868MHz -Orthogonal spreading factors -Up to 8 parallel LoRa channel demodulation preamble -Sensitivity down to -141 dBm (SF12) -RF interface optimized to 50 ohm -Output power level up to 27 dBm -GPS receiver (optional)	
GPS Receiver		Receiver Type 48 Channels -Sensitivity (typical values):Tracking -161dBm,Acquisition -147dBm -Accuracy of Timepulse Signal:RMS 100ms
USB	One internal USB 2.0 host port (max 500mA)	
CPU	ARM Cortex-A5 (armhf) @ 536MHz	
Memory	-256 Mbyte NAND FLASH -8GB SD card -256 or 512 Mbyte DDR2@32bit	

RTC	Accuracy ≤ 30 ppm	
MAIN PHYSICAL CARATTERISTICS		
Case Dimension (LxPxH)	-200x130x200 (mm)	200x130x200 (mm)
Power Supply	-Option 1: 230Vac 50Hz class 2 (range 90-260Vac 47-63Hz) -Option 2: 48 Vdc (range 38-72 Vdc) -Option 3: solar panel with external case battery holder	
Maximum Power consumption	30 W (device fully equipped)	
Backup Battery	Internal (Lead) 12V-6Ah	
Operating temperature	-20˚C +60˚C -15˚C +50˚C if battery is included	
Storage temperature	Battery not included -25˚C +85˚C -15˚C +40˚C if battery is included (temperatures above or below the recommended limits shorten the life of the battery)	

Maximum operating relative humidity	93% (no condensing)
Ingress Protection	IP67
Weight	-Max configuration: 1,9 Kg -Wall/Pole mounting bracket: 0,45 Kg -Lead Backup Battery:2,0 kg
OPERATING SYSTEM	
Linux Embedded O.S., Kernel 4.x.x Toolchain Software Development Kit (SDK) on demand (Helioty Applications not included)	
NETWORKING	
Firewalling, routing, networking and tunneling features	
SECURITY	
Secure boot, firewall Remote Signed OS Sw Package	

COMMUNICATION PROTOCOLS			
UNI	Gas Metering AEEG 631/2013/R/GAS: -(SAC, Network Management): UNITS11291-11 applicable parts (GW), DLMS/COSEM , UNITS11291-11 applicable parts -(LWPAN): EN13757-4:2013 Fully compatible with Helioty SAC and other vendors (list by agreement)		
LoRa		-(LoRa Network Server) Semtech UDP Packet Forwarder (Beacon) -(LoRa Network Server) Semtech LoRa Basic Station Fully compatible with Helioty LoRa Network Server and others vendors	
Management	Remote alarm notification, firmware upgrade, file transfer, configuration, radio monitoring and statistics (Helioty Network Management System); MQTT/Json Helioty Open Protocol		
SIZING			
Up to 3.000 white list enrolled meters FW Upgrade Option for up to 6.000 white list enrolled meters Up to 12.000 network detected list visible meter (up to 18.000 in case of 6.000 white list enrolled meters option)	Up to 3.000 white list enrolled meters FW Upgrade Option for up to 6.000 white list enrolled meters Up to 12.000 network detected list visible meter (up to 18.000 in case of 6.000 white list enrolled meters option) Up to 5.000 LoRaWan devices	Up to 10.000 LoRaWan Devices	

COMPATIBLE ACCESSORIES	
-LoRa 868MhZ Antennas (high gain) -169MhZ Antennas (high gain) -868MhZ/169MhZ antenna cable (low loss) -Antennas mounting kit -Surge protections -external POE power supply -LoRa Antenna splitters	
CERTIFICATIONS	
EN 62368-1 EN 62311	Art. 3.1a Health and Safety
EN 55032:2015/A11:2020 EN 55035:2017/A11:2020 ETSI EN 301 489-1 V2.2.3 ETSI EN 301 489-3 V2.1.1 ETSI EN 301 489-19 V2.1.1	Art. 3.1b Electromagnetic Compatibility

ETSI EN 301 489-52 V1.2.1	
ETSI EN 301 511 V12.5.1 ETSI EN 301 908-2 V13.1.1 ETSI EN 301 908-13 V13.1.1 ETSI EN 300 220-2 V3.2.1 ETSI EN 303 413 V1.1.1	Art. 3.2 Effective use of the radio spectrum

DISCLAIMER

Helioty reserves all rights to make corrections, modifications, enhancements, and other changes to its products and services at any time without prior notice.

CONTACT INORMATION

info@helioty.com