



# **XGW1 LoRaWAN Gateway**

DATASHEET

## Revision history

Revision	Author	Date	Changes
R1	TP	10.2022.	First release

## 1 Copyright & Disclaimer

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## 2 Product variants and options

XGW1 device is by default available in a full set with aluminium main enclosure, POE and auxiliary 12V power supply inputs, LTE modem with GPS receiver, antennas for LoRaWAN, LTE and GPS and complete set of mounting brackets.

868MHz EU ISM band is default.

Other bands, customizations and variations can be made available on request to X-LOGIC.

## 3 Key features

XGW1 LoRaWAN gateway by X-LOGIC is a full feature LoRaWAN gateway based on a modular concept with highest quality components.

It provides flexible platform with main functional features:

- LoRaWAN mini PCI express concentrator board with 8x8 channels based on SX1301 chip (other SX chips available on request)
- Different network connections available: LTE/GPRS, Ethernet 10/100
- Different power supply configurations: POE (injector brick provided in the delivery set), 12V DC (i.e. for solar powered locations with LTE network connection)
- Possibility to add industrial USB flash storage and SD card – sockets available on hardware
- Running full Linux distribution
- Possible to use HDMI display and USB mouse/keyboard for testing/monitoring
- Provided complete solution to connect to Lorient and Chirpstack, tested also with TTN, Google Cloud, AWS and Azure with respective packet forwarder apps used.
- GPS available on mPCIe LTE/GPRS module
- Filesystem on EMMC storage greatly reduces possibility of filesystem corruption compared to SD Card
- Designed as all-in-one solution, can be, with provided brackets, standalone installed in the field, without additional cabinets and equipment.
- IP66 aluminium enclosure, high quality
- N-Type RF sealed connectors and cable glands as interface on the bottom side, pressure compensation included
- Operating temperature range: -30°C ~ +60°C
- Reverse ssh device management available
- Web administration for local configuration
- Custom changes according to the customer need are possible (i.e. different packet forwarders and running apps) on request it is possible to open the system for customer to make own developments

- Tested for over 1000 power removal shutdowns without filesystem corruption
- Operating system – Debian based Linux distribution

## 4 Technical properties

GENERAL PROPERTIES	
<b>Power</b>	PoE +48V input, passive POE, with bundled POE injector brick Isolated design on POE power input External 12V DC power supply Power consumption 3,5-6W
<b>CPU platform</b>	ARM running Linux eMMC storage
<b>USB ports</b>	1 x Type A
<b>Video out</b>	HDMI (on the PCB, available for lab/office/test environment)
<b>LAN</b>	Ethernet 10/100
<b>Mobile connection</b>	LTE/3G/2G (EMEA bands by default)
<b>GPS</b>	Yes
<b>LoRA concentrator</b>	SX1301 default, SX1302 and other available
<b>LoRA antenna</b>	3dBi high performance fiberglass antenna
<b>Antenna surge protection</b>	By default special antenna SPD devices are not delivered. Available on request. Antenna should not be the highest point of installation pole. Pole must be grounded.
<b>Operating temperature range</b>	-30 to +60°C
<b>Ingress protection</b>	IP66 with pressure compensation
<b>Mounting</b>	Mounting of complete assembly to a pole of 60 – 100mm diameter. All mounting accessories are a part of the standard delivery set.
<b>Size</b>	320x240x150mm volume taken by complete assembly 360mm length of default 3dBi LoRa antenna

## 5 LoRa RF properties

SX1301 base band processor emulates 49 x LoRa demodulators, 10 parallel demodulation paths. It supports 8 uplinks channels and 1 downlink channel.

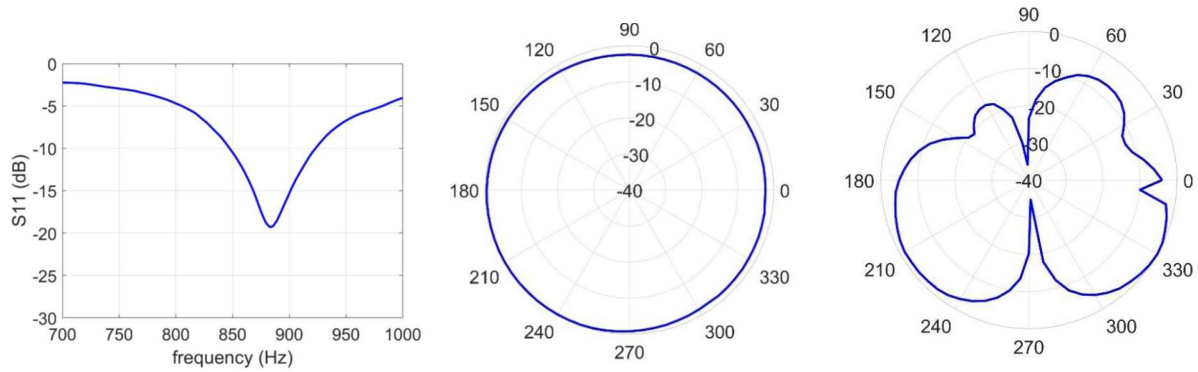
2 x SX125x Tx/Rx front-ends high/low frequency

Tx power up to 27 dBm, Rx sensitivity down to -139 dBm @ SF12, BW 125 kHz.

Supports global license-free frequency band (EU433, CN470, IN865, EU868, US915, AU915, KR920, and AS923)

Standard XGW1 version is EU868, other regional parameters are available on request.

Standard LoRa antenna properties:



## 6 Delivery set



## 7 Regulatory compliance

XGW1 device is CE certified.

### EU-certifikat o pregledu tipa

*EU-type examination certificate*

Broj / No: **RED 80210012**

<b>Proizvod:</b> <i>Product:</i>	LoRaWAN Gateway
<b>Tip/model:</b> <i>Type/model</i>	XGW1
<b>Komercijalni naziv:</b> <i>Brand name:</i>	-
<b>Podnositelj zahtjeva:</b> <i>Applicant:</i>	X-LOGIC d.o.o. Dužice 12, 10 000 Zagreb, Croatia
<b>Proizvođač:</b> <i>Manufacturer:</i>	X-LOGIC d.o.o. Dužice 12, 10 000 Zagreb, Croatia
<b>Primijenjene norme:</b> <i>Related standards:</i>	EN 62368-1:2014+A11:2017 EN 62311:2008 EN 301 489-1 V2.2.3:2019 Draft EN 301 489-52 V1.1.2:2020* EN 300 220-2 V3.2.1:2018
<b>Broj izvještaja prijavljenog tijela:</b> <i>Notified Body Evaluation Report No:</i>	80210012RED

## 8 Environmental

XGW1 devices shall be disposed and recycled following all applicable regulations in your area and common sense.