

## Product Specifications

Model: TLG7X21L-NX-ECs

Ver.1.5

### LoRa 16CH Indoor Gateway



## 1. Description

TLG7X21L is a high performance IoT gateway that adopt **LoRaWAN™** technology.

**LoRaWAN™** is a Low Power Wide Area Network (LPWAN), and uses ISM band and target to machine-to-machine (M2M) and Internet of Things (IoT) applications.

TLG7X21L is a TI ARM Cortex A8 based platform and design for indoor wireless transmission applications, i.e. smart factory and warehouse management, smart mall, hospital and health center management.

The power supply is by POE (Power over Ethernet). Channel access with Listen-before-talk (LBT). TLG7X21L provide LTE 4G and Ethernet to connect the cloud server.

Kiwitec has already offered different bands for different regions, i.e. 470MHz, 868 MHz and 915MHz. It's the cost-effective solution for long range, and low power systems.

## 2. Features

- LoRa packet forwarder
- Long range transmission, could be almost 10Km (depends on the interference in the air)
- High sensitivity: -137dBm
- Port 10/100Mbps Fast Ethernet
- TCP Server/Client, UDP.
- MQTT protocol
- Web GUI for configuration and web management
- Friendly FW upgrade through Web GUI
- JavaScript programs plug-in by customers for special applications (customization)
- Built-in Node-RED application development environment
- Built-in splitter in system, and support POE (Power of Ethernet)

### 3. Application

- Smart city: smart campus, smart meter, smart parking and smart traffic monitoring.
- Smart agriculture and animal husbandry
- Smart Industry: smart warehouse, smart transportation
- Smart sensor applications

### 4. Product Specifications

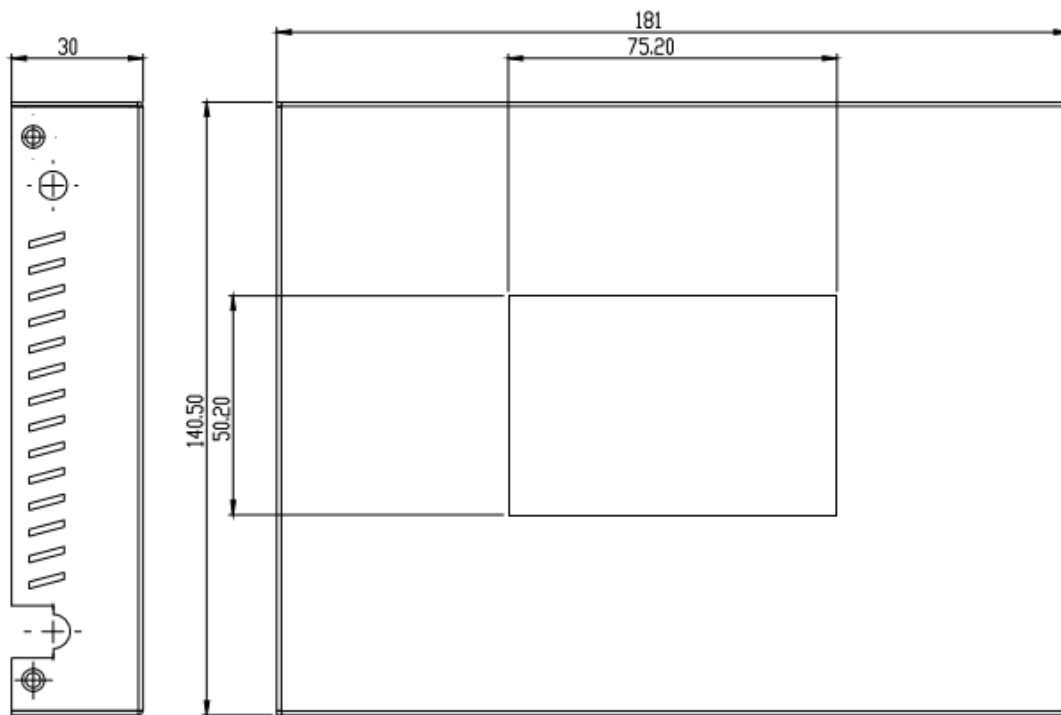
#### 4.1. General specifications

LoRa Chip	Semtech SX1301
SoC	TI AM3352 (Cortex A8)
Operating Voltage	30 Watt POE (Power over Ethernet)
Operating System	Linux v4.1.6
Flash	256 MB (NAND Type)
Memory	512 MB (DDRIII)
<b>LoRa Interface</b>	
Modulation	LoRa
Transceiver	Semtech SX1301
Frequency Range	902~928MHz for USA 920~928MHz for JPN 920~925MHz for TWN 863~870MHz for EU 470~490MHz for China
Data rate	0.292~21.875Kbps
Sensitivity	-137dBm
<b>LTE module</b>	
LTE Module	Quectel EC25 serials for EU/USA/JPN/TWN Quectel EC20-CE for China
<b>System</b>	
LoRa Antenna	3dBi (for JPN, USA, EU) 5dBi (for China)

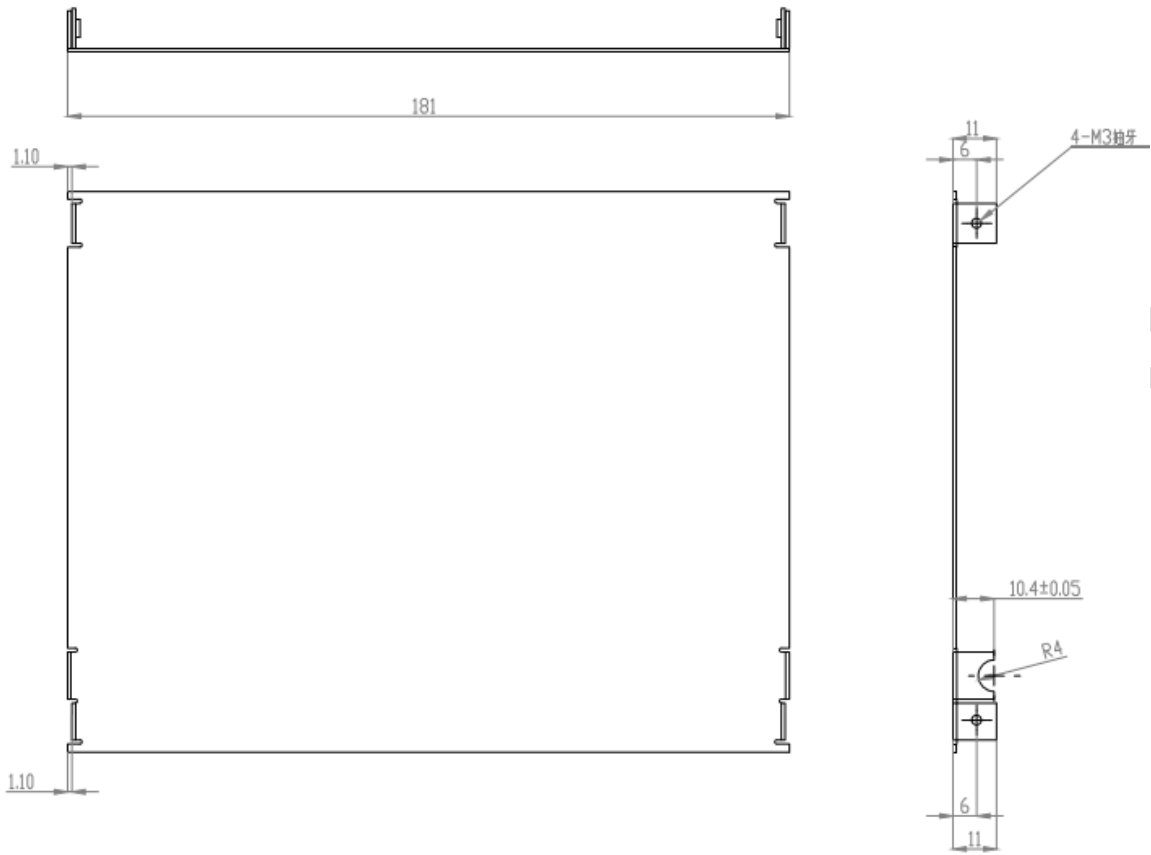
Interface	SMA connector x 4 SIM card slot x 1 RJ45 connector x 1 Standard USB x 1
Dimension	181X140.5X30 (mm) without connectors
Operation Temp.	-40~60° C
Storage Temp.	-40~80° C
Compliance of Certificate	FCC/TELEC/VCCI

## 4.2. Mechanical Drawing

### Bottom cover

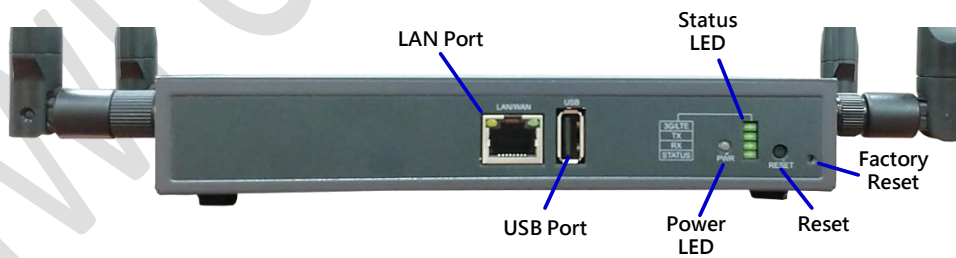


## Top Cover



## 4.3. Indoor Gateway Outlook

### Front View of Indoor Gateway



### Right-side View of Indoor Gateway

