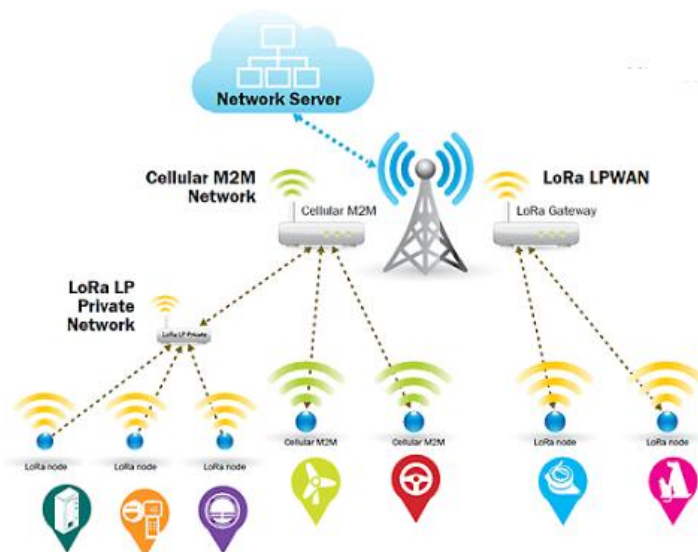


Indoor LoRa Gateway Quick Setup Guide (GPE810U)



1. Introduction

LoRa indoor gateway is designed to meet the needs of IoT services. This indoor gateway allow the users to setup this in indoor environment as an aggregator of LoRa sensors to the internet for the related services. Tomorrow's connected devices will control everything from indoor temperatures to air conditioner, from the flow of energy through our cities to the flow of critical healthcare data, unlocking hidden value in unconnected machines. So the connectivity is critical to generate intelligence, except the WiFi, LoRa is also an alternatively solution for indoor applications.



2. Hardware Specifications

Feature	Description
Processor	TI AM3352 ARM Cortex-A8, 1-GHz
Storage	4/8GB eMMC
Memory	DDR3 4Gb
2.4G WiFi	TI WL1831MOD b/g/n single band 2.4G 1T1R
Sensor-LoRa 868 MHz	Semtech FPGA+SX1301 (daughter card)
External Power Jack	12V/1.5A DC_IN
I/O Port	1.RJ45x1, 1 WAN 10/100/1000 2.Reset button x 1 3.USB x 1 4.SMA x 1
Dimension	A x B x C mm (128.9 x 128.9 x 26.2)
Weight	205g
Housing Color	White

3. LEDs Specification

	Type	Status	Comment
1	Internet	Constant Off	Physical cable error.
2	Internet	Constant Light Red	Lrr serv. Connector fixed by Actility is not available.
3	Internet	Constant Light Blue	Lrr serv. Connector fixed by Actility is available.
4	Internet	Blinking Blue	Data transfer with lrr serv.
5	WiFi ACT	Constant Off	Wifi AP is not exist.
6	WiFi ACT	Constant Light Blue	Wifi AP is enable.
7	WiFi ACT	Blinking Blue	There is the traffic between Indoor GW and Wireless clients.
8	WiFi EN	Constant Off	Wifi AP and Wifi client are not enable.
9	WiFi EN	Constant Light Blue	The one of Wifi AP and Wifi client is existed.
10	LoRa	Constant off	LoRa radio is off.
11	LoRa	Constant Light Blue	LoRa radio is on.
12	LoRa	Blinking Blue	LoRa radio is on and LoRa traffic is transferring.

4. Software setup

4.1 Use web interface to setup LoRa Indoor GW under Ethernet deployment mode

4.1.1 Power up Indoor LoRa GW

4.1.2 Set PC/NB ether port IPv4 setting in user PC statically for example, 192.168.127.100.

4.1.3 Use PC/NB ether port connect to the Indoor LoRa GW Ethernet port, and then open a browser to Indoor LoRa GW's IP (192.168.127.250) to access its web interface. The login information is like:

Username: [bsconfig](#)

Password: [aup6g/t;3](#)

- Use the hidden webpage to enable Telnet or SSH service on Indoor GW.

<http://192.168.127.250/hiddenpage.html>

Username : [foxconfig](#)

Password : [cj/6c93!](#)

4.1.4 Required a web browser

Chrome version "55.0.2883.87 m" web browser to access Indoor LoRa GW web page.

4.1.5 Connection to Indoor LoRa GW web UI

STATUS	STATUS
WAN	Firmware Version: PCG020C-20170322-FULLSDK1003
WiFi AP	HW Revision: PCG020C-V2
NTP	Wan Status: ETH, 192.168.31.47
Management	Forwarding: NO
LRR Log	- Ping GW: NO
	- Check DNS Server: 46584254C000011B
	- Ping Network Server: YES
	Gateway ID: PASS (DNS#1)

4.2. Set WAN interface

Select [WAN] page for setting WAN configuration

STATUS

WAN

WiFi AP

NTP

Management

LRR Log

WAN Settings

Primary WAN Type

☒ Ethernet

☐ WiFi

☐ LTE

Secondary WAN Type

☐ Ethernet

☐ WiFi

☐ LTE

☒ None

Ethernet Settings

Ethernet IP Type

☐ Static

☒ DHCP

WiFi Client Settings

WiFi IP Type

☐ Static

☒ DHCP

WiFi Security Type

☒ Open

☐ WPA2-PSK

☐ WPA/WPA2-PSK

WiFi SSID

FOXC_AP

WiFi WPA Passphrase

LTE Settings

LTE Power

☐ Enable

☒ Disable

LTE APN

internet

LTE Username

any

LTE Password

Apply

- WiFi client can be WAN interface, and it is independent from WiFi AP mode.

4.2.1 Select “Ethernet” as WAN

Use DHCP Mode to get IP address automatically

- A. Set Primary WAN type as “Ethernet”
- B. Set Ethernet IP Type under **Ethernet Settings** as “DHCP”
- C. Press **Apply** button

The screenshot shows the 'WAN Settings' page. On the left, a sidebar menu has 'WAN' highlighted with a red box. The main content area shows 'Primary WAN Type' with radio buttons for Ethernet (selected), WiFi, and LTE. Below it, 'Secondary WAN Type' has radio buttons for Ethernet, WiFi, LTE, and None. Under the 'Ethernet Settings' section, 'Ethernet IP Type' has radio buttons for Static and DHCP (selected), with DHCP highlighted by a red box.

- Secondary WAN will be used when Primary WAN is dead.

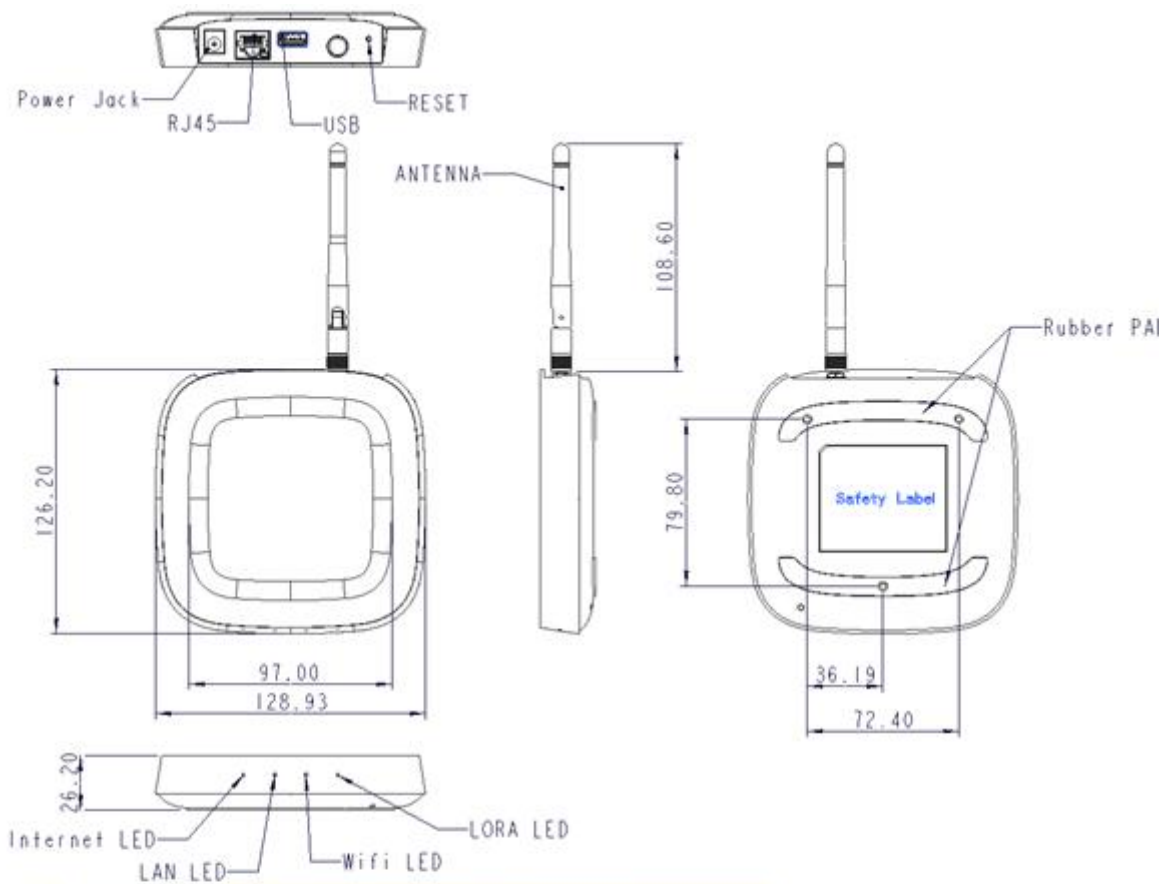
4.2.3 Use static IP Mode

- A. Set Primary WAN type as “Ethernet”
- B. Set Ethernet IP Type under **Ethernet Settings** as “Static”
- C. Configure proper settings in IP address / Netmask / Gateway / Primary DNS / Secondary DNS under Static IP Settings
- D. Press **Apply** button

This screenshot shows the 'WAN Settings' page with 'Ethernet IP Type' set to 'Static' (highlighted with a red box). The 'Ethernet Settings' section contains several input fields: IP Address (192.168.128.250), Netmask (255.255.255.0), Gateway IP address (192.168.128.1), Primary DNS IP address (166.95.1.1), and Secondary DNS IP address (8.8.8.8). The sidebar menu on the left includes 'WAN' (highlighted), 'WiFi AP', 'NTP', 'Base Station', 'Management', and 'LRR Log'.

- “NTP” is for users able to setup five NTP server maximum. GW will query NTP server from the first one until GW get the response from NTP server.
- “LRR log” can upload / export LRR TRACE.log from GW to local user space.

5. Mechanical and Accessory



Assessory List:

A: Power Supply * 1

B:Antenna * 1

C:Gateway* 1

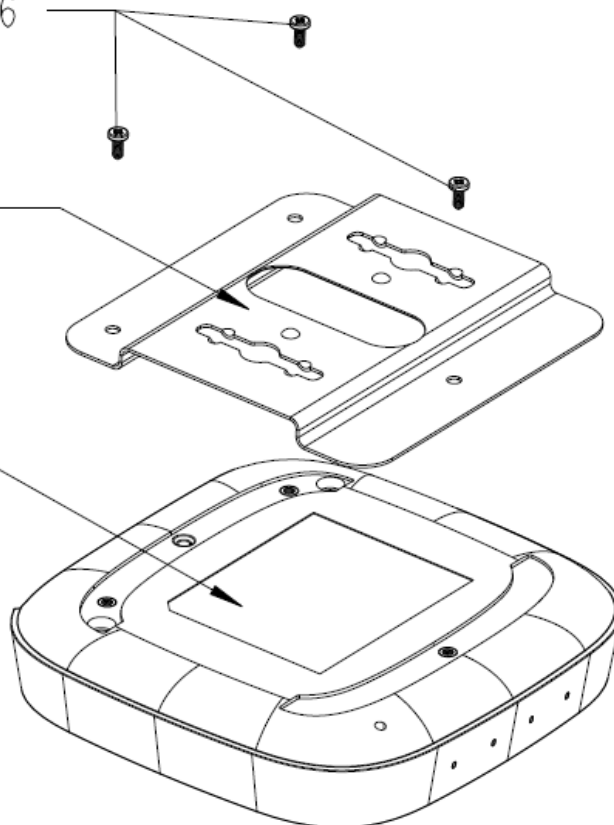
5.1 Wall Mount support

This product may provide the optional wall mounting support due to the 3 nuts on its bottom. For this function, 3 pieces of machine screws shall be used, and the recommended spec is M3X6mm or others appropriate.

Machine Screw: M3*6

Metal Mount

Gateway



Federal Communication Commission Interference Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution:

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- RF Modules installed in this product must not be co-located or operating in conjunction with any other antenna or transmitters, except when installed in accordance with FCC multi-transmitter product guidelines.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Country Code selection feature to be disabled for products marketed to the US/CANADA