

Setup Guide

Kuando IoT Busylight – LoRaWAN

Version 3.1

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1. Adding a device to the LoRaWAN network

The process of adding the device to the LoRaWAN depends on selected GW and Network Server setup (See user guide provided from your network provider). Make sure the Busylight is added as a class C device.

In order to add the device to a LoRaWAN network you need:

- a) Device EUI: 16 digit code/QR-code can be found on the cord label and on the box.



- b) Application EUI: 16 digit code assigned for the application.
 - a. Default is **70B3D57ED1000000**
 - b. Alternative code can be assigned and available through Plenom or the Solution Partner.
- c) Application Key: 32 digit code assigned for the application.
 - a. A unique number composed by the 16 digit **AppEUI** and the 16 digit **DeviceEUI**.
 - i. Example: **70B3D57ED1000000202020360E0C0F02**
 - b. Alternative code can be assigned and available through Plenom

2. Connect and power up the device for the first time

- a) Please make sure LoRaWAN Gateways are in reach of the device.
- b) Connect the USB and power adaptor.



- c) Plug in the adaptor to power socket to a power up the Busylight.
- d) The device will start up with a white blink, followed by a soft yellow color. In this mode it will try to connect sending a JoinRequest to LoRaWAN network.
- e) The light turns into a soft green color when joined and connected to the LoRaWAN network (Note: this will only happen if the device has been added on the network server)
- f) If no connection is made, the device will stay yellow and keep trying to connect
- g) After join the device will initial send uplink with acknowledge request. When uplink is confirmed keep alive signals (unconfirmed) will be send every 30 min.
 - PLEASE NOTE for EU: If many devices are started within short time, there is a risk for duty cycle on join accept. It might take longer time for all to join, but device will keep requesting until join is accepted.
 - PLEASE NOTE for US and AU: As the LoRaWAN band for US and AUS include 64 upstream channels it might take some time before the devices hits a frequency an 8- channel gateway is listening on. Therefore, it can take some time before the keep alive signal is visible and stabile in server log.

3. Recommended NS settings.

Plenom recommend the following settings for using the kuando Busylight in indoor office settings. Please coordinate with your server admin or provider for these settings.

- Receive Window: RX2
- RX2 Data-Rate
 - EU: 4 or 5
 - US: 2
 - AU: 4
- ADR: Disabled on server side.
- Default channel mask: 8-channel
- EU Channel frequency list (MHz): 867.1; 867.3; 867.5; 867.7; 867.9
- Busylight IoT is LoRaWAN MAC version 1.0.3