Technical Documentation

Kuando IoT Busylight - LoRa

Contents

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. Default is **D3FD8EEED7E8881025CC63D5E8E1D7FB**
   b. Alternative code can be assigned and available through Plenom or the Solution Partner.

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 search for LoRaWan network.
e) The light turns into a soft green color when 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

How to compose the LoRa payload.

Before the Busylight can change color, an application controlling the logic needs to be integrated/developed. Please see documentation on LoRaWAN network server to learn how to connect an application.

Payload for the Lora Busylight is a 5 byte array.
Byte 0: Red Color intensity (0..255)
Byte 1: Blue Color intensity (0..255)
Byte 2: Green Color intensity (0..255)
Byte 3: On duration (0..255)
Byte 4: Off duration (0..255)

Example for a blue static light:
Byte[0]=0
Byte[1]=255
Byte[2]=0
Byte[3]=255
Byte[4]=0

Depending on the network provider, this byte array needs to be encoded in base64 or something similar.
The above byte array would result in this base64 string: AP8A/wA=

LoRa FPort

Busylight uses FPort 15

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