

EZMK

Product description

Rev.5 – March/2022



1. Overview

The EZ-MK is a complete system solution for Battery operated sensors application, stand along for period of 2-10 years without power supply (Depend on communication cycle).

Based on Telit LTE Cat M **ME310G1-WW** module, the unit includes microcontroller for low energy and 19,000ma/h D-Size Li Primary battery.

Option Sensors

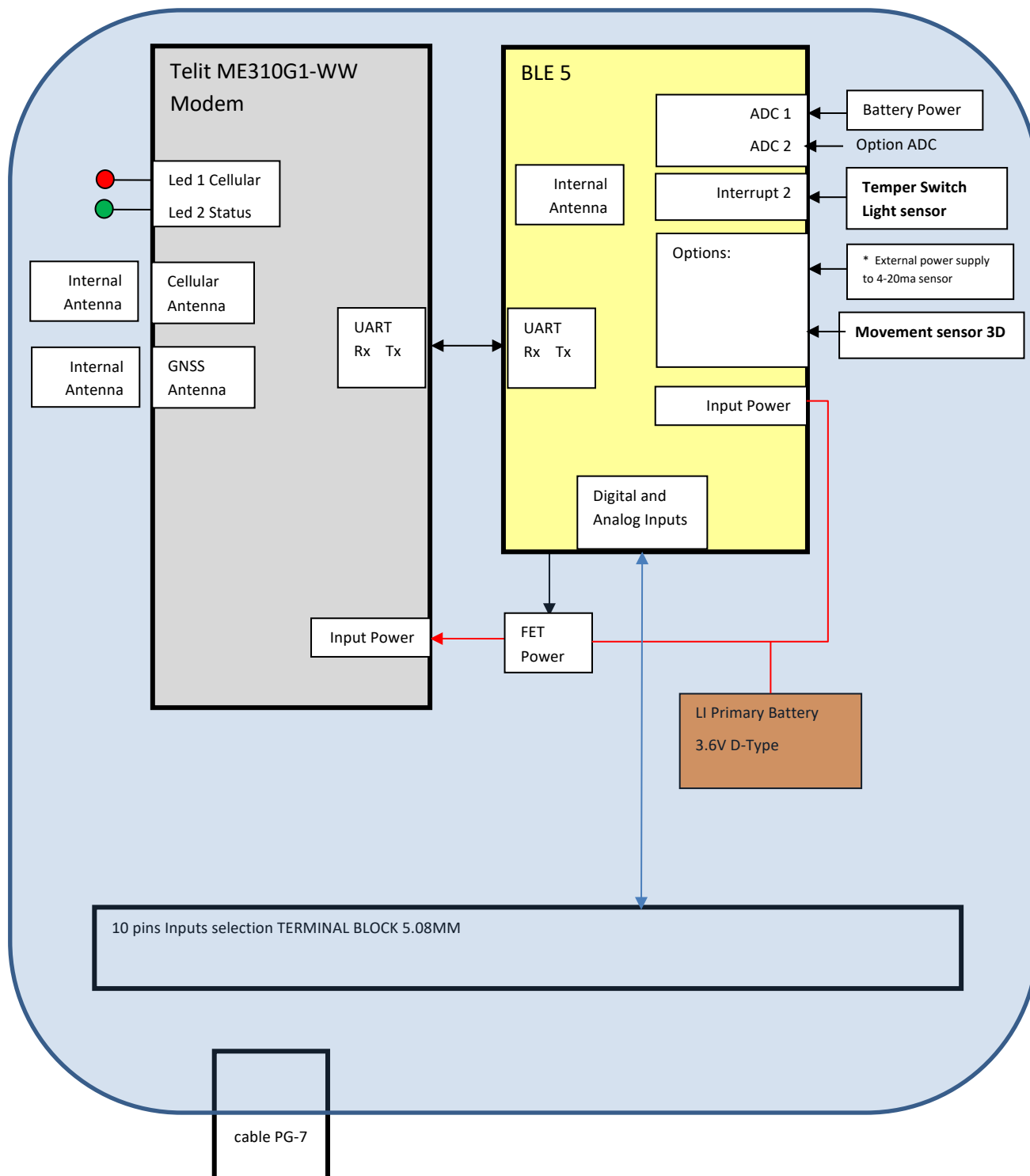
1. Movement sensor
2. Light sensor

2. Hardware Interface Description

2.1 Main features of the EZ-MK

Feature	Implementation
Incorporates Telit ME310G1-WW LTE Cat M module	The Telit module handles all cellular and GNSS processing
Option: Telit BLE S50	The BLE use for low energy, detection of sensors, detection of Temper switch.
Frequency bands	LTE Cat-M global Bands with fall over to 2G global 4G bands: B1(2100), B2(1900),B3(1800),B4(AWS1700),B5(850), B8(900),B12(700), B13(700),B18(800), B19(800),B20(800),B26(850),B28(700) 2G bands: B2(1900),B3(1800),B5(850),B8(900)
Battery D-Type	Primary battery Single supply voltage 3.6V 19A/H
Low energy levels	Consumption of less than 10µA with cellular modem OFF, Cellular wakeup from sleep mode when external sensor or temper switch change.
Battery Backup	19,000ma/H LI primary battery
Antennas internal	Cellular antenna 2.5db Option: GNSS antenna
Options assemble on hardware	option 1: Movement sensor 3D option 2: Light sensor (Light sensor tamper) option 3: ADC input and Digital inputs option 4: External temperature option 5: The unit supplies 5V or 12V (must be defined at the order) for external sensors (limited to 100mA)

2.2 Hardware block diagram



3. Internal Description

The selected battery Li/SOCl₂

Model : ER34615 + HPC1550

Capacity : 19Ah

Nominal Voltage: 3.6V

Max dimension: $\phi 34\text{mm} \times H60.5\text{mm}$ Max weight: 118g

4. How it works

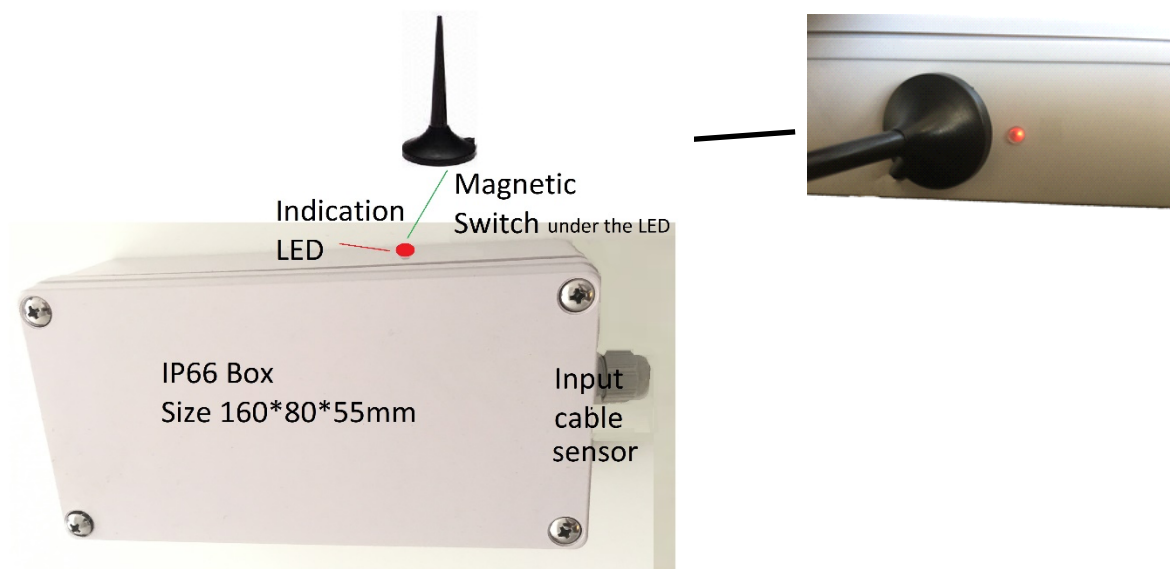
EZMK unit arrived out of the box in sleeping mode

To startup the unit, use the provide magnet, place the magnet near the light guide

The RED led will come on for 1 sec – this indicate the unit is working

Estimate 30 second after, the RED led will blinking 5 time – this indicate the unit is connected to the cloud (at this point you can view the unit on cloud)

The name of the register unit on the cloud will be the IMEI number on the back sticker.

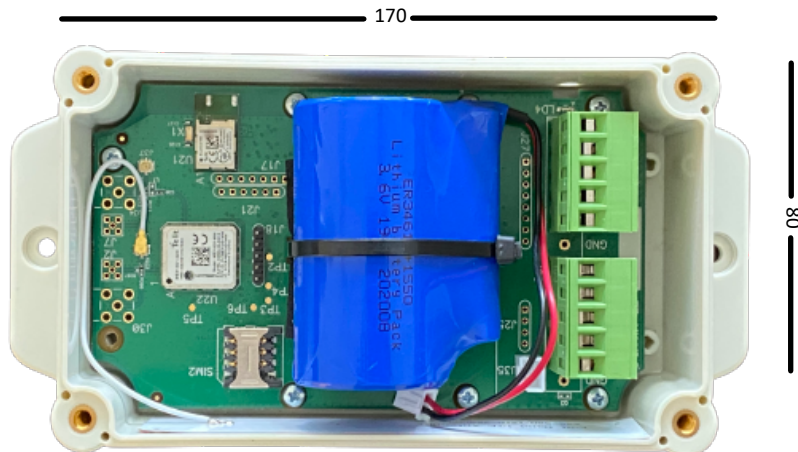


5. General Product Description

5.1 Dimensions

External Dimensions: 170mm x 80mm x 55mm

Plastic IP68



5.2 Weight

The weight of the EZ-MK is 400 grams.

6. Environmental requirements Temperature range

Operating Temperature Range	Ambient temperature in plastic enclosure	Note
	-40°C to +85°C	The module is fully functional in all the temperature range.
Storage and Non-Operating Temperature Range	-40°C to +85°C	

6.1 Air humidity range

5% - 95% non-condensing

6.2 RoHS compliance

All hardware components are fully compliant with the EU RoHS and WEEE Directives

7. Option Magnetic Holders



8. Connection to cloud example

8.1 Communication Manhole cover

