



NB-IOT & GNSS STARTER KIT

Starter Kit Technical Specifications & User Manual



Purpose of the Document

The purpose of this document is to explain the technical specifications and manual for using the starter kit with NB-IoT & GNSS hardware board.

Document History

Version	Author	Date	Description
A	5G HUB	04.28.2020	Initial Document
A	5G HUB	02.27.2021	Minor update and add downloadable software

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1 Package Contents

1.1 Software

Arduino software can be downloaded from the following website:

<https://github.com/5ghub/5G-NB-IoT/tree/master/KitSketches>

To use the board with Arduino IDE and starts running Arduino projects and sketches, install the following software:

Install Arduino IDE for Windows from the following website:

<https://www.arduino.cc/en/Main/Software>

Download and Install LTE&GNSS modem driver for Windows OS:

<https://github.com/5ghub/5G-NB-IoT/tree/master/Driver>

Download and Install QNavigator &QCOM tools for Quectel BG96 here:

<https://github.com/5ghub/5G-NB-IoT/tree/master/Tools>

Download and install Arduino library (**5G-NB-IoT_Arduino.zip**) here:

<https://github.com/5ghub/5G-NB-IoT>

All the following software can be installed from the GitHub location here:

<https://github.com/5ghub/5G-NB-IoT>

[LTE cellular connectivity on Windows OS](#)

YouTube tutorials:

[5G NB-IoT Kit – YouTube](#)

1.2 Hardware

Item #	Name	Quantity
1	5G NB-IoT Hardware Board	1
2	LTE & GPS Antenna	1
3	4*4 Matrix Keypad	1
4	5V Relay	1
5	Step Motor	1
6	Temperature Sensor LM35	1
7	Motor	1
8	IR Receiver	1
9	Vibration Sensor SW-520D	2
10	Jumper Cap	4
11	Key Switch(yellow)	5
12	DHT11 Module	1
13	Clock Module	1
14	Big Sound Module	1
15	Water Module	1
16	Photocell	3
17	Active Buzzer	1
18	SN74HC595	1
19	3-color LED	1
20	7 Segment	1
21	4-7 Segment	1
22	Passive Buzzer	1
23	B10K Variable	1
24	Flame	1
25	SG90 Servo	1
26	1602 Display	1
27	8*8 Matrix	1
28	830 Breadboard	1
29	Joystick	1

30	RFID Module	1
31	Remote Control	1
32	Blue LED	10
33	Red LED	10
34	Green LED	10
35	330R Resistance	10
36	220R Resistance	10
37	10K Resistance	10
38	1K Resistance	10
39	Jumper Wire	1
40	F-M Dupont Wire	1
41	2.54mm 40Pin	1



Figure 2. Firm Package for the Kit

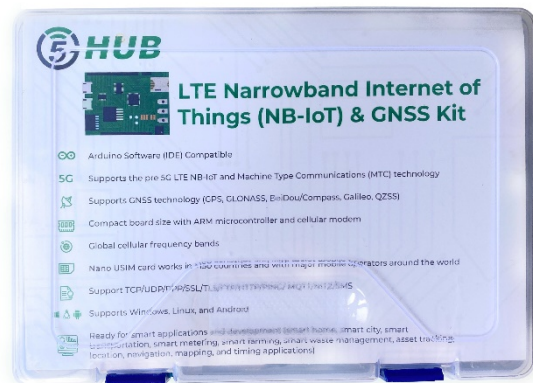


Figure 3. Package Top View

3 References

- [1] Arduino IDE, <https://www.arduino.cc/en/Main/Software>
- [2] Arduino IDE, <https://www.arduino.cc/en/Guide/ArduinoZero>
- [3] Microchip, “Low-Power, 32-bit Cortex-M0+ MCU with Advanced Analog and PWM”