

ST Microelectronics / Verizon LTE-M IoT Starter Kit



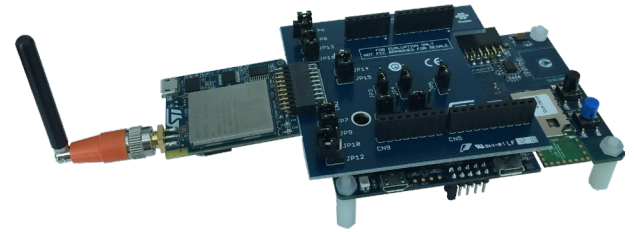
Get your next cellular IoT project off the ground with the ST Microelectronics / Verizon LTE-M IoT Starter Kit, which combines best in-class processing, connectivity, cloud capabilities, credited Verizon open development end-device certification, and an IoT Developer plan. Together, the kit provides all the necessary hardware, tools, and services to enable development across a wide range of IoT applications. The development kit is powered by a board set, combining an ST Discovery Kit IoT Node featuring a STM32L4 microcontroller, multiple sensors and assorted RF technologies with an LTE Cat M1 / NB-IoT modem plug-in module. The rich hardware solution enables a wide range of IoT use cases and sets the embedded IoT product developer on the path to creating rapid prototypes and proof-of-concepts. The software provided enables fast cellular based prototyping and is fully reusable for cost optimized production, providing a significant gain in time to market. It provides a set of API calls allowing non-cellular experts to very quickly develop end applications. All the cellular complexity is abstracted for modem initialization, modem commands, error management, and facilitating Verizon final device certification.

A sensor to cloud example application is provided based on Microsoft Azure and IoT Central dashboard.

FEATURES

STM32 Discovery Board Features

- Ultra-low-power STM32L4 Series microcontroller based on Arm® Cortex®-M4 core with 1 Mbyte of Flash memory and 128 Kbytes of SRAM, in LQFP100 package
- Multiple Sensors:
 - 2 digital microphones (MP34DT01), Humidity and temperature sensor (HTS221)
 - 3D magnetometer (LIS3MDL), 3D accelerometer and 3D gyroscope (LSM6DSL)
 - Pressure sensor (LPS22HB), Time-of-Flight proximity sensor (VL53LOX)
- RF Communications:
 - Bluetooth® V4.1 module (SPBTLE-RF)
 - Sub-GHz RF module (SPSGRF-915)
 - 802.11 b/g/n Wi-Fi® module (ISM43362-M3G-L44)
 - Dynamic NFC tag (M24SR) with its printed NFC antenna
- LEDs, 2 push-buttons (user and reset)
- USB OTG FS with Micro-AB connector
- On-board ST-LINK/V2-1 debugger/programmer
- Arduino™ UNO V3 connector



KIT INCLUDES

- ST Microelectronics STM32 Discovery Board with sensors and RF radios (B-L475E-IOT01A)
- STMicroelectronics adaptation board (X-NUCLEO-STMODA1)
- STMicroelectronics LTE modem (B-CELLNB1)
- STMicroelectronics Cat M1 SIM Card with Verizon profile (CIMBA8HT6P00797\$):
- Taoglas LTE Antenna supporting Bands 13 and 4
- Verizon Open Development certified solution
- Downloadable tutorials software and documentation

TARGET APPLICATIONS

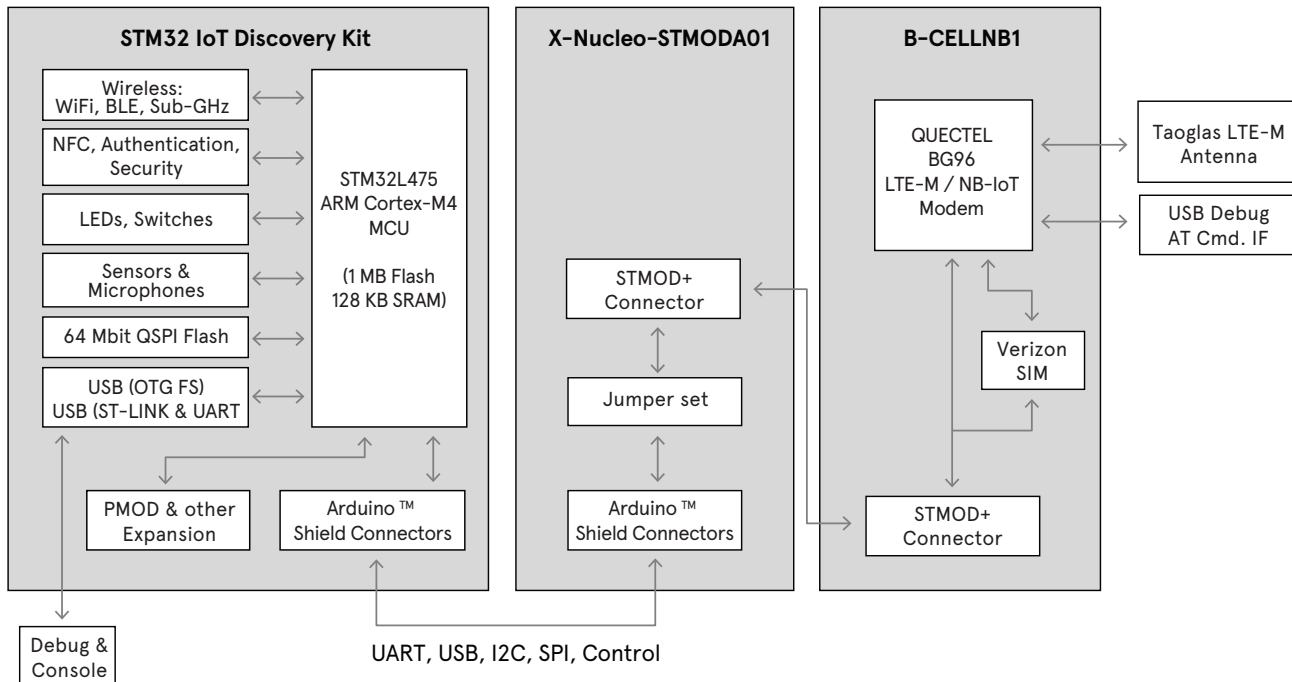
- Asset Tracking
- Factory Automation
- Smart City
- Smart Building
- Smart Agriculture

Features cont....

LTE Modem Features

- Quectel BG96 LTE Cat M1 multi-band module offers a compact design
- Conversion board from Arduino™ to STMod+ 20 pins connector
- SIM card socket
- E2Prom for additional configuration memory
- SMA port for the cellular antenna

BLOCK DIAGRAM



FEATURED MANUFACTURERS



PARTS

Part Number	Description	Resale
VERIZON ST-LTE KIT	ST Microelectronics / Verizon LTE-M IoT Starter Kit	\$139.00

Countries available for purchase: United States

To purchase this kit, visit: www.Avnet.me/svm-lte