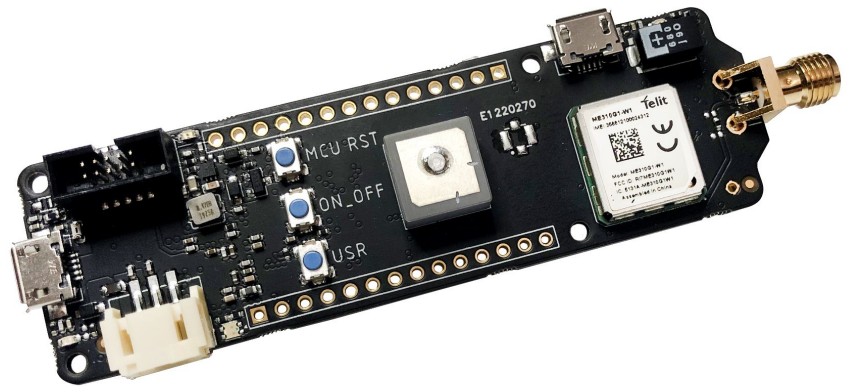




Product Description

In the world of IoT, everything starts at the edge, with the devices and the data they generate: that's The First Mile of IoT™. Start your IoT journey from The First Mile with Charlie, the complete, ready-to-use Telit evaluation kit.

The next generation of Telit IoT evaluation kits, Charlie is an Arduino-based MKR form factor board. It combines a low power ARM® Cortex®-M0 32-bit SAMD21 microprocessor with a Telit ME310 cellular module, providing global narrowband connectivity and a high-performance GNSS receiver.

Charlie includes a Bosch Sensortec high-performance motion smart sensor chip and an embedded GNSS antenna to make it a complete yet extremely compact IoT development platform.

Charlie can be used either alone or expanded with Arduino-compatible shields and provides all building blocks to develop, prototype and deploy IoT applications.

Key Benefits

- Ideal for rapid IoT application design; all hardware building blocks are readily available
- Standard Arduino MKR form factor board, including a microprocessor, cellular module with GNSS receiver, motion sensor and battery charger
- Can be expanded with Arduino MKR shields
- Mounts ME310G1, one of the most compact and power-efficient cellular modules available on the market, featuring LTE Cat M1/NB2 connectivity
- High-performance, ultralow-power Bosch Sensortec acceleration sensor
- Fully compatible with the Arduino software development environment
- Embedded high-performance patch antenna for GNSS receiver

AVAILABLE FOR

EMEA

North America

Latin America

APAC

Korea

Australia

**Complete,
Ready-to-Use Access
to the Internet of Things**



IoT Modules



Connectivity Plans



Software & Platforms

Charlie

Product Features

- Powered either from a computer USB port or Li-ion battery (3.7 V, minimum capacity 700 mAh)
- High-efficiency battery charger circuit*
- SMA receptacle for external cellular antenna
- Built-in high-performance GNSS antenna with a low-noise preamplifier
- External GNSS antenna connector with LNA supply
- High-performance, ultralow-power and low-noise Bosch BMA400 triaxial acceleration sensor with 12-bit resolution and typical 5.8 μ A current consumption
- Microprocessor interfaced to the cellular module through UART interface; additional dedicated USB port for cellular module
- SIM holder
- User pushbutton and LED

**Battery pack not included*

ME310G1-W1 Key Features

- 3GPP Rel. 14 compliant module supporting LTE Cat M1/NB2
- Power Saving Mode (PSM) and extended Discontinuous Reception (eDRX) allowing longer battery operation
- LTE bands (MHz): B1 (2100), B2 (1900), B3 (1800), B4 (AWS 1700), B5 (850), B8 (900), B12 (700), B13 (700), B18 (800), B19 (800), B20 (800), B25(1900), B27 (800), B28 (700), B71 (600), B85 (700)
- Approvals: PTCRB, GCF, AT&T, Verizon, RED, FCC/IC, Sprint
- IPv4/IPv6 stack with TCP and UDP protocol
- OMA Lightweight M2M (LwM2M)
- Firmware Over-the-Air (FOTA) update
- Embedded GNSS (GPS, GLONASS, Beidou, Galileo)
- Interfaces: USB 2.0, UART, SPI, I2C, 1.8 V SIM interface
- Power supply voltage: 3.8 V nominal (range: 3.4–4.2 V)

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