Boron LTE Kit

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Note: Particle's MVNO will provide support for LTE M1 connectivity in the US upon initial release. Not in the region? Check out the Boron 2G/3G Kit. See the cellular FAQ for details.

The Boron LTE is a powerful LTE CAT-M1/NB1 enabled development kit that can act as either a standalone cellular endpoint or LTE enabled gateway for Particle Mesh networks. It is based on the Nordic nRF52840 and has built-in battery charging circuitry so it's easy to connect a Li-Po and deploy your local network in minutes.

The Boron is great for connecting existing projects to the Particle Device Cloud or as a gateway to connect an entire group of local endpoints where Wi-Fi is missing or unreliable.

All Particle hardware is designed from the ground up to work with the Device Cloud; a powerful set of tools and infrastructure to build, connect, and manage your IoT fleet. The Device Cloud for Particle Mesh will be priced by network. All Particle customers get 3 free months of Device Cloud access for micro networks using a cellular gateway. A micro network is defined as a network with 10 total devices and a single gateway. More pricing details to be released soon. In the meantime, check out our documentation.
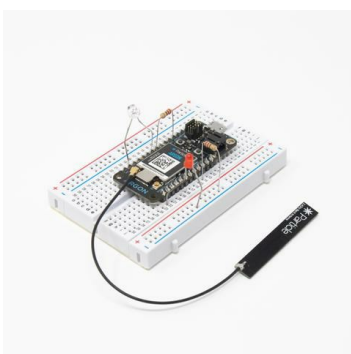
- Contents:

  - Boron LTE dev board
  - Mini breadboard
  - Cellular flex antenna
  - USB cable
  - Starter project includes two resistors (220 ohm), one red LED, and one photodiode
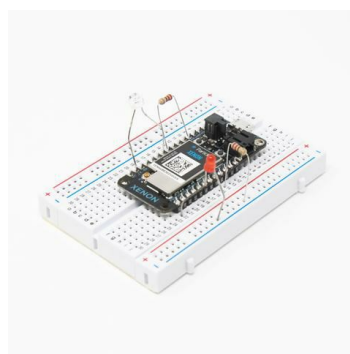
- Specs:

- u-blox SARA R410 LTE modem

  - LTE CAT M1/ NB1 module with global hardware support (MVNO support for US only)

  - 3GPP Release 13 LTE Cat M1

- Nordic Semiconductor nRF52840 SoC

  - ARM Cortex-M4F 32-bit processor @ 64MHz

  - 1MB flash, 256KB RAM

  - IEEE 802.15.4-2006: 250 Kbps

  - Bluetooth 5: 2 Mbps, 1 Mbps, 500 Kbps, 125 Kbps

  - Supports DSP instructions, HW accelerated Floating Point Unit (FPU) calculations

  - ARM TrustZone CryptoCell-310 Cryptographic and security module

  - Up to +8 dBm TX power (down to -20 dBm in 4 dB steps)

  - NFC-A tag

- On-board additional 2MB SPI flash

- 20 mixed signal GPIO (6 x Analog, 8 x PWM), UART, I2C, SPI

- Micro USB 2.0 full speed (12 Mbps)

- Integrated Li-Po charging and battery connector

- JTAG (SWD) Connector

- RGB status LED

- Reset and Mode buttons

- Dual SIM support: Nano 4FF (unpopulated) and MFF2

- U.FL connector for external antenna

- Meets the Feather specification in dimensions and pinout

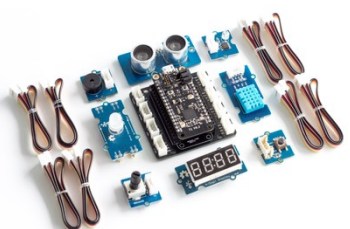- FCC and PTCRB certified

- RoHS compliant (lead-free)

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