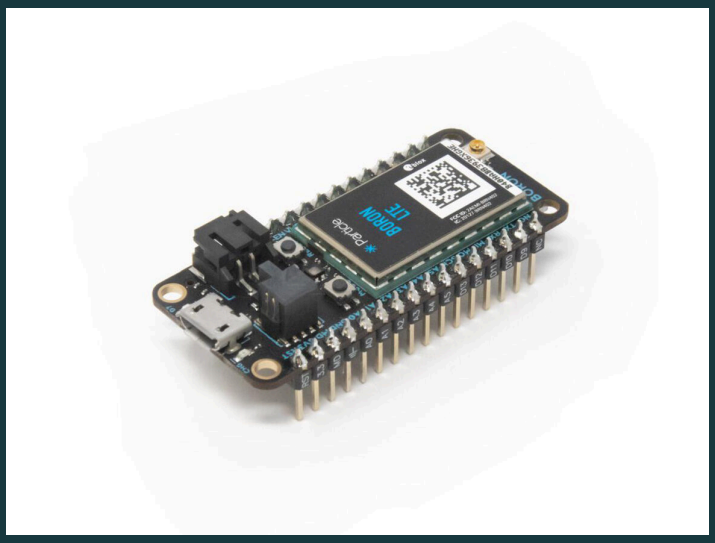
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INDUSTRIAL PRODUCT DATASHEET

Particle Boron IoT Development Board (Cellular+Mesh+Bluetooth)

The Particle Boron IoT Development Board (Cellular+Mesh+Bluetooth) combines LTE CAT-M1/NB1, mesh networking, and Bluetooth 5 connectivity with Nordic nRF52840 processing and Particle Device Cloud support.

SKU	UPDATED	PRICE
113990598	2025-10-30 07:59:37	$49.00(Excl. VAT)



Overview



The Particle Boron IoT Development Board (Cellular+Mesh+Bluetooth) is a powerful LTE CAT-M1/NB1 enabled board that functions as a standalone cellular endpoint or an LTE gateway for Particle Mesh networks. Based on the Nordic nRF52840 SoC, it features built-in Li-Po battery charging, Bluetooth 5, and 20 mixed-signal GPIOs, with seamless integration to the Particle Device Cloud.

Key Features

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 board 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 is 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. Please refer to our **pricing documentation** for more information.

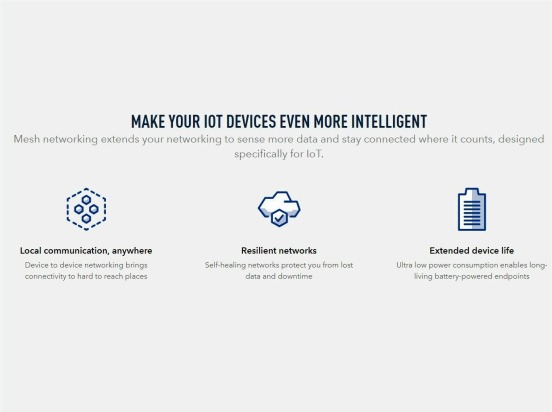
Features:

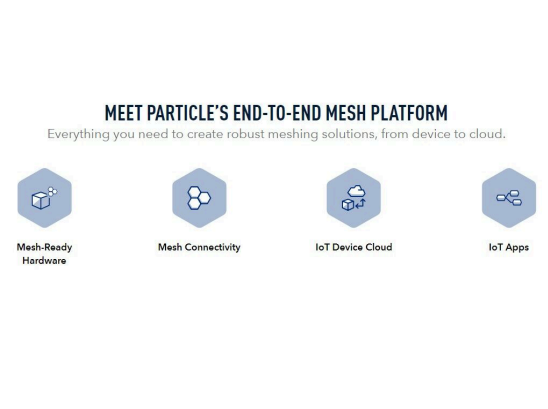
- u-blox SARA R410 LTE modem
  - LTE CAT M1/ NB1 module with global hardware support (MVNO support for US only)
  - 3GPP Release 13 LTE Cat M1
- Nordic Semiconductor nRF52840 SoC
  - ARM Cortex-M4F 32-bit processor @ 64MHz
  - 1MB flash, 256KB RAM
  - IEEE 802.15.4-2006: 250 Kbps
  - Bluetooth 5: 2 Mbps, 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

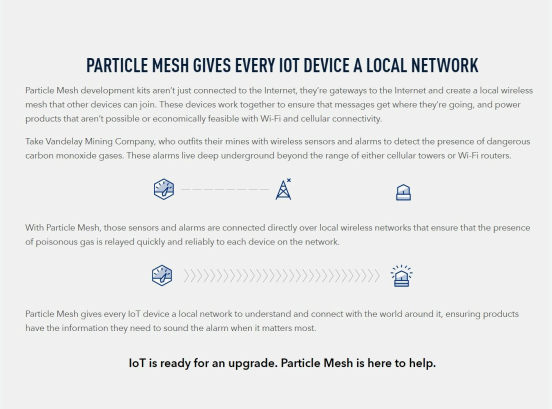
- U.FL connector for external antenna
- Meets the Feather specification in dimensions and pinout
- FCC and PTCRB certified
- RoHS compliant (lead-free)

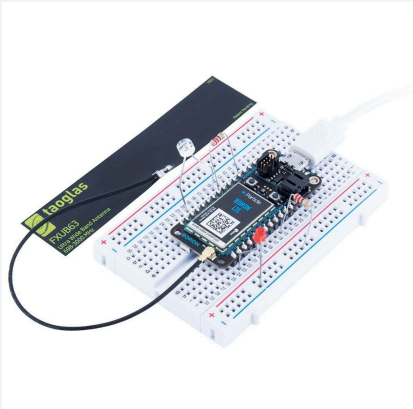
Product Gallery











Part List

Boron LTE dev board	1
Cellular flex antenna	1

Compliance & Logistics



HSCODE	8517709000
USHSCODE	8517790000
UPC	841454121749
EUHSCODE	8517180000
COO	United States

Resource Links

- https://www.seeedstudio.com/Particle-Boron-IoT-Development-Board-Cellular-Mesh-Bluetooth-p-3204.html
- Datasheet
- Schematic
- Product Handling
- Community Forums
- Email

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