



## Boron 2G/3G Kit

**Note: Live in the United States? Check out the Boron LTE. See the cellular FAQ for 2G/3G country availability.**

The Boron GSM is a powerful 2G/3G enabled development kit that can act as either a standalone cellular endpoint or 2G/3G 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 2G/3G dev board
- Mini breadboard
- Cellular flex antenna
- 1800mAh Li-Po battery
- USB cable
- Starter project includes two resistors (220 ohm), one red LED, and one photodiode

- **Specs:**

- u-blox SARA U201 2G/3G modem
  - HSPA/GSMq with global hardware and SIM support
  - 3GPP Release 7
  - Bands 800/850/900/1900/2100 MHz
- 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 and MFF2
- U.FL connector for external antenna
- Meets the Feather specification in dimensions and pinout
- FCC and PTCRB certified
- RoHS compliant (lead-free)