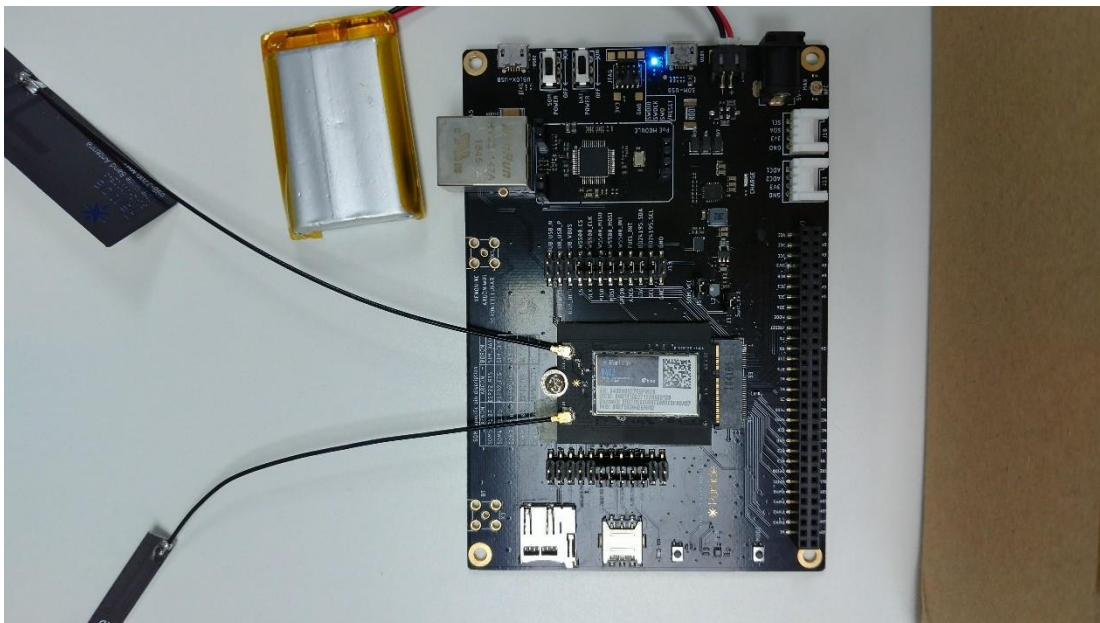


# QUICK START: B402



The Particle B402 is a mesh and Bluetooth development kit designed for building connected projects and products. To set up the device you'll need an Android or iOS mobile phone and a connection to the internet.

<b>PRODUCT</b>	B Series B402	
<b>MODEL NAME</b>	B402,B402S	
<b>NOMINAL VOLTAGE</b>	Li+ PIN /Battery connector: DC 3.7V from Li-ion Battery or VUSB PIN /USB connector :DC 5V from USB Host Unit	
<b>OPERATING TEMPERATURE RANGE</b>	-20 ~ 75°C	
<b>MODULATION TYPE</b>	<b>LTE/BLE</b>	QPSK&16QAM, GFSK(1MHz, 2MHz)
<b>TX OPERATING FREQUENCY</b>	<b>LTE/BLE</b>	1850.7MHz ~ 1909.3MHz (FOR LTE Band2) 1710.7MHz ~ 1754.3MHz (FOR LTE Band4) 824.7MHz ~ 848.3MHz (FOR LTE Band5) 699.7MHz ~ 715.3MHz (FOR LTE Band12) 779.5MHz ~ 784.5MHz (FOR LTE Band13) 2402MHz ~ 2480MHz (FOR BLE)
<b>ANTENNA GAIN</b>	<b>LTE Band 2</b>	FPC Antenna with 3.5dBi gain
	<b>LTE Band 4</b>	FPC Antenna with 3.5dBi gain
	<b>LTE Band 5</b>	FPC Antenna with 1.0dBi gain
	<b>LTE Band 12</b>	FPC Antenna with 1.0dBi gain
	<b>LTE Band 13</b>	FPC Antenna with 1.0dBi gain
	<b>BLE</b>	FPCB Antenna with 2.0dBi gain

## SET UP YOUR B402

The B402 Kit comes with the following things:

- B402 development kit
- SoM develop board
- Starter Project
  - One micro-USB cable
  - One LiPo battery

## 1. Set up your B402

Use the online setup application to configure your new B402. The process includes the following.

- Registration of your device with your Particle account
- Connection of your device to the Particle Device Cloud
- Particle Mesh network configuration

Once you've completed the setup you will be able to program your device and send over-the-air (OTA) updates to it.

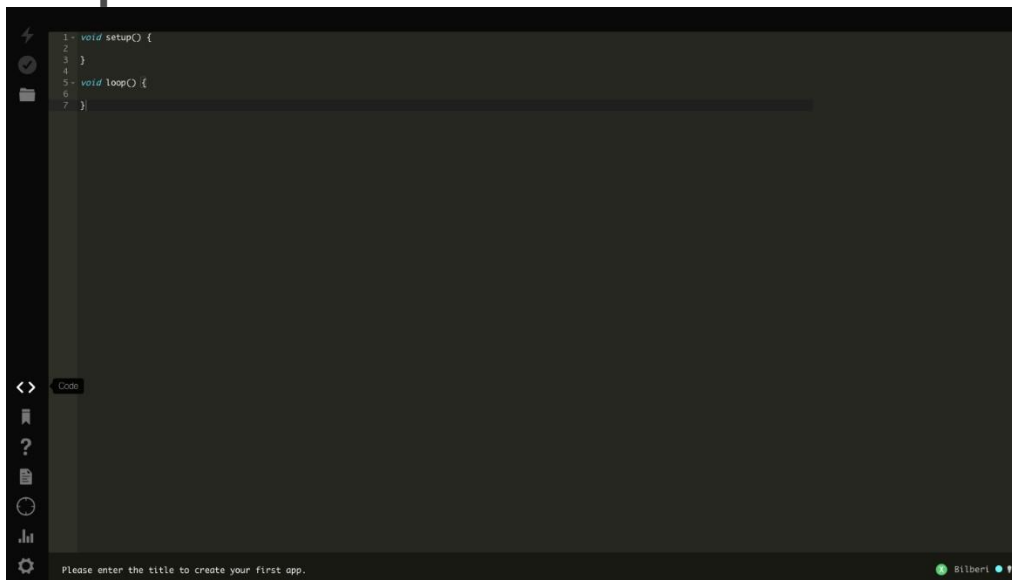
To begin setting up your B402, click the button below and follow the onscreen instructions. When you've completed set up, continue to Step #2.

## SET UP YOUR XENON

### NOTES:

- 1.) If you have already set up your B402, skip to Step #2.
- 2.) During set up you may skip setting up a Particle Mesh network and use the Xenon in a standalone mode.

## 2. Open the Web IDE



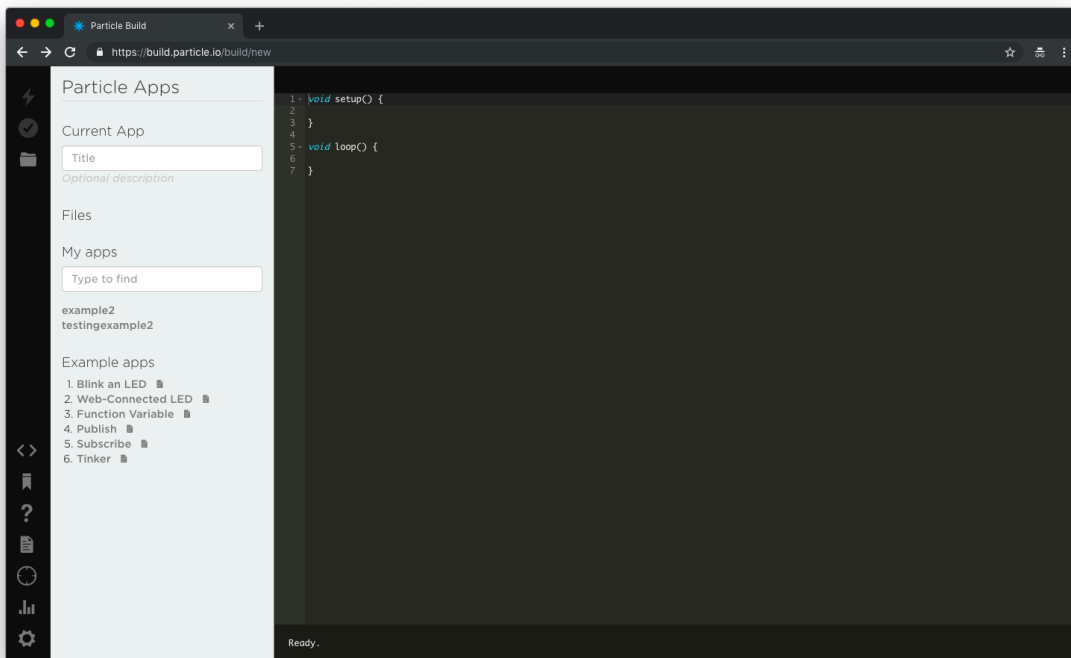
To program your B402, open a new browser tab and go to the [Web IDE](#).

### NOTE:

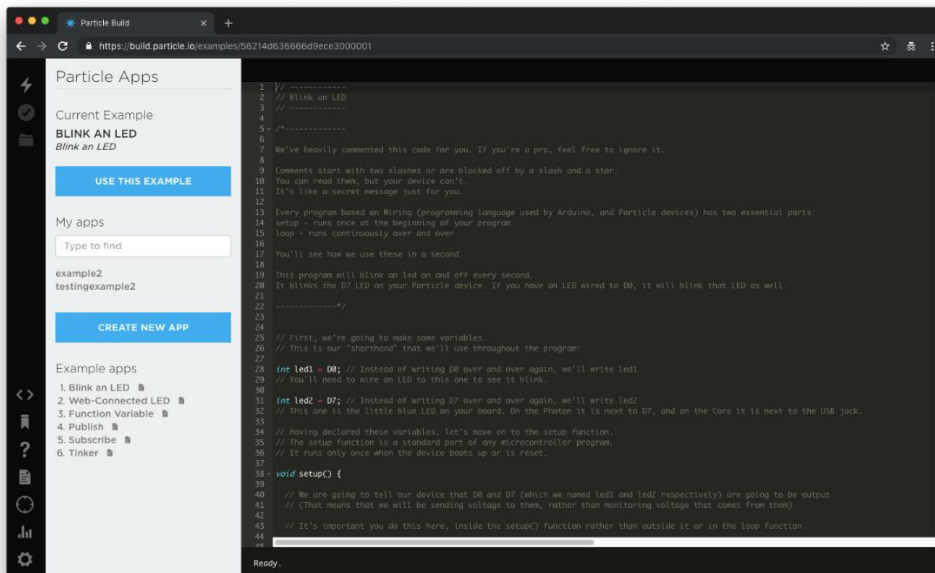
The Web IDE is one of the ways you can write, compile, and deploy code to your Particle devices.

If you're looking for a more traditional embedded development experience, be sure to learn about [Particle Workbench], a full toolchain integration with Microsoft Visual Studio Code.

### 3. Load the Blink example



Click on *Blink an LED* on the left side of the page. As soon as you click the *Blink and LED* code will load and fill the screen as shown below.



The code is heavily commented to help you understand the general structure of the sketch: the first part of the code declares two variables, the setup() function configures two pins as outputs, and finally the loop() which turns the onboard LED on, then off, then loops continuously.

### 4. Target your device

The Web IDE can be used with multiple devices. As such, when you go to compile source code, it's a good idea to verify that the board you Before you compile the source code and flash your device with its binary output, make sure that the correct Particle device is selected.

**NOTE:**

If you don't see your B402 listed, click on the device name. A sidebar will appear on the left with a list of all of your devices. Click on *start* to the left of the B402 you wish to deploy code to.

## **5. Compile your code & flash**

Click the lightning bolt icon on the top left of your screen to flash your code to your device.

As soon as you click, the Particle Device cloud will compile the program source code to a binary file and send it over-the-air (OTA) to your Argon.

**NOTE:**

You'll often see words like flashing and deploying used interchangeably.

**FCC Statement**

This device complies with Part 15/22/24/27 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Co-location of this module with other transmitters that operate simultaneously are required to be evaluated using the FCC multi-transmitter procedures.

**Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

## Industry Canada statement

This device complies with Industry Canada license-exempt RSS standard(s).  
Operation is subject to the following two conditions:

- 1) this device may not cause interference, and
- 2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- 1) l'appareil ne doit pas produire de brouillage, et
- 2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This Class B digital apparatus complies with Canadian ICES-003.  
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter, except tested built-in radios.  
Cet appareil et son antenne ne doivent pas être situés ou fonctionner en conjonction avec une autre antenne ou un autre émetteur, exception faites des radios intégrées qui ont été testées.

The County Code Selection feature is disabled for products marketed in the US/Canada.  
La fonction de sélection de l'indicatif du pays est désactivée pour les produits commercialisés aux États-Unis et au Canada.

### **Radiation Exposure Statement:**

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

### **Déclaration d'exposition aux radiations:**

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.