



## Wio LTE EU Version v1.3- 4G, Cat.1, GNSS, Espruino Compatible

SKU 102991022

This product contains battery, might apply to shipping restriction.

### Description

Wio Tracker (Wireless Input Output) is an open source gateway which enable faster IoT GPS solutions. It is Arduino and Grove compatible development boards that helps you track nearly any moving thing on the planet and then upload that data wirelessly. The Wio LTE is the LTE version of Wio Tracker, so now we've got 2 versions of Wio Tracker and the LTE (4G) version will make some differences.

There are three main updates comparing the Wio LTE to the 2G version. Firstly, from its name we know that the Wio LTE supports LTE (4G) communication which is much faster and popular than 2G. Secondly, the Wio LTE supports in total 4 different GNSS – GPS, Beidou, GLONSS and Galileo, the QZSS is also supported as bonus. With more GNSS support, positioning will be more accurate. Thirdly, the Wio LTE's MCU is upgraded to STM32, which is based on Cortex-M4, makes the Wio LTE 5 times faster than the 2G version. What's more, the flash and RAM have also been raised to 1Mbytes and 192+4k bytes.

Apart from the three main updates, the LTE version is almost the same as the 2G version. If your project is using the 2G version, it would be very easy to update to the LTE version because we have prepared transplantable and expansible AT command library. The Arduino and Grove compatibility allows for quicker development through numerous libraries and a supportive community. The GPS library which will be available with the board is not just limited to Arduino – it can function just as well if you chose to develop in C/C++. With the onboard 6 Grove connections, developers can create any combination of our 180+ sensors and actuators to build project and solve any problem. Simplifying the prototyping and development phase is our goal.

The Wio LTE is well suited for outdoor projects where the device can connect to the GPS satellites and provide a real-time location of the item it is attached to. The LTE provides a wide bandwidth which allows much faster interaction between the user and device. If you are going to build projects like a bicycle sharing service, tracking pets or livestock, locating a vehicle, or even keeping track of a child, the Wio LTE is the best solution.

### **Wio Lte v1.3 Release Notes**

Since the launch of this product, we have received a lot of user feedback and suggestions. We decided to further improve this product based on user feedback, so here you see, the Wio Lte v1.3 comes out. We made some changes in the power circuit:

- Change the PMIC (Power manage IC) into MP2617, which is more stable.
- Remove the DC-DC Module which supplies for the Lte Module, instead, in this version we power the Lte Module by the main circuit or the Lipo battery.
- Add two 100uf capacitors to make the power more stable.

For more detail about the change please refer to our [wiki](#)

#### **Note:**

- The suggest power supply for Wio LTE products is 5V/2A; The board may not be able to power up when the current is below 1A.
- Please always plug a 3.7V Lipo battery in case USB power supply is not sufficient.
- When the signal is not good, there will be noise while calling.
- We have developed 4 different versions of Wio LTE for different regions. This is the Wio LTE EU version, except this version, the others also support GNSS, below table shows the difference between each version. For more detail information, please refer to the [manual](#).

Versions	LTE Bands	3G Bands	GSM	GNSS
US	FDD: B2/B4/B12	WCDMA: B2/B4/B5	/	GPS/GLONASS/Beidou/Compass /Galileo/GZSS
EU	FDD: B1/B3/B5/B7/B8/B20	WCDMA: B1/B5/B8	900/1800	GPS/GLONASS/Beidou/Compass /Galileo/GZSS
AU	FDD: B1/B2/B3/B4/B5/B7/B8/B28	WCDMA: B1/B2/B5/B8	850/900/1800/1900	GPS/GLONASS/Beidou/Compass /Galileo/GZSS
JP	FDD: B1/B3/B8/B18/B19/B26	/	/	/

### Technical Details

Dimensions	55mm x 48mm x 10mm
Weight	G.W 98g
Battery	Lithium Cells/Batteries packed with equipment UN3481 -PI966

### Part List

Wio LTE EU Version v1.3- 4G, Cat.1, GNSS, Espruino Compatible	1
LTE Antenna	1
GPS Antenna	1
Lithium Polymer Battery 3.7V-1050mAH;46.5*45*4.8mm; JST1.0	1
Micro USB cable,200mm in length	1

Sub-System	Function	Detail
Microcontroller	Processor	STM32F405RG, ARM Cortex-M4, CPU running up to 168MHZ
	Flash	1MB
	RAM	192+4KB
	Operating Voltage	3.3V
	Low Power	Sleep, Stop, Standby modes
	DC Current per I/O Pin	7 mA
LTE	LTE Cat.1	FDD LTE: B1/B3/B5/B7/B8/B20 WCDMA: B1/B5/B8 GSM: 900/1800
		AT Command: 3GPP TS27.007 and enhanced AT Commands
	Data	LTE-FDD Max 10Mbps(DL) Max 5Mbps (UL)
		Protocol: TCP/UDP/PPP/FTP/HTTP/SSL
	SMS	Peer to Peer Message, SMS broadcast, Text and PDU mode
Audio	Echo cancellation; Noise elimination	
GNSS	System	GPS/GLONASS/BeiDou/Galileo
	Precision	<2.5 m CEP
Peripheral	Grove	2 x Grove Digital Port
		2 x Analog Port
		1 x UART
		1 x I2C
	Antenna	2 x LTE Antenna
		1 x GPS Antenna
	Others	USB: Power supply and upload program
		JST 1.0 connecter for battery
		3.5mm Audio Jack
		MCU Reset Button, EC21 Power Button
1 x User RGB LED SK6812		
Nano SIM and TF card 2 in 1 socket		

ECCN/HTS

ECCN

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