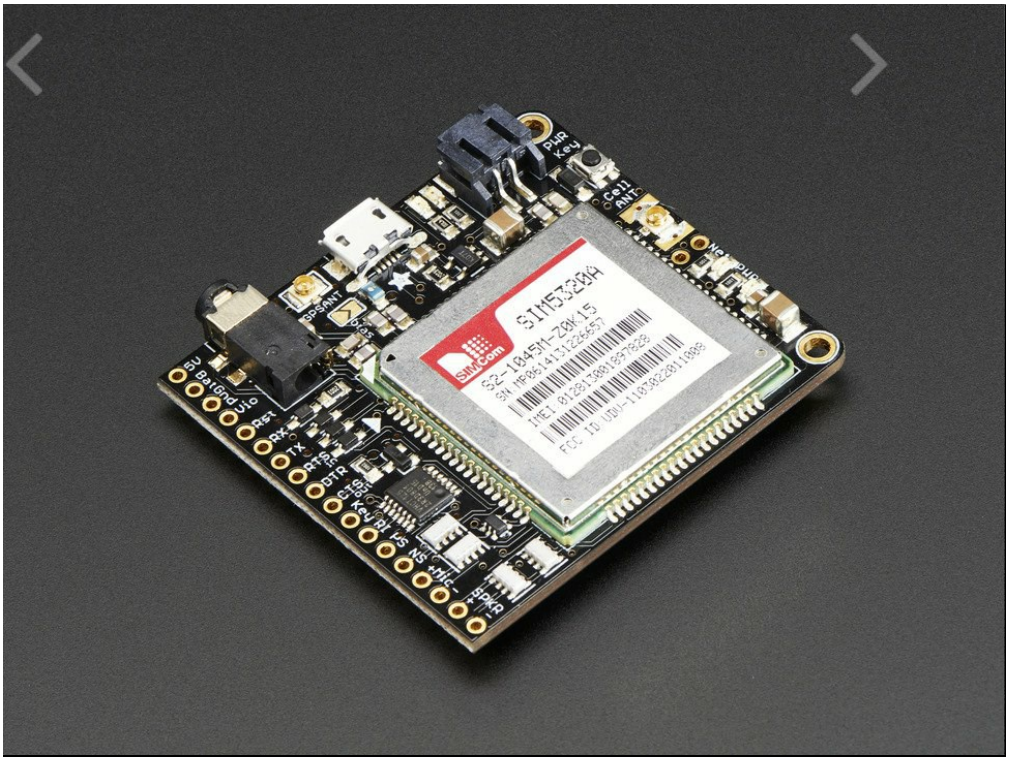


Adafruit FONA 3G Cellular Breakout - American version - Without Free Ting Sim Card

PRODUCT ID: 2687

There are multiple versions of this item. Please select one from the options below:

- European Version
- American Version - NO FREE Ting Sim Card
- American Version - FREE Ting Sim Card included

IN STOCK

1 ADD TO CART

- Also include 1 x GSM 2G SIM Card from Ting & Adafruit - Data/Voice/Text USA Only ()
- Also include 1 x Lithium Ion Polymer Battery - 3.7v 1200mAh ()
- Also include 1 x Slim Sticker-type GSM/Cellular Quad-Band Antenna - 3dBi uFL ()
- Also include 1 x Adafruit IO+ Subscription Pass – One Year ()

1-9
10-99
100+

ADD TO WISHLIST

DESCRIPTION

TECHNICAL DETAILS

DESCRIPTION

For those who want to take it to the next level we now have a 3G Cellular Modem breakout! The FONA 3G has better coverage, GSM backwards-compatibility and even sports a built-in GPS module for geolocation & asset tracking. This all-in-one cellular phone module with that lets you add location-tracking, voice, text, SMS and data to your project in a single breakout.

If you want the version that comes with a free Ting 2G SIM Card, click here! This version is for resellers and people who do not need a free SIM card. For 3G use in the USA, please use AT&T network as the Ting network is 2G only on this module.

This module measure only 1.75"x1.6" but packs a surprising amount of technology into it's little frame. At the heart is a powerfull GSM cellular module (we use the latest SIM5320) with integrated GPS. This module can do just about everything

- Quad-band 850MHz GSM, 900MHz EGSM, 1800MHz DCS, 1900MHz PCs - connect onto any global GSM network with any 2G SIM.
- **This is the American Version dual-band UMTS/HSDPA 850/1900MHz WCDMA + HSDPA** (Click here for the European frequency band version)
- Fully-integrated GPS (Qualcomm PM8015 GPS) that can be controlled and query over the same serial port
- Make and receive voice calls using a headset or an external 8Ω speaker + electret microphone
- Send and receive SMS messages
- Send and receive GPRS data (TCP/IP, HTTP, etc.)
- AT command interface can be used with 300, 600, 1200, 4800, 9600, 19200, 38400, 57600, 115200, 230K, 461K, 961K, 3.2M, 3.7M and 4.0Mbps
- Native USB support - plug it into a computer and you'll get serial ports for GPS and

Here's the GPS specifications:

- 16 acquisition channels
- GPS L1 C/A code
- Sensitivity

Tracking: -157 dBm
Cold starts : -144 dBm

- Time-To-First-Fix

Cold starts: 100s (typ.)
Hot starts: 1s (typ.)

- Accuracy: approx 2.5 meters

We strongly recommend using an active antenna with the GPS, while we could get a fix with a passive antenna it took a long time.

Please note! We've had a lot of requests for a 3G cell module and we're happy to oblige but this module has many small differences between it and the FONA 800 and 808, so it is not a drop-in replacement! In particular the data functionality is not as easy to use. We are adapting our FONA library to support the 3G chipset and right now we have SMS, calling, and basic functionality working but it will be a while until we get full GPRS TCP/IP and HTTP support. Also, the GPS is not as fast and low-power as the one on the FONA 808. **We recommend this module for people who are able to handle a more advanced experience.** Beginners will like our FONA 80x series more.

Sounds great, right? So we kitted out this fine module onto a little breakout with all the extras you need to make your next project shine

- Onboard LiPoly battery charging circuitry so you can take your project on the go. Use any 500mAh+ LiPoly or LiIon battery and recharge over the MicroUSB when necessary. Two LEDs let you know when its charging and done
- Standard 4-pole TRRS headphone jack. Use any 'Android' or 'iPhone'-compatible headset with mic
- Breakouts for external 8Ω speaker and electret mic if you don't want to use a headphone
- Level shifting circuitry so you can run it with 2.8V to 5V logic.
- uFL connections for external antennas
- Indicator LEDs for power and network connectivity
- Standard SIM slides into the back

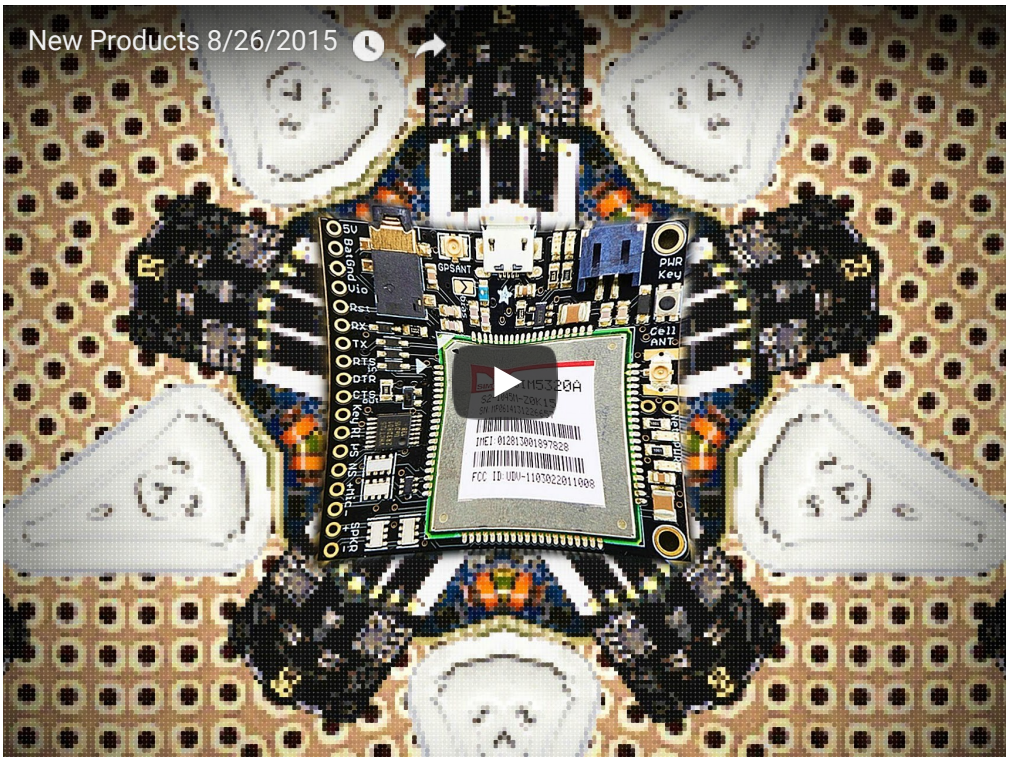
uires a microcontroller to drive it! We suggest

and use an Arduino but any 3-5V microcontroller with a UART can send and receive commands over the RX/TX pins.

You will also need some required & recommended accessories to make FONA 3G work. **These are not included!**

- **Required SIM Card!** A 2G or 3G Mini SIM card is required to do anything on the cellular network.
- **Required Lipoly Battery - 500mAh or larger!** This 1200mAh will work great.
- **MicroUSB cable** for charging the battery and communicating with the module over USB
- **External uFL GSM Antenna** - this slim one works great (or, if you want to us an SMA antenna - a uFL to SMA adapter cable.)
- **External Active GPS Antenna** (needs a uFL to SMA adapter too) - like this one!
- **TRRS 4-Pole Headset** - Not required but it'll be tough to make a phone call without it. Any 'iPhone' or 'Android' compatible (but not iPhone original) should work. We tried about 10 different ones, and basically the more expensive once are more comfortable and louder but our official iPhone headset mic did not work.

Check out our tutorial with schematics, wiring diagrams, datasheets and more here!



TECHNICAL DETAILS

- Datasheets, schematic, EagleCAD PCB files, and Fritzing available in the product tutorial

Product Dimensions: 50.0mm x 46.0mm x 7.0mm / 2.0" x 1.8" x 0.3"

Product Weight: 16.0g / 0.6oz

RoHS

LEARN

Adafruit FONA 3G Cellular + GPS Breakout
The next generation of FONA is here!

FLORA + FONA
for wearable cell network projects

MAY WE ALSO SUGGEST...


Adafruit FONA - Mini


Adafruit FONA 808 - Mini

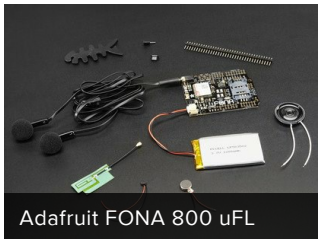

Adafruit FONA 800


Adafruit FONA - Mini


Adafruit FONA 808 Shield -


Adafruit FONA 800 Shield -


Adafruit FONA - uFL


Adafruit FONA 800 uFL


Adafruit FONA 3G Cellular

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"In the beginner's mind there are many possibilities, in the expert's mind there are few" - Shunryu Suzuki