

## Adafruit FONA - Mini Cellular GSM Breakout - SMA Version - v1

PRODUCT ID: 1963

IN STOCK

1

ADD TO CART

- Also include 1 x Cell-phone TRRS Headset - Earbud Headphones w/ Microphone ()
- 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 Lithium Ion Polymer Battery - 3.7v 500mAh ()
- Also include 1 x Mini GSM/Cellular Quad-Band Antenna - 2dBi SMA Plug ()
- Also include 1 x Right-angle Mini GSM/Cellular Quad-Band Antenna - 2dBi SMA Plug ()
- Also include 1 x Adafruit IO+ Subscription Pass – One Year ()

1-9

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DESCRIPTION

TECHNICAL DETAILS



# DESCRIPTION

Ring, Ring! Who's that callin'? It's your breadboard! Introducing Adafruit FONA MiniGSM, an adorable all-in-one cellular phone module that lets you add voice, text, SMS and data to your project in an adorable little package.

This module measures only 1.75"x1.25" but packs a surprising amount of technology into its little frame. At the heart is a GSM cellular module (we use the latest SIM800) the size of a postage stamp. This module can do just about everything. [This version has an SMA connector. For the uFL version, click here!](#)

- Quad-band 850/900/1800/1900MHz - connect onto any global GSM network with any 2G SIM (in the USA, T-Mobile is suggested)
- 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.)
- Scan and receive FM radio broadcasts (yeah, we don't exactly know why this was included but it works really well)
- PWM/Buzzer vibrational motor control
- AT command interface with "auto baud" detection

Sounds delicious, right? So we plated 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 Lilon 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.
- Vibrational motor (buzzer) driver so you can have noiseless notifications
- SMA connection for external antenna
- Indicator LEDs for power and network connectivity
- Standard SIM slides into the back

Cellular modules can be a bit challenging to use, the FONA is intended for hackers and advanced makers. We're still adding library support for all the various things the FONA can do but there may be updates as FONA is used around the world!

On its own, this module can't do anything. It requires 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 accessories to make FONA work. These are not included!**

- **SIM Card!** [Check out the SIM Card we sell from Ting!](#)
- **Lipoly Battery** - 500mAh or larger! This [500mAh battery](#), [or this 1200mAh](#) will work great.
- **MicroUSB cable** for charging the battery.
- **External Antenna** - [this straight one](#) or [this right-angle one will work well](#).

There's also some recommended accessories. They are not required but chances are you'll want them!

- **TRRS 4-Pole Headset** - Any 'iPhone' or 'Android' compatible (but not iPhone original) should work. We tried about 10 different ones, and basically the more expensive ones are more comfortable and louder but our official iPhone headset mic did not work.
- **External Mic & Speaker** - If you want to talk directly to your FONA, [an electret mic](#) and [mini 8 ohm speaker](#) will do quite nicely.
- **Vibrating motor** - the FONA can drive this directly, [just solder a mini vibrating motor disc in!](#)
- **USB console cable** - the microUSB connector is for charging [only](#), but you can [wire up a console cable for direct-connection to the module](#) if you want to send commands from a terminal (great for testing and tweaking)

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## TECHNICAL DETAILS

- January 4, 2016 we have replaced the SIM800L module with SIM800H which is backward compatible. Note that this board design does not have a bluetooth antenna on it so you cannot use the BT capabilities of the SIM800H
- August 25, 2016 the SIM800 module has been updated to S2-1065N-Z142K parts (firmware version B07)

[Datasheets, PCB CAD files and Fritzing objects available in the tutorial](#)

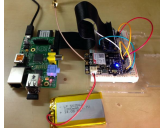


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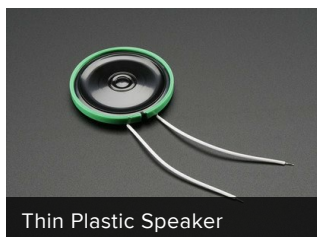
### [SMSsenger Bag](#)

SMS TXT scroller on a NeoPixel Matrix with Fona + Flora

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Breadboard-Friendly PCB



Thin Plastic Speaker



Mini GSM/Cellular Quad-



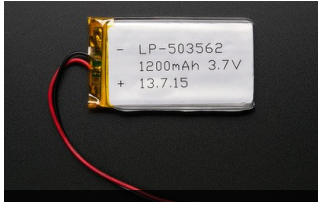
Electret Microphone - 20Hz-



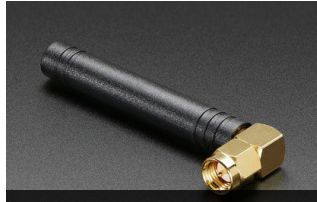
Vibrating Mini Motor Disc



Mini Metal Speaker w/ Wires



Lithium Ion Polymer Battery



Right-angle Mini



Lithium Ion Polymer Battery



Wired Miniature Electret



Adafruit FONA 3G Cellular



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