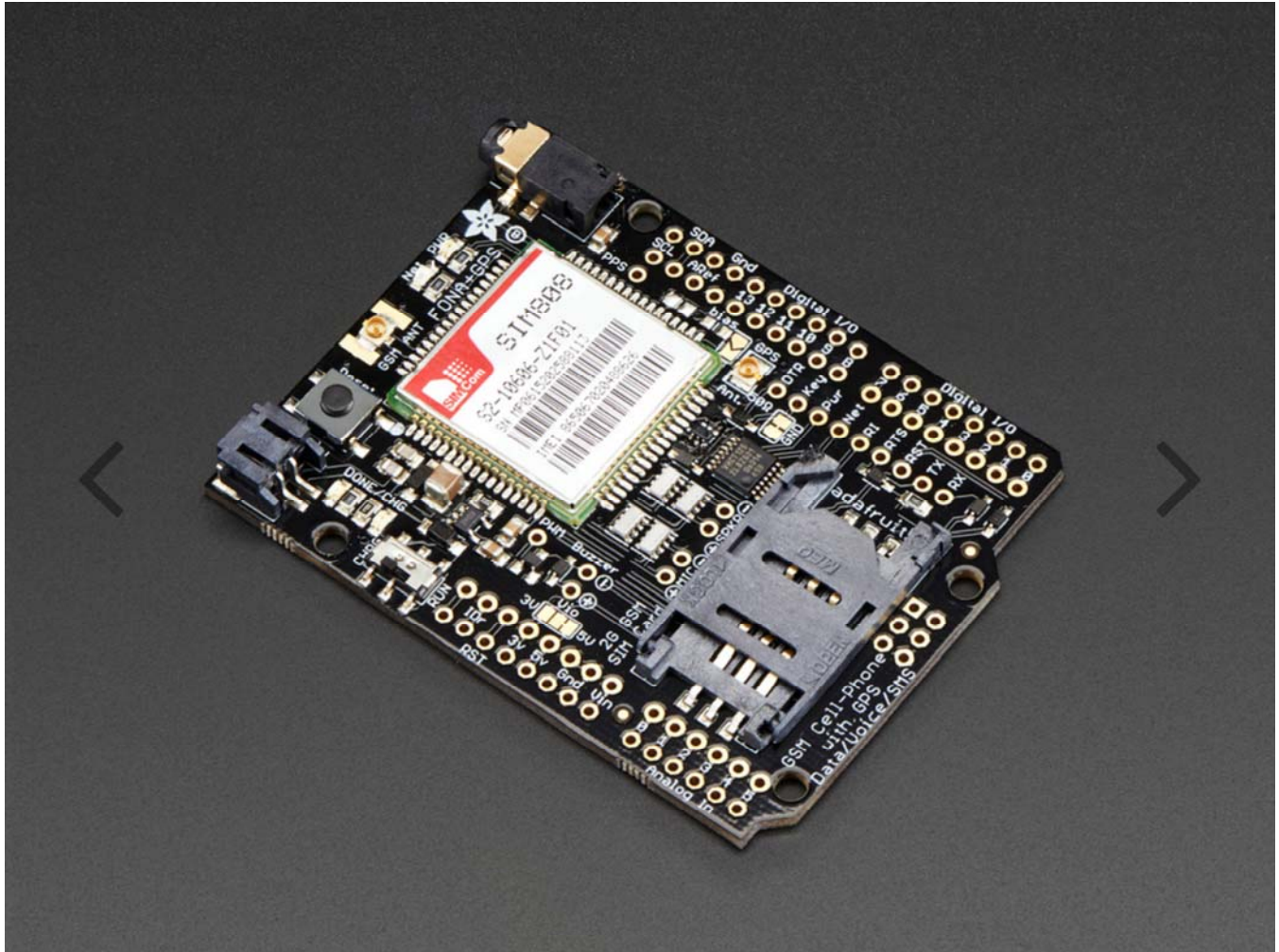


Adafruit FONA 808 Shield – Mini Cellular GSM + GPS for Arduino

PRODUCT ID: 2636



DESCRIPTION

Cellular + GPS tracking, all in one, for your Arduino? Oh yes! Introducing Adafruit FONA 808 GSM + GPS Shield, an all-in-one cellular phone module with that lets you add location-tracking, voice, text, SMS and data to your project, in Arduino shield format for easy use.

This shield fits right over your Arduino or compatible. At the heart is a powerful GSM cellular module (we use the latest SIM808) with integrated GPS. This module can do just about everything

- Quad-band 850/900/1800/1900MHz – connect onto any global GSM network with any 2G SIM (in the USA, T-Mobile is suggested)
- Fully-integrated GPS (MT3337 chipset with -165 dBm tracking sensitivity) that can be controlled and query over the same serial port
- Make and receive voice calls using a headset or an external 32Ω speaker + electret microphone
- Send and receive SMS messages
- Send and receive GPRS data (TCP/IP, HTTP, etc.)
- PWM/Buzzer vibrational motor control
- AT command interface with "auto baud" detection

Here's the GPS specifications:

- 22 tracking /66 acquisition channels
- GPS L1 C/A code
- Sensitivity

Tracking: -165 dBm

Cold starts : -148 dBm

- Time-To-First-Fix

Cold starts: 32s (typ.)

Hot starts: 1s (typ.)

Warm starts: 5s (typ.)

- Accuracy: approx 2.5 meters

Sounds delicious, right? So we plated this fine module onto a shield 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 via the Arduino when necessary. Two LEDs let you know when its charging and done. You can then flip the switch and use the battery to run your circuit!
- Standard 4-pole TRRS headphone jack. Use any 'Android' or 'iPhone'-compatible headset with mic
- Breakouts for external 32Ω speaker and electret mic if you don't want to use a headphone
- Level shifting circuitry to make it Arduino-safe
- Vibrational motor (buzzer) driver so you can have noiseless notifications
- uFL connection for external passive GPS & external GSM antenna
- Indicator LEDs for power and network connectivity
- Any standard 2G SIM slides into a secure connector

On its own, this shield can't do anything. It requires a microcontroller like an Arduino to drive it! You will also need some required accessories to make FONA work. These are not included!

- SIM Card! A 2G Mini SIM card is required to do anything on the cellular network. US AT&T no longer sells 2G SIMs and will shut off their 2G network, so for American customers we recommend any T-Mobile or reseller (TING, SIMPLE mobile, etc) that uses the T-Mobile network.
- Lipoly Battery - 500mAh or larger! This 500mAh battery, or this 1200mAh will work great.
- External GSM Antenna - This slim uFL antenna works great!
- External Passive GPS Antenna - This 15mm passive antenna works great!

Each order comes with one tested and assembled FONA shield and a stick of 0.1" male header. Required Arduino, SIM card, battery, antenna and other accessories are not included! Some light soldering is required to put the headers onto the shield. You can also grab some stacking headers if you would like to stack a shield on top

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!

Check out our great tutorial for code, wiring diagrams, schematics, datasheets and more!
