Name: SparkFun RedBoard Artemis ATP
Single Line Description: The RedBoard Artemis ATP has 48 GPIO and this board breaks out all of them in an Arduino Mega format.
SKU: DEV-15442

Description:
The RedBoard Artemis ATP is affectionately called 'All the P ins!' at SparkFun. The Artemis module has 48 GPIO and this board breaks out absolutely every one of them in a familiar Mega like form factor. What's with the silkscreen labels? They're all over the place. We decided to label the pins as they are assigned on the A pollo3 IC itself. This makes finding the pin with the function you desire a lot easier. Have a look at the full pin map from the Apollo3 datasheet. If you really need to test out the 4-bit SPI functionality of the Artemis you're going to need to access pins 4, 22, 23, and 26. Need to try out the differential ADC port 1? Pins 14 and 15. The RedBoard Artemis ATP will allow you to flex the impressive capabilities of the Artemis module.

The RedBoard Artemis ATP has the improved power conditioning and USB to serial that we've refined over the years on our RedBoard line of products. A modern USB-C connector makes programming easy. A Qwiic connector makes I2C easy. The ATP is fully compatible with SparkFun's Arduino core and can be programmed easily under the Arduino IDE. We've exposed the JTAG connector for more advanced users who prefer to use the power and speed of professional tools. If you need a *lot* of a GPIO with a simple to program, ready to go to market module, the ATP is the fix you need. We've added a digital MEMS microphone for folks wanting to experiment with always-on voice commands with TensorFlow and machine learning. We've even added a convenient jumper to measure current consumption for low power testing.

With 1M flash and 384k RAM you'll have plenty of room for your sketches. The Artemis module runs at 48MHz with a 96MHz turbo mode available and with Bluetooth to boot!

The SparkFun RedBoard Artemis ATP is a powerful platform if you're interested in testing out the full capabilities of the SparkFun Artemis module. If you're looking for a more compact solution, be sure to check out our Nano and Uno footprints for more hacker-friendly products.

Features:

- Arduino Mega Footprint
- 1M Flash / 384k RAM
- 48MHz / 96MHz turbo available
- 6uA/MHz (operates less than 5mW at full operation)
- 48 GPIO - all interrupt capable
- 31 PWM channels
- Built-in BLE radio
- 10 ADC channels with 14-bit precision with up to 2.67 million samples per second effective continuous, multi-slot sampling rate
- 2 channel differential ADC
- 2 UARTs
- 6 I2C buses
- 6 SPI buses
- 2/4/8-bit SPI bus
- PDM Interface
- I2S Interface
- Secure 'Smart Card' interface
- Qwiic Connector

Documents:

- Schematic
- Eagle Files
- Hookup Guide
- Designing with the SparkFun Artemis
- Artemis Development with Arduino
- Arduino Core
- Apollo3 Pin Map
- Artemis Info Page
- GitHub Hardware Repo