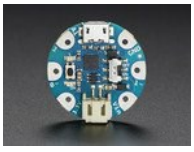
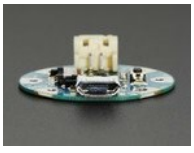




Arduino GEMMA - Miniature wearable electronic platform

PRODUCT ID: 2470

DISCONTINUED

Grab the Adafruit GEMMA V2 here!

DESCRIPTION

What do you get when you combine an Adafruit classic with geniuses at Arduino? The Arduino GEMMA! It's a tiny wearable platform board with a lot of might in a 1" diameter package. Powered by a Attiny85 and programmable with an Arduino IDE over USB, you'll be able to realize any wearable project.

This is a collaboration with Arduino.cc and Adafruit. This product is for US Sales only! Use Arduino IDE 1.6.4 or higher for Arduino Gemma support!

We worked with the folks over at Arduino to design a microcontroller board that was small enough to fit into any project, and low cost enough to use without hesitation. Perfect for when you don't want to give up your Adafruit Flora and you aren't willing to take apart the project you worked so hard to design. It's the Adafruit and Arduino lowest-cost sewable controller!

The Attiny85 is a great processor because despite being so small, it has 8K of flash, and 5 I/O pins, including analog inputs and PWM 'analog' outputs. We designed a USB bootloader so you can plug it into any computer and reprogram it over a USB port just like an Arduino (it uses 2 of the 5 I/O pins, leaving you with 3). In fact we even made some simple modifications to the Arduino IDE so that it works like a mini-Flora. Perfect for small & simple projects the Arduino GEMMA will be your go-to wearable electronics platform.

Even though you can program GEMMA using the Arduino IDE, it's not a fully 100% Arduino UNO-compatible. There are some things you trade off for such a small and low cost microcontroller!

- GEMMA does not have a Serial port connection for debugging so the serial port monitor will not be able to send/receive data
- Some computers' USB v3 ports don't recognize the GEMMAs bootloader. Simply use a USB v2 port or a USB hub in between

Here are some useful specifications!

- Super small, only 1.1" / 28mm diameter and 0.28" / 7mm thick.
- Easy-to-sew or solder pads for embedding in your wearable project
- Low cost enough, you can use one for every weekend project
- ATtiny85 on-board, 8K of flash, 512 byte of SRAM, 512 bytes of EEPROM
- Internal oscillator runs at 8MHz
- Ultra low power, draws only 9 mA while running
- USB bootloader with a nice LED indicator looks just like a USBtinyISP so you can program it with the Arduino IDE (with a few simple config modifications)
- Micro-USB jack for power and/or USB uploading, you can put it in a box or tape it up and use any USB cable for when you want to reprogram.
- We really worked hard on the bootloader process to make it rugged and foolproof
- ~5.25K bytes available for use (2.75K taken for the bootloader)
- On-board 3.3V power regulator with 150mA output capability and ultra-low dropout. Up to 16V input, reverse-polarity protection, thermal and current-limit protection.
- Power with either USB or external output (such as a battery) - it'll automatically switch over
- On-board green power LED and red pin #1 LED
- Reset button for entering the bootloader or restarting the program.
- 3 GPIO - The 3 independent IO pins have 1 analog input and 2 PWM output as well.

sor interfacing.

For more information about GEMMA, check our out Learn guide

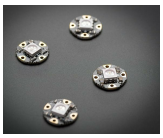
TECHNICAL DETAILS

- Diameter: 28mm / 1.1"
- Height: 6mm / 0.24"
- Weight: 2g

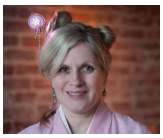
Documentation, PCB files, and more at the Arduino product page

RoHS

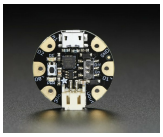
LEARN



Sewable NeoPixels
Addressable, chainable, delectable!

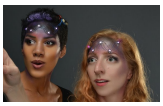


Jewel Hair Stick
Bring out your inner geisha with this Neopixeled chopstick kanzashi.



Introducing Gemma
Introducing Adafruit's mini wearable microcontroller

Bluetooth-Controlled NeoPixel Goggles
Adding a smartphone interface to your wearable project couldn't be easier!

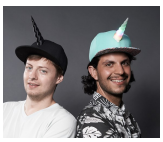


Space Face LED Galaxy Makeup
Wear a constellation with NeoPixels & GEMMA

Buzzing Mindfulness Bracelet
feel the passage of time

LED candles: simple, easy, cheap
LED candles are very popular but can be expensive and unrealistic. Why not make your own?

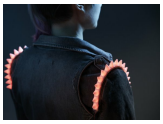
NeoPixel Ring Bangle Bracelet
Pixel ring bling



3D Printed Unicorn Horn
Glowing majesty two ways

Gemma-Powered NeoPixel LED Sound Reactive Drums
Light up your drums with sound.

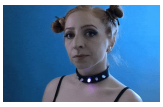
NeoPixel Tiara
Wear a crown of LEDs for your birthday or prom!



Cyberpunk Spikes
3D printed NinjaFlex Electronic Fashion

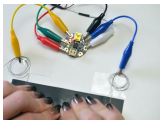
Chirping Plush Owl Toy
Make any toy make simple sound!

Interior Purse Light
See your stuff!



NeoPixel Punk Collar
GEMMA + LED studs

FLORA and GEMMA ICSP
They see me rolling, bootloading!



Serial Debugging with GEMMA
Calibrate sensors on GEMMA and Trinket!

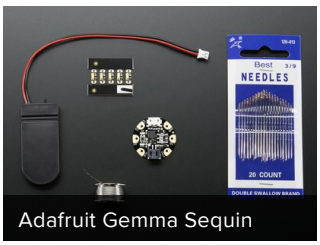
Unibeam
Shoot powerful LED lights, from your chest!

Animated NeoPixel Glow Fur Scarf
Wrap up in light and motion

Celebration Spectacles
New Years Glasses with NeoPixel Rings

Textile Potentiometer Hoodie
All-sewn slide-sensor circuit

MAY WE ALSO SUGGEST...



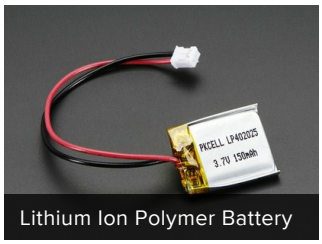
Adafruit Gemma Sequin

Right Angle USB cable -

JST-PH Battery Extension

Adafruit GEMMA v2 -

Stainless Medium



Lithium Ion Polymer Battery


FLORA - Wearable


USB cable - USB A to Micro-

Needle set - 3/9 sizes - 20


Gemma Starter Pack


Flora Wearable Bluefruit LE


Flora Sewable 3-Pin JST

"If you have knowledge, let others light their candles at it" - Margaret Fuller