Adafruit 2.13" Monochrome eInk / ePaper Display FeatherWing - 250x122 Monochrome

PRODUCT ID: 4195

Easy e-paper finally comes to your Feather, with this breakout that's designed to make it a breeze to add a monochrome eInk display. Chances are you've seen one of those new-fangled 'e-readers' like the Kindle or Nook. They have gigantic electronic paper 'static' displays - that means the image stays on the display even when power is completely disconnected. The image is also high contrast and very daylight readable. It really does look just like printed paper!

We've liked these displays for a long time, and they're just about Feather sized, so wouldn't a custom e-paper FeatherWing make a ton of sense? This 'Wing is tested to work with *all* of our Feathers, from the ESP8266 to the M0. It has built in memory buffering so it can work with chips as small as the '32u4 and '328. It *does* use a lot of pins: the 3 SPI pins, and up to 4 control pins to manage the SD card slot and SRAM.

The FeatherWing sports a 2.13" monochrome (black and white) display. It's higher resolution than our 2.13" Tri-Color display with 250x122 black pixels on a white-ish background. The monochrome displays also take a lot less time to update, only a couple seconds instead of 15 seconds!

Using our CircuitPython or Arduino libraries, you can create a 'frame buffer' with what pixels you want to have activated and then write that out to the display. Most simple breakouts leave it at that. But if you do the math, 250 x 122 pixels x 2 colors = 7.6 KBytes. Which won't fit into many microcontroller memories. Heck, even if you do have 32KB of RAM, why waste 8KB?

So we did you a favor and tossed a small SRAM chip on the back. This chip shares the SPI port the eInk display uses, so you only need one extra pin. And, no more frame-buffering! You can use the SRAM to set up whatever you want to display, then shuffle data from SRAM to eInk when you're ready. The library we wrote does all the work for you, you can just interface with it as if it were an Adafruit_GFX compatible display.
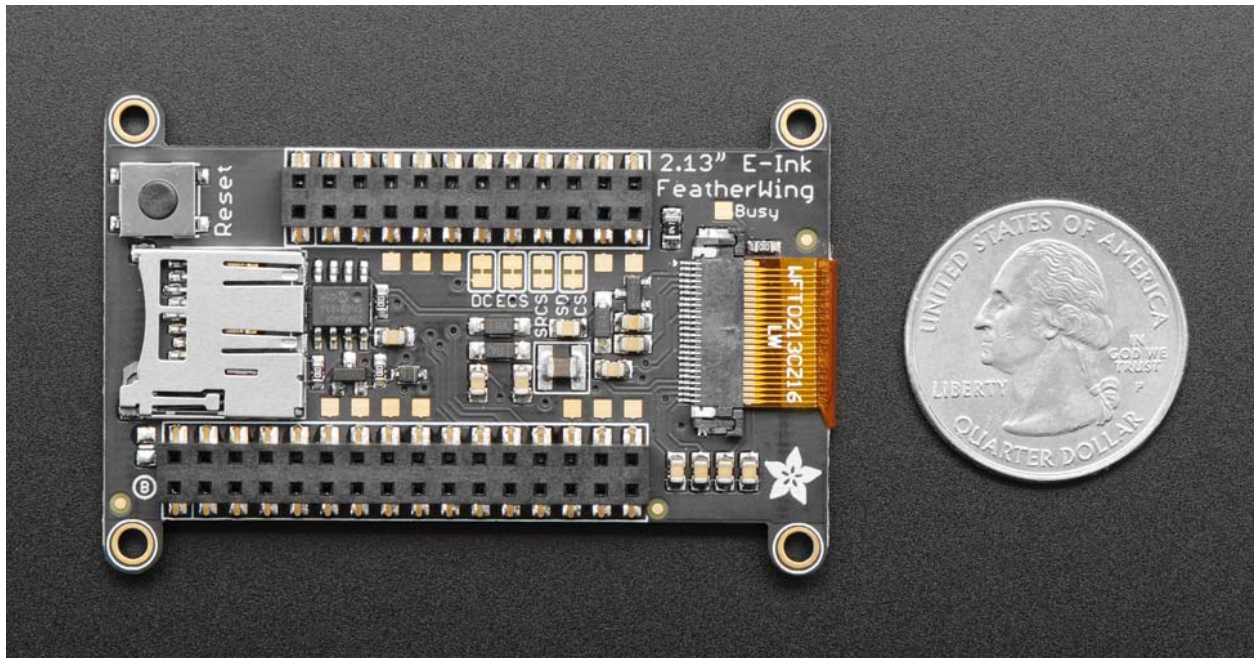
We even tossed on a MicroSD socket so you can store images, text files, whatever you like to display. Comes assembled and tested with socket headers that you can plug your Feather right into, no soldering required!

TECHNICAL DETAILS

Product Dimensions: 61.3mm x 40.2mm x 6.7mm / 2.4" x 1.6" x 0.3"

Product Weight: 13.8g / 0.5oz

https://www.adafruit.com/product/41954-15-19