LCD FeatherWing from Oddly Specific Objects
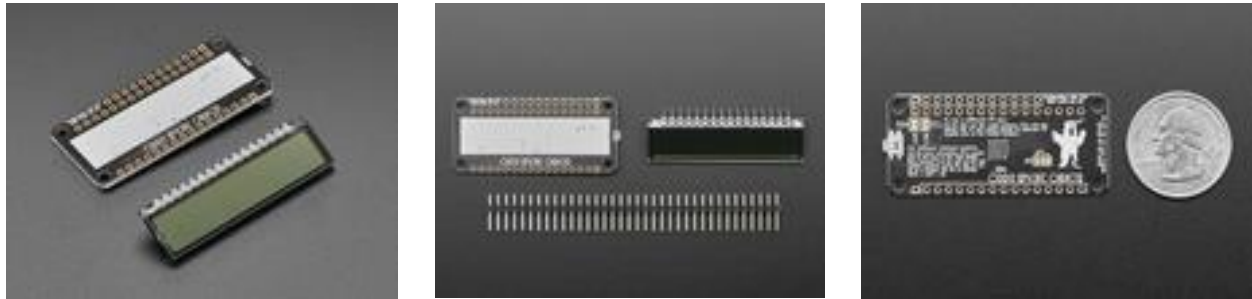
Product ID: 5581

Description

The LCD FeatherWing from Oddly Specific Objects is a low-power, CircuitPython-compatible, I²C-driven display that works with Adafruit's Feather line of development boards. It uses the BU9796 segment LCD controller to drive a custom liquid crystal display glass with 48 segments, including:

- Five indicator icons: Bell, Wifi, Moon, Arrows, and Battery
- Five 7-segment digits, plus a sign indicator
- Four decimal points, one between each pair of digits.
- AM and PM indicators, plus a colon for displaying the time

What's in the bag?

The LCD FeatherWing comes mostly assembled but does require some basic through-hole soldering. The wing comes in three parts:

- One LCD FeatherWing board with all surface mount parts assembled.
- One 16-pin segment LCD, which you'll solder onto the wing.
- One 36-pin header strip, which you'll break into a 12- and a 16-pin strip to serve as the Feather headers.

Why did you make it?

"Segment LCDs are a kind of old-school technology that doesn't get a lot of love in maker projects. They have a striking, high-contrast look with great daylight readability, and they are staggeringly low power as display tech goes. But they are somewhat difficult to drive, requiring AC signals on all pins and multiple bias voltages.

I made this LCD FeatherWing to simplify the use of LCD technology in Feather-oriented projects so that makers could take advantage of this low-power, always-on display technology in their projects using the I²C protocol and an easy-to-use CircuitPython library." – Joey Castillo

What makes it special?

Unlike a segment LED display which consumes dozens of milliamperes, this LCD FeatherWing consumes mere *microamperes* of power, even as the display remains on and showing useful data. When paired with judicious use of deep sleep, you can use this wing to make battery-powered projects that last *months* instead of hours or days.

In addition to the custom FeatherWing circuit board, this device sports a completely custom liquid crystal display glass of my own design. With five digits plus a sign indicator, four decimal points, and a colon, it's optimized for displaying all kinds of data, from sensor readings like temperature to the time of day or a countdown clock. Its diverse set of indicators includes icons for wifi connection and data transfer, battery status, alarm, and sleep mode. This makes it an ideal match for boards like the ESP32 Feather and the Feather M4 that support deep sleep.

YouTube link:
https://www.youtube.com/watch?t=473&v=AuKynjUTnJc&feature=emb_imp_woyt

Technical Details

- Design Files
- Documentation
- Source Code