



Espruino Pixl.js – Javascript Microcontroller with LCD

PRODUCT ID: 3855

There are smart coffeemakers, smart mirrors, color-changing smart fabrics, what will they come out with next? Check out Espruino's Pixl.js, a smart LCD with Bluetooth LE!

The Espruino Pixl.js is a low energy Bluetooth smart display that can be programmed and debugged wirelessly with JavaScript. It is both multi-functional and easy to use, with a custom circuit board that contains both the Nordic nRF52832 BLE chipset, some input buttons and a monochrome LCD display. On the back you even get a full 'Arduino'-compatible header set so you can plug in shields! You get all the joy of an interpreted language and wireless functionality, that's ready for hardware adventures.

Pixl.js comes with the Open Source JavaScript interpreter Espruino pre-installed, which makes it incredibly easy to use and means you can get started in just seconds, without any prior programming experience. You can start programming straight out of the box – no wires or software required!

Its unique design allows you to use the Arduino footprint to interface with the huge array of existing Arduino shields, while still using the LCD and buttons. You can add Ethernet, WiFi, motor drivers, even GSM... all with no soldering needed!

Features

Bluetooth Low Energy

Espruino JavaScript interpreter pre-installed

nRF52832 SoC – 64MHz ARM Cortex M4, 64kB RAM, 512kB Flash

Sunlight readable monochrome display with white backlight

20 x GPIO in Arduino footprint (capable of PWM, SPI, I2C, UART, Analog Input)

Support for GSM, LTE, WiFi and Ethernet Arduino shields

2.5v to 16v input range (0.3mA idle)

CR2032 battery holder (Battery not included), or Micro USB (power only)

4 x 3mm mounting holes

4 x buttons

Built in thermometer and battery level sensors

NFC tag programmable from JavaScript

Dimensions: 60mm x 53mm x 15mm (2.4 x 2.1 x 0.6 inches)

Powering Pixl.js

Pixl.js can be powered in multiple ways:

Micro USB – the Micro USB connector can easily provide power to your Pixl.js (there is no data connection)

CR2032 Lithium battery – a CR2032 battery will power Pixl.js for around 20 days with light JavaScript usage. Battery not included

Vin pins – available via the Arduino header, or the separate pin header to the side. You can supply 3v – 16v which is regulated down to 3.3v for Pixl.js. The unpopulated pins to the side are spaces to accommodate a connector for JST PHR-2 Batteries.

CR2032 LiPo battery – you can not use a CR2032 LiPo battery without some minor modifications as the voltage is too high. There is a small solder jumper below the CR2032 holder. Cut the existing connection and solder between the other two pads. This causes the battery to be connected via the voltage regulator. Note: the LiPo will then be connected directly to Vin, and you will be unable to use the USB for power (as it'll connect to LiPo to 5v).

CR2032 battery backup – the CR2032 can be used as a backup when Vin/USB power is not present. Cut the trace in the solder jumper below the CR2032 holder, and add a surface mount diode to the two pads to the right of it.

While the main advantage of the Espruino is its instant execution, it can also be used as a traditional board through a Web-based IDE hosted on your computer. The microcontroller also uses less power than Linux Boards (although its of course a lot less powerful as well) so will run longer on battery power. There's also much more info on the Espruino Pixl.js page including tutorials, code examples, manuals, datasheets, and more!

For other great embedded Javascript development boards from Espruino, check out the classic Espruino and the little Espruino Pico.

TECHNICAL DETAILS

Product Dimensions: 60.0mm x 53.0mm x 15.0mm / 2.4" x 2.1" x 0.6"

Product Weight: 34.2g / 1.2oz

