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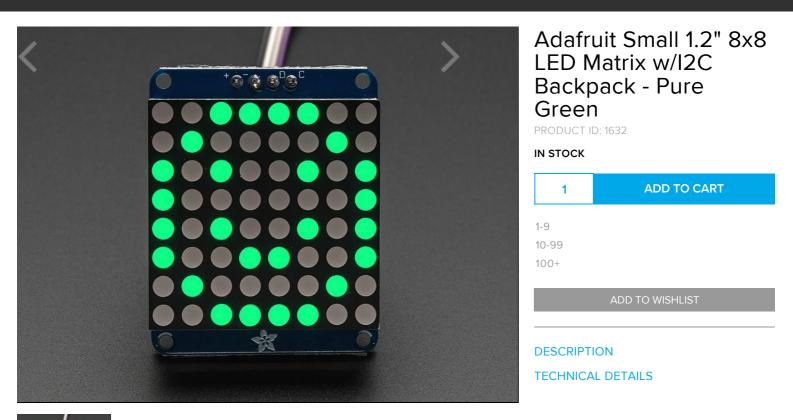
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LEDS / 1.2" LED MATRICES / ADAFRUIT SMALL 1.2" 8X8 LED MATRIX W/I2C BACKPACK - PURE GREEN







What's better than a single LED? Lots of LEDs! A fun way to make a small display is to use an 8x8 matrix or a 4-digit 7-segment display. Matrices like these are 'multiplexed' - so to control 64 LEDs you need 16 pins. That's a lot of pins, and there are driver chips like the MAX7219 that can control a matrix for you but there's a lot of wiring to set up and they take up a ton of space. Here at Adafruit we feel your pain! After all, wouldn't it be awesome if you could control a matrix without tons of wiring? That's where these lovely LED matrix backpacks come in. We have them in three flavors - a mini 0.7" 8x8, a small 1.2" 8x8 and a 4-digit 0.56" 7-segment. They work perfectly with the matrices we stock in the Adafruit shop and make adding a bright little display trivial.

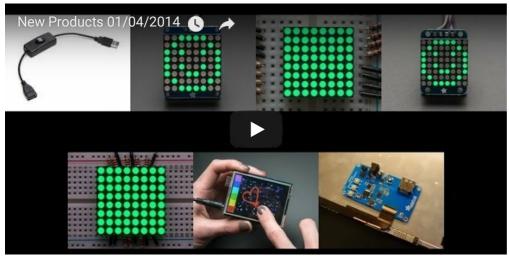
The matrices use a driver chip that does all the heavy lifting for you: They have a built in clock so they multiplex the display. They use constant-current drivers for ultra-bright, consistent color (the images above are photographed at the dimmest setting to avoid overloading our camera!), 1/16 step display dimming, all via a simple I2C interface. These 1.2" matrix backpacks come with three address-selection jumpers so you can connect up to eight 1.2" 8x8's together (or a combination, such as four 1.2" 8x8's and four 7-segments, etc) on a single I2C bus.

The product kit comes with:

- A fully tested and assembled 1.2" LED backpack
- Ultra-bright 1.2" 8x8 pure-green matrix
- 4-pin header

A bit of soldering is required to attach the matrix onto the backpack but its very easy to do and only takes about 5 minutes.

Of course, in classic Adafruit fashion, we also have a detailed tutorial showing you how to solder, wire and control the display. We even wrote a very nice library for the backpacks so you can get running in under half an hour, displaying images on the matrix or numbers on the 7-segment. If you've been eying matrix displays but hesitated because of the complexity, this is the solution you've been looking for!



Adafruit Small 1.2" 8x8 LED Matrix w/I2C Backpack - Pure Green (0:57)

## **TECHNICAL DETAILS**

This board/chip uses I2C 7-bit addresses between 0x70-0x77, selectable with jumpers.

Datasheets, Fritzing object, EagleCAD PCB files and more in the tutorial!



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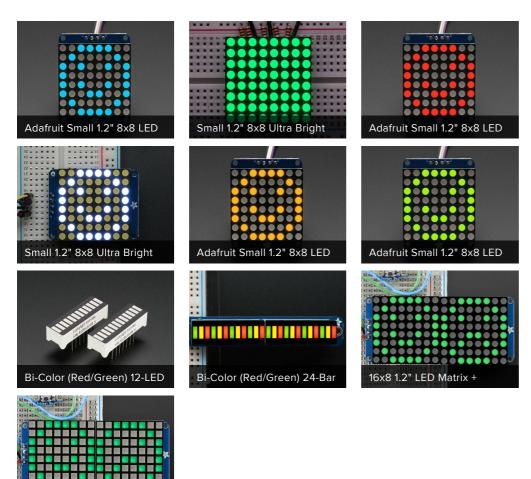
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16x8 1.2" LED Matrix +

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