DESCRIPTION

The IS31FL3731 will let you get back to that classic LED matrix look, with a nice upgrade! This I2C LED driver chip has the ability to PWM each individual LED in a 16x9 grid so you can have beautiful LED lighting effects, without a lot of pin twiddling. Simply tell the chip which LED on the grid you want lit, and what brightness and it’s all taken care of for you.

The IS31FL3731 is a nice little chip - it can use 2.7-5.5V power and logic so its flexible for use with any microcontroller. You can set the address so up to 4 matrices can share an I2C bus. Inside is enough RAM for 8 separate frames of display memory so you can set up multiple
frames of an animation and flip them to be displayed with a single command.

This chip is great for making small LED displays, and we even designed the breakout to match up with our ready-to-go LED grids in red, yellow, green, blue and white. Sandwich the driver and matrix breakout, solder together for a compact setup. Or you can DIY your own setup, just follow the LED grid schematic in the IS31FL3731 datasheet.

Please note this does not come with any LEDs, you can pick up a matching LED matrix from us or DIY your own.

Pick up a driver board and your favorite color LEDs to match. You'll need to do some basic soldering to attach the driver backpack and matrix together, and run wires to your microcontroller, but its not too hard. Then install our Arduino or CircuitPython libraries to get some LEDs blinking immediately. Our library is Adafruit_GFX compatible so you can draw lines, circles, text, and small bitmaps if you want more graphics control.

Check out our detailed tutorial for Arduino & CircuitPython support, pinouts, assembly, wiring, and more!

---

**TECHNICAL DETAILS**

- 43.3mm x 27.9mm x 2.4mm / 1.7" x 1.1" x 0.09"
- Weight: 4.2g
- Schematic, Datasheet, EagleCAD PCB files, and Fritzing available in the product tutorial

---

**LEARN**

- IS31FL3731 16x9 Charlieplexed PWM LED Driver
- 144 individually dimmable PWM LEDs over I2C
- Animated Flame Pendant
- Turn on your heart light!

- CircuitPython Hardware: Charlieplex LED Matrix
- How to use Charlieplex LED matrices with CircuitPython!

- Mini Commodore PET with Charlieplexed LED Matrix
- 3D Print This Adorable Retroputer

- I2C addresses!
- I2C addresses from 0x00 to 0x7F (inclusive)

---

**MAY WE ALSO SUGGEST...**

- Adafruit 16x8 LED Matrix
- LED Charlieplexed Matrix - Cool White
- LED Charlieplexed Matrix - Blue
"Seek freedom and become captive of your desires. Seek discipline and find your liberty" - Frank Herbert