

---

# Adafruit IS31FL3731 Documentation

*Release 1.0*

**Radomir Dopieralski**

**Jun 13, 2017**



---

## Contents

---

|          |                            |          |
|----------|----------------------------|----------|
| <b>1</b> | <b>Matrices</b>            | <b>3</b> |
| <b>2</b> | <b>Examples</b>            | <b>5</b> |
| 2.1      | Matrix . . . . .           | 5        |
| 2.2      | Charlie Wing . . . . .     | 5        |
| <b>3</b> | <b>Indices and tables</b>  | <b>7</b> |
|          | <b>Python Module Index</b> | <b>9</b> |



Contents:



**class** `is31fl13731.Matrix` (*i2c*, *address=0x74*)

Charlieplexed 16x9 LED matrix.

**reset** ()

Reset the matrix.

**sleep** ([*value* ])

Get or set the sleep mode.

**autoplay** (*delay=0*, *loops=0*, *frames=0*)

Enables or disables autoplay.

If *delay* is 0, autoplay is disabled. Otherwise the display will switch between *frames* frames every *delay* milliseconds, and repeat the cycle *loops* times. If *loops* is 0, it will repeat indefinitely.

**fade** (*self*, *fade\_in=None*, *fade\_out=None*, *pause=0*)

Disables or enables and configures fading.

If called without parameters, disables fading. If *fade\_in* and/or *fade\_out* are specified, it will take that many milliseconds to change between frames, with *pause* milliseconds of dark between.

**frame** (*self*, *frame=None*, *show=True*)

Change or get active frame.

If *frame* is not specified, returns the active frame, otherwise sets it to the value of *frame*. If *show* is `True`, also shows that frame.

**audio\_sync** (*self*, *value=None*)

Enable, disable or get sync of brightness with audio input.

**audio\_play**(*self*, *sample\_rate*, *audio\_gain=0*,  
*agc\_enable=False*, *agc\_fast=False*)

Enable or disable frame display according to the audio input.

The *sample\_rate* specifies sample rate in microseconds. If it is 0, disable the audio play. The *audio\_gain* specifies amplification between 0dB and 21dB.

**blink** (*self*, *rate=None*)

Get or set blink rate up to 1890ms in steps of 270ms.

**fill** (*self*, *color=None*, *blink=None*, *frame=None*)

Fill the display with specified color and/or blink.

**pixel** (*self*, *x*, *y*, *color=None*, *blink=None*, *frame=None*)

Read or write the specified pixel.

If `color` is not specified, returns the current value of the pixel, otherwise sets it to the value of `color`.

If `frame` is not specified, affects the currently active frame. If `blink` is specified, it enables or disables blinking for that pixel.

**class** `is31fl3731.CharlieWing` (*i2c*, *address=0x74*)

Driver for the 15x7 CharlieWing Adafruit FeatherWing.

Has the same methods as the `:class:Matrix` above.



### Matrix

Example usage with ESP8266:

```
import is31f13731
from machine import I2C, Pin
i2c = I2C(Pin(5), Pin(4))
display = is31f13731.Matrix(i2c)
display.fill(127)
```

### Charlie Wing

Example usage with the Feather HUZAZH ESP8266 board:

```
import is31f13731
from machine import I2C, Pin
i2c = I2C(Pin(5), Pin(4))
display = is31f13731.CharlieWing(i2c)
display.fill(127)
```



## CHAPTER 3

---

### Indices and tables

---

- `genindex`
- `modindex`
- `search`



i

is31f13731, 3



## A

audio\_sync() (is31fl3731.Matrix method), 3  
autoplay() (is31fl3731.Matrix method), 3

## B

blink() (is31fl3731.Matrix method), 3

## C

CharlieWing (class in is31fl3731), 4

## F

fade() (is31fl3731.Matrix method), 3  
fill() (is31fl3731.Matrix method), 4  
frame() (is31fl3731.Matrix method), 3

## I

is31fl3731 (module), 3

## M

Matrix (class in is31fl3731), 3

## P

pixel() (is31fl3731.Matrix method), 4

## R

reset() (is31fl3731.Matrix method), 3

## S

sleep() (is31fl3731.Matrix method), 3