

Mercury V1 manual · v1.0

<https://www.altimetercloud.com/support/mercuryv1/code-status-led/>

The Mercury has either 1 "Neopixel" type status LED, or 4 in a square from revision 3 onwards. The easiest way to use these is to turn them on (See the Power control page) and then use a standard library. In this example you can change it to either 4 or 1 pixel we've defaulted it to 4 pixels.



Using Arduino IDE? Our online programmer includes Mercury_Pins.h by default so the pin names work without issue. If you are using Arduino IDE or another programmer, copy the Mercury_Pins.h tab content and paste it into the top of your program.

```
/*
 * Mercury V1 (ESP32-C6) Status LED example
 * Cycles the Neopixel(s) through various colours
 */
#include "Mercury_Pins.h"
#include "Adafruit_NeoPixel.h"

Adafruit_NeoPixel pixels(4, LED, NEO_GRB + NEO_KHZ800);

void setup() {
  Serial.begin(115200);

  // Enable the NeoPixel power rail
  pinMode(LEDPOWER, OUTPUT);
  digitalWrite(LEDPOWER, HIGH);
  delay(10);

  pixels.begin();
  pixels.setBrightness(140); // Keep brightness low (0-255)
  pixels.show();

  Serial.println("NeoPixel colour cycle started");
}

// Smoothly cycle all pixels through the colour wheel
void rainbow(int wait) {
  static uint16_t hue = 0;
  for (int i = 0; i < pixels.numPixels(); i++) {
    uint16_t pixelHue = hue + (i * 65536L / pixels.numPixels());
    pixels.setPixelColor(i, pixels.gamma32(pixels.ColorHSV(pixelHue)));
  }
  pixels.show();
  hue += 256;
  delay(wait);
}

void loop() {
  rainbow(20);
}
```

#pragma once

```
/*
 * Mercury (ESP32-C6) Pin Definitions
 * Board-specific GPIO assignments
 */

// — Status LED (NeoPixel) —
#define LEDPOWER 3 // NeoPixel power (drive HIGH to enable)
#define LED 2 // NeoPixel data signal

// — I2C Bus —
#define SDA 21 // I2C data
#define SCL 22 // I2C clock

// — Sensor Power —
#define VACC 20 // Sensor power rail (drive HIGH to enable)

// — General Purpose Ports —
#define GP06 6 // GP06 port
#define GP07 7 // GP07 port

// — High Current Output —
#define OUT1 5 // High current output (e.g. pyro / relay)

// — Battery Bar LEDs —
#define BL1 4 // Battery LED 1 (lowest)
#define BL2 14 // Battery LED 2
#define BL3 15 // Battery LED 3
#define BL4 18 // Battery LED 4
#define BL5 19 // Battery LED 5 (highest)

// — Indicators —
#define DISK 8 // Disk activity LED

// — Analogue / Detection —
#define BATIN 0 // Battery voltage (1:1 divider)
#define USBDETECT 1 // USB power detect (HIGH = USB present)
#define BUTTON 9 // BUTTON on the board, boot button but can be used
```