

CoreS3 Camera カメラ

CoreS3 カメラ使用サンプルプログラム。

サンプルプログラム

コンパイル要件

- M5Stack ボード マネージャー バージョン $\geq 3.2.2$
- ボード選択 = M5CoreS3
- M5Unified ライブラリ バージョン $\geq 0.2.11$

```
1  #include "M5Unified.h"
2  #include "esp_camera.h"
3
4  class GC0308 {
5  private:
6  public:
7      camera_fb_t* fb;
8      sensor_t* sensor;
9      camera_config_t* config;
10     bool begin();
11     bool get();
12     bool free();
13 };
14
15 static camera_config_t camera_config = {
16     .pin_pwdn    = -1,
17     .pin_reset   = -1,
18     .pin_xclk    = -1,
19     .pin_sscb_sda = 12,
20     .pin_sscb_scl = 11,
21     .pin_d7      = 47,
22     .pin_d6      = 48,
23     .pin_d5      = 16,
24     .pin_d4      = 15,
25     .pin_d3      = 42,
26     .pin_d2      = 41,
27     .pin_d1      = 40,
28     .pin_d0      = 39,
29
30     .pin_vsync = 46,
31     .pin_href  = 38,
32     .pin_pclk  = 45,
33
34     .xclk_freq_hz = 20000000,
35     .ledc_timer   = LEDC_TIMER_0,
36     .ledc_channel  = LEDC_CHANNEL_0,
37
38     .pixel_format  = PIXFORMAT_RGB565,
39     .frame_size    = FRAMESIZE_QVGA,
40     .jpeg_quality  = 0,
41     .fb_count      = 2,
42     .fb_location   = CAMERA_FB_IN_PSRAM,
43     .grab_mode     = CAMERA_GRAB_WHEN_EMPTY,
44     .sccb_i2c_port = -1,
45 };
46
47 bool GC0308::begin()
48 {
49     M5.In_I2C.release();
50     esp_err_t err = esp_camera_init(&camera_config);
```

```

51     if (err != ESP_OK) {
52         return false;
53     }
54     sensor = esp_camera_sensor_get();
55     return true;
56 }
57
58 bool GC0308::get()
59 {
60     fb = esp_camera_fb_get();
61     if (!fb) {
62         return false;
63     }
64     return true;
65 }
66
67 bool GC0308::free()
68 {
69     if (fb) {
70         esp_camera_fb_return(fb);
71         return true;
72     }
73     return false;
74 }
75
76 GC0308 Camera;
77
78 void setup() {
79     auto cfg = M5.config();
80     M5.begin(cfg);
81
82     if (!Camera.begin()) {
83         Serial.println("Camera Init Fail");
84     }
85     Serial.println("Camera Init Success");
86
87     Camera.sensor->set_framesize(Camera.sensor, FRAMESIZE_QVGA);
88 }
89
90 void loop() {
91     if (Camera.get()) {
92         M5.Display.pushImage(0, 0, M5.Display.width(),
93                             M5.Display.height(),
94                             (uint16_t *)Camera.fb->buf);
95         Camera.free();
96     }
97 }

```