Chain Captain Wakeup 休眠唤醒

Chain Captain 休眠唤醒相关 API 与案例程序。

案例程序

编译要求

- M5Stack 板管理版本 >= `3.3.10-a`
- 开发板选项 = `M5ChainCaptain`
- M5Unified 库版本 >= `0.3.0`
- M5GFX 库版本 >= `0.3.0`

cpp

```cpp
#include <M5Unified.h>
// #include <esp_sleep.h>

static constexpr uint64_t SLEEP_TIME_US = 5000000ULL;

static const char* SLEEP_MODE_NAMES[] = {
  "Light sleep 5s",
  "Deep sleep 5s",
};

static const size_t MODE_COUNT = sizeof(SLEEP_MODE_NAMES) / sizeof(SLEEP_MODE_NAMES[0]);
static size_t modeIndex = 0;

static void drawMenu(const char* status)
{
  M5.Display.startWrite();
  M5.Display.fillScreen(TFT_BLACK);
  M5.Display.setTextDatum(middle_center);
  M5.Display.setFont(&fonts::FreeSansBold18pt7b);
  M5.Display.setTextColor(TFT_CYAN, TFT_BLACK);
  M5.Display.drawString("Wakeup", 120, 40);
  M5.Display.setFont(&fonts::FreeSans9pt7b);

  for (size_t i = 0; i < MODE_COUNT; ++i) {
    M5.Display.setTextColor(i == modeIndex ? TFT_GREEN : TFT_WHITE, TFT_BLACK);
    M5.Display.drawString(SLEEP_MODE_NAMES[i], 120, 100 + i * 36);
  }

  M5.Display.setTextColor(TFT_DARKGREY, TFT_BLACK);
  M5.Display.drawString("B: prev  C: next", 120, 180);
  M5.Display.setTextColor(TFT_WHITE, TFT_BLACK);
  M5.Display.drawString("A: OK", 120, 205);

  if (status) {
    M5.Display.setTextColor(TFT_ORANGE, TFT_BLACK);
    M5.Display.drawString(status, 120, 228);
  }
  M5.Display.endWrite();
}

void setup()
{
  delay(500);
  auto cfg = M5.config();
  cfg.serial_baudrate = 115200;
  M5.begin(cfg);

  M5.Display.setRotation(0);
  M5.Display.setBrightness(128);
  drawMenu(nullptr);
}

void loop()
{
  M5.update();
```

```
56
57    if (M5.BtnB.wasClicked()) {
58      modeIndex = (modeIndex + MODE_COUNT - 1) % MODE_COUNT;
59      drawMenu(nullptr);
60    }
61
62    if (M5.BtnC.wasClicked()) {
63      modeIndex = (modeIndex + 1) % MODE_COUNT;
64      drawMenu(nullptr);
65    }
66
67    if (M5.BtnA.wasClicked()) {
68      if (modeIndex == 0) {
69        drawMenu("Light sleep now");
70        delay(200);
71        M5.Power.lightSleep(SLEEP_TIME_US, false);
72        // Light sleep resumes here.
73        Serial.printf("Wakeup cause: %d\n",
74                      static_cast<int>(esp_sleep_get_wakeup_cause()));
75        drawMenu("Light sleep wakeup");
76        Serial.println("Woke up from light sleep");
77      } else {
78        drawMenu("Deep sleep now");
79        delay(200);
80        M5.Power.deepSleep(SLEEP_TIME_US, false);
81      }
82    }
83
84    delay(20);
85  }
```

上传后，屏幕显示休眠模式菜单。按动 KEYB / KEYC 选择浅度休眠或深度休眠，按动 KEYA 执行；浅度休眠唤醒后显示 `Light sleep wakeup`，深度休眠唤醒后 ESP32-S3 复位并重新显示初始菜单。



API

Chain Captain 休眠唤醒部分使用 M5Unified 库中的 `Power_Class`，更多相关 API 可以参考下方文档：

- M5Unified - Power Class