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How to write with ESP32 partition table specified

How to apply arbitrary partition table in writing to ESP32 mounted on TWELITE SPOT

We will show you how to apply an arbitrary partition table when writing sketches and files to the ESP32 installed in TWELITE SPOT.

This article introduces applied content (how to specify the partition table of the flash area).

If you are using the partition table settings that come with the ESP32 Arduino Core (e.g. Default 4MB with spiffs), you can ignore this article.

We do not take any responsibility for any damage caused by the settings in this article.

Creating a definition file

The partition table definition is written in a csv file.

The example below specifies that 8MB of the 16MB flash space is to be used by the file system.

```
# TWELITE SPOT 16MB with 8MB LittleFS
# Name,   Type, SubType, Offset,   Size,     Flags
nvs,      data, nvs,     0x9000,   0x5000,
otadata,  data, ota,     0xE000,   0x2000,
app0,     app,  ota_0,   0x10000,  0x7F0000,
spiffs,   data, spiffs,  0x800000, 0x800000,
```

- `TWELITE SPOT 16MB with 8MB LittleFS` This is the name displayed in the Arduino IDE.
- `nvs` Area used by the system. Do not change.
- `otadata` This is the area used when using OTA. Do not change.
- `app0` This is the area where the firmware is written.
- `spiffs` The space used by the LittleFS file system.

`Offset` The units of and columns in the csv file `Size` are bytes and are hexadecimal.

So, in the example above, the usable size of the firmware and filesystem can be calculated as follows:

- `app0` size: `0x7F0000 = 8323072` more `7.875MB`
- `spiffs` size: `0x800000 = 8388608` more `8MB`

Registration of definition files

Open the Arduino15 folder and add the csv file to the path below.

```
Arduino15/packages/esp32/hardware/esp32/x.x.x/tools/partitions
```

`x.x.x` is the version of the Arduino core for the ESP32

Applying a partition table

From the Arduino IDE toolbar, open Tools -> Partition Scheme and select the added partition table.

The selected partition table will be reflected in subsequent firmware writes and file system writes.

> As far as writing the firmware is concerned, if you `partitions.csv` place a setting file with the name of in the same location as the sketch file, it may take precedence.