

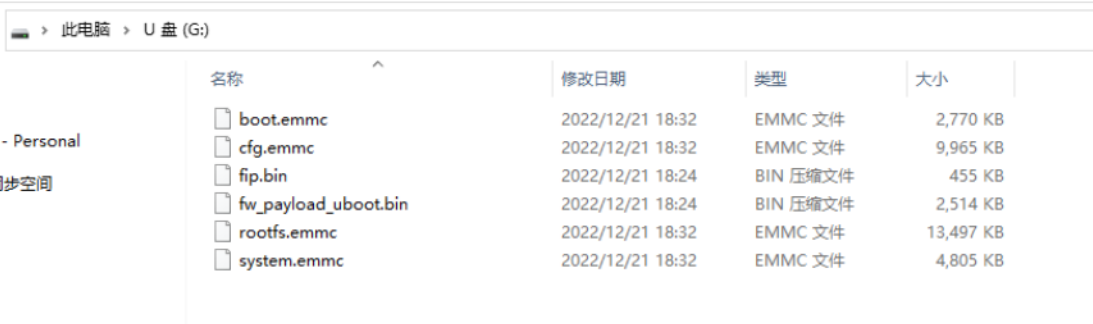
## 固件下载地址

大部分实验可跳过 Virtualbox 与 Vmbuntu20.04 安装，直接使用编译好的固件直接烧录 SD 卡使用

(<https://github.com/sophgo/sophpi-huashan/tree/master/product-sample/image>)

例：1. 首先准备一张 FAT32 格式的 Micro SD 卡

2. 完成后将对应固件放入 sd 卡中，这里以烧录固件为例



名称	修改日期	类型	大小
boot.emmc	2022/12/21 18:32	EMMC 文件	2,770 KB
cfg.emmc	2022/12/21 18:32	EMMC 文件	9,965 KB
fip.bin	2022/12/21 18:24	BIN 压缩文件	455 KB
fw_payload_uboot.bin	2022/12/21 18:24	BIN 压缩文件	2,514 KB
rootfs.emmc	2022/12/21 18:32	EMMC 文件	13,497 KB
system.emmc	2022/12/21 18:32	EMMC 文件	4,805 KB

3. 将 sd 卡插入华山派开发板，将华山派重开机

4. 插卡上电开机后，会自动进入升级，升级完成后，如下所示会停留在 uboot:

```
Hit any key to stop autoboot: 0
```

```
## Resetting to default environment
```

```
Start SD downloading...
```

```
mmc1 : finished tuning, code:60
```

```
465408 bytes read in 11 ms (40.3 MiB/s)
```

```
mmc0 : finished tuning, code:27
```

```
switch to partitions #1, OK
```

```
mmc0(part 1) is current device
```

```
MMC write: dev # 0, block # 0, count 2048 ... 2048 blocks written: OK
in 17 ms (58.8 MiB/s)
```

MMC write: dev # 0, block # 2048, count 2048 ... 2048 blocks written:  
OK in 14 ms (71.4 MiB/s)

Program fip.bin done

mmc0 : finished tuning, code:74

switch to partitions #0, OK

mmc0(part 0) is current device

64 bytes read in 3 ms (20.5 KiB/s)

Header Version:1

2755700 bytes read in 40 ms (65.7 MiB/s)

MMC write: dev # 0, block # 0, count 5383 ... 5383 blocks written: OK  
in 64 ms (41.1 MiB/s)

64 bytes read in 4 ms (15.6 KiB/s)

Header Version:1

13224 bytes read in 4 ms (3.2 MiB/s)

MMC write: dev # 0, block # 5760, count 26 ... 26 blocks written: OK  
in 2 ms (6.3 MiB/s)

64 bytes read in 4 ms (15.6 KiB/s)

Header Version:1

11059264 bytes read in 137 ms (77 MiB/s)

MMC write: dev # 0, block # 17664, count 21600 ... 21600 blocks written:  
OK in 253 ms (41.7 MiB/s)

64 bytes read in 3 ms (20.5 KiB/s)

Header Version:1

4919360 bytes read in 65 ms (72.2 MiB/s)

MMC write: dev # 0, block # 158976, count 9608 ... 9608 blocks written:  
OK in 110 ms (42.6 MiB/s)

64 bytes read in 4 ms (15.6 KiB/s)

Header Version:1

10203200 bytes read in 128 ms (76 MiB/s)

MMC write: dev # 0, block # 240896, count 19928 ... 19928 blocks  
written: OK in 228 ms (42.7 MiB/s)

Saving Environment to MMC... Writing to MMC(0)... OK

mars\_c906#

...

5. 拔掉 SD 卡，输入 re 重启

## 改动记录

改动内容	时间
初版	2022. 11. 2
增加烧录教程	2022. 12. 27