

Flash Commands

Core tools

Esp-idf commands can be executed using:

- **python**, Located in: `/esp32/idf-tools/python_env/idf5.2_py3.11_env/bin/python`
- **idf.py**, Located in: `/esp32/esp-idf/tools/idf.py`
- **esptool.py**, Located in: `/esp32/idf-tools/python_env/idf5.2_py3.11_env/bin/esptool.py`

idf.py to be invoked as:

```
$ idf.py <parameters>
```

esptool.py can be invoked in different ways:

```
$ esptool <parameters>
$ python -m esptool <parameters>
```

Full Flash

```
idf.py -p /dev/ttyACM0 flash
python -m esptool --chip esp32c3 -p /dev/ttyACM0 -b 460800 --before
default_reset --after hard_reset write_flash --flash_mode dio --flash_size
4MB --flash_freq 80m 0x0 build/bootloader/bootloader.bin 0x8000
build/partition_table/partition-table.bin 0xd000 build/ota_data_initial.bin
0x10000 build/LCR-Meter.bin 0x250000 default.config
```

Where parameters are:

- `-chip esp32c3`
- `-p /dev/ttyACM0`
- `-b 460800`
- `--before default_reset`
- `--after hard_reset`
- `write_flash`
- `--flash_mode dio`
- `--flash_size 4MB`
- `--flash_freq 80m`
- `0x0 build/bootloader/bootloader.bin`
- `0x8000 build/partition_table/partition-table.bin`
- `0xd000 build/ota_data_initial.bin`
- `0x10000 build/LCR-Meter.bin`

Flash Application Partition

Use following examples to write to flash:

```
esptool.py -chip esp32c3 -p /dev/ttyACM0 -b 460800 --before default_reset --after hard_reset write_flash --flash_mode dio --flash_size detect --flash_freq 80m 0x10000 build/ESR-Meter.bin
```

```
python -m esptool --chip esp32c3 -p /dev/ttyACM0 -b 460800 --before default_reset --after hard_reset write_flash --flash_mode dio --flash_size 4MB --flash_freq 80m 0x10000 build/ESR-Meter.bin
```

```
python ../../esp-idf/components/esptool_py/esptool/esptool.py -p /dev/ttyUSB0 -b 460800 --before default_reset --after hard_reset --chip esp32 write_flash --flash_mode dio --flash_size detect --flash_freq 40m 0x00130000 build/thermometer.bin
```

Where parameters are:

- write_flash
- -chip **esp32c3** or **esp32**
- -p **/dev/ttyACM0** or **/dev/ttyUSB0**
- -b **460800**
- --before default_reset
- --after hard_reset
- --flash_mode **dio**
- --flash_size **detect** or 4MB
- --flash_freq **80m** or 40m
- 0x10000 build/ESR-Meter.bin

Flash Config Partition

Write Config to partition

```
esptool.py --port /dev/ttyACM0 write_flash --flash_mode qio 0x250000 default.config
```

Read CONFIG from partition

```
esptool.py --port /dev/ttyACM0 -b 460800 --before default_reset --chip esp32c3 read_flash 0x250000 4096 downloaded.config
```

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