Flashing firmware to ESP32 & ESP8286 with esptool

Go to https://github.com/espressif/esptool for instructions to install esptool on your computer.

On your computer Terminal, find the USB port, run

% ls /dev/tty.u*

If no port shows up, you need to install USB driver (chip is CH304)

```
kunlu@Sunfish-M1 bin % ls -l
total 3112
-rw-r--r--@ 1 kunlu  staff  1568128 Dec  7 13:34 controller-x-1.6.0-sc32.bin
-rw-r--r--@ 1 kunlu  staff    18992 Dec  7 13:34 controller-x-1.6.0-sc32.bootloader.bin
-rw-r--r--@ 1 kunlu  staff     3072 Dec  7 13:34 controller-x-1.6.0-sc32.partitions.bin
kunlu@Sunfish-M1 bin % esptool --port /dev/tty.usbserial-120 erase_flash
esptool.py v4.5.1
Serial port /dev/tty.usbserial-120
Connecting.....
Detecting chip type... Unsupported detection protocol, switching and trying again...
Connecting..............
Detecting chip type... ESP32
Chip is ESP32-D0WD-V3 (revision v3.0)
Features: WiFi, BT, Dual Core, 240MHz, VRef calibration in efuse, Coding Scheme None
Crystal is 40MHz
MAC: 0c:b8:15:07:d6:d4
Uploading stub...
Running stub...
Stub running...
Erasing flash (this may take a while)...
Chip erase completed successfully in 22.1s
Hard resetting via RTS pin...
kunlu@Sunfish-M1 bin % esptool --port /dev/tty.usbserial-120 write_flash 0x1000 controller-x-1.6.0-sc32.bootloader.bin
esptool.py v4.5.1
Serial port /dev/tty.usbserial-120
Connecting.....
Detecting chip type... Unsupported detection protocol, switching and trying again...
Connecting.....
Detecting chip type... ESP32
Chip is ESP32-D0WD-V3 (revision v3.0)
Features: WiFi, BT, Dual Core, 240MHz, VRef calibration in efuse, Coding Scheme None
Crystal is 40MHz
MAC: 0c:b8:15:07:d6:d4
Uploading stub...
Running stub...
Stub running...
Configuring flash size...
Flash will be erased from 0x00001000 to 0x00005fff...
Compressed 18992 bytes to 13110...
Wrote 18992 bytes (13110 compressed) at 0x00001000 in 1.5 seconds (effective 98.1 kbit/s)...
Hash of data verified.

Leaving...
Hard resetting via RTS pin...
```

```
kunlu@Sunfish-M1 bin % esptool --port /dev/tty.usbserial-120 write_flash 0x8000 controller-x-1.6.0-sc32.partitions.bin
esptool.py v4.5.1
Serial port /dev/tty.usbserial-120
Connecting.....
Detecting chip type... Unsupported detection protocol, switching and trying again...
Connecting......
Detecting chip type... ESP32
Chip is ESP32-D0WD-V3 (revision v3.0)
Features: WiFi, BT, Dual Core, 240MHz, VRef calibration in efuse, Coding Scheme None
Crystal is 40MHz
MAC: 0c:b8:15:07:d6:d4
Uploading stub...
Running stub...
Stub running...
Configuring flash size...
Flash will be erased from 0x00008000 to 0x00008fff...
Compressed 3072 bytes to 134...
Wrote 3072 bytes (134 compressed) at 0x00008000 in 0.1 seconds (effective 337.5 kbit/s)...
Hash of data verified.

Leaving...
Hard resetting via RTS pin...
kunlu@Sunfish-M1 bin % esptool --port /dev/tty.usbserial-120 write_flash 0x10000 controller-x-1.6.0-sc32.bin
esptool.py v4.5.1
Serial port /dev/tty.usbserial-120
Connecting..........
Detecting chip type... Unsupported detection protocol, switching and trying again...
Connecting.....
Detecting chip type... ESP32
Chip is ESP32-D0WD-V3 (revision v3.0)
Features: WiFi, BT, Dual Core, 240MHz, VRef calibration in efuse, Coding Scheme None
Crystal is 40MHz
MAC: 0c:b8:15:07:d6:d4
Uploading stub...
Running stub...
Stub running...
Configuring flash size...
Flash will be erased from 0x00010000 to 0x0018efff...
Compressed 1568128 bytes to 978460...
Wrote 1568128 bytes (978460 compressed) at 0x00010000 in 94.7 seconds (effective 132.4 kbit/s)...
Hash of data verified.

Leaving...
Hard resetting via RTS pin...
kunlu@Sunfish-M1 bin %
```