

How to flash the binaries of the ESP32 edition of TCode controller

Head to <https://www.espressif.com/en/products/socs/esp32/resources>

Navigate to Tools and download “Flash download tools”



APKs



Documentation



Tools



Found 4 results

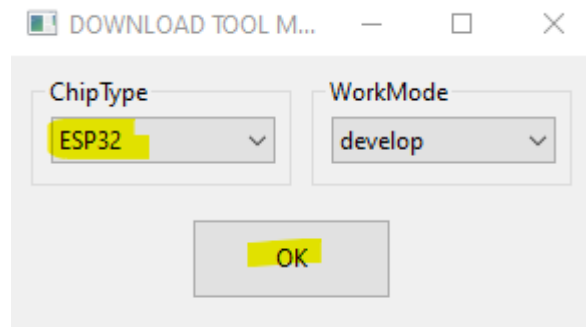
Expand all +

Collapse all -

| Title   | Platform   | Version | Release Date | Download |
|---|------------|---------|--------------|----------|
| + Flash Download Tools                                    | Windows PC | V3.8.7  | 2021.04.29   |          |
| + ESP8266&ESP32 WFA Certification and Test Guide          | Windows PC | v1.1    | 2020.08.05   |          |
| + ESP32&ESP8266&ESP32S2 RF Performance Test Demonstration | ZIP        | V2.5    | 2020.07.15   |          |
| + ESP-Tuning Tool for TouchSensor                         | ZIP        | V1.0    | 2018.09.21   |          |

Extract “flash\_download\_tool\_v3.8.7.zip” and start flash\_download\_tool\_3.8.7.exe

Select ESP32 and click ok



Browse to the ESP32 files selecting each one as in the image below.  
Enter the hex values to the right as in the image below  
Check each checkbox next to the file path.  
Select your COM port your ESP32 is on at the bottom of the window  
Click start

The screenshot shows the 'ESP32 DOWNLOAD TOOL V3.8.5' window. It has three tabs: 'SPIDownload' (selected), 'HSPIDownload', and 'GPIOConfig'. The 'SPIDownload' tab contains a list of files to be downloaded, each with a checkbox, a file path, a browse button (...), and a hex value field. The first five files are selected, and their hex values are entered. Below this is the 'SpiFlashConfig' section with settings for SPI speed, flash size, and SPI mode. The 'Download Panel 1' at the bottom shows a 'FINISH' button and a text box with device information. At the very bottom are buttons for 'START', 'STOP', and 'ERASE', along with dropdowns for 'COM' (set to COM13) and 'BAUD' (set to 921600).

| File Path  | Hex Value  |
|--|------------|
| <input checked="" type="checkbox"/> C:\Users\...Git\TCodeESP32\ESP32\bin\Release\a_0x1000.bin    | 0x1000     |
| <input checked="" type="checkbox"/> C:\Users\...Git\TCodeESP32\ESP32\bin\Release\b_0x8000.bin    | 0x8000     |
| <input checked="" type="checkbox"/> C:\Users\...Git\TCodeESP32\ESP32\bin\Release\c_0x10000.bin   | 0x10000    |
| <input checked="" type="checkbox"/> C:\Users\...Git\TCodeESP32\ESP32\bin\Release\d_0xe000.bin    | 0xe000     |
| <input checked="" type="checkbox"/> C:\Users\...Git\TCodeESP32\ESP32\bin\Release\e_0x003d0000.bi | 0x003d0000 |
| <input type="checkbox"/>   |            |
| <input type="checkbox"/>   |            |
| <input type="checkbox"/>   |            |

**SpiFlashConfig**

**SPI SPEED**

- ☒ 40MHz
- ☐ 26.7MHz
- ☐ 20MHz
- ☐ 80MHz

**CombineBin**

☐ Default

**SPI MODE**

- ☐ QIO
- ☐ QOUT
- ☒ DIO
- ☐ DOUT
- ☐ FASTRD

**FLASH SIZE**

- ☐ 8Mbit
- ☐ 16Mbit
- ☒ 32Mbit
- ☐ 64Mbit
- ☐ 128Mbit

☐ SpiAutoSet

☐ DoNotChgBin

☐ LOCK SETTINGS

**DETECTED INFO**

flash vendor:  
5Eh : N/A  
flash devID:  
4016h  
QUAD;32Mbit  
crystal:  
40 Mhz

**Download Panel 1**

**FINISH**  
完成

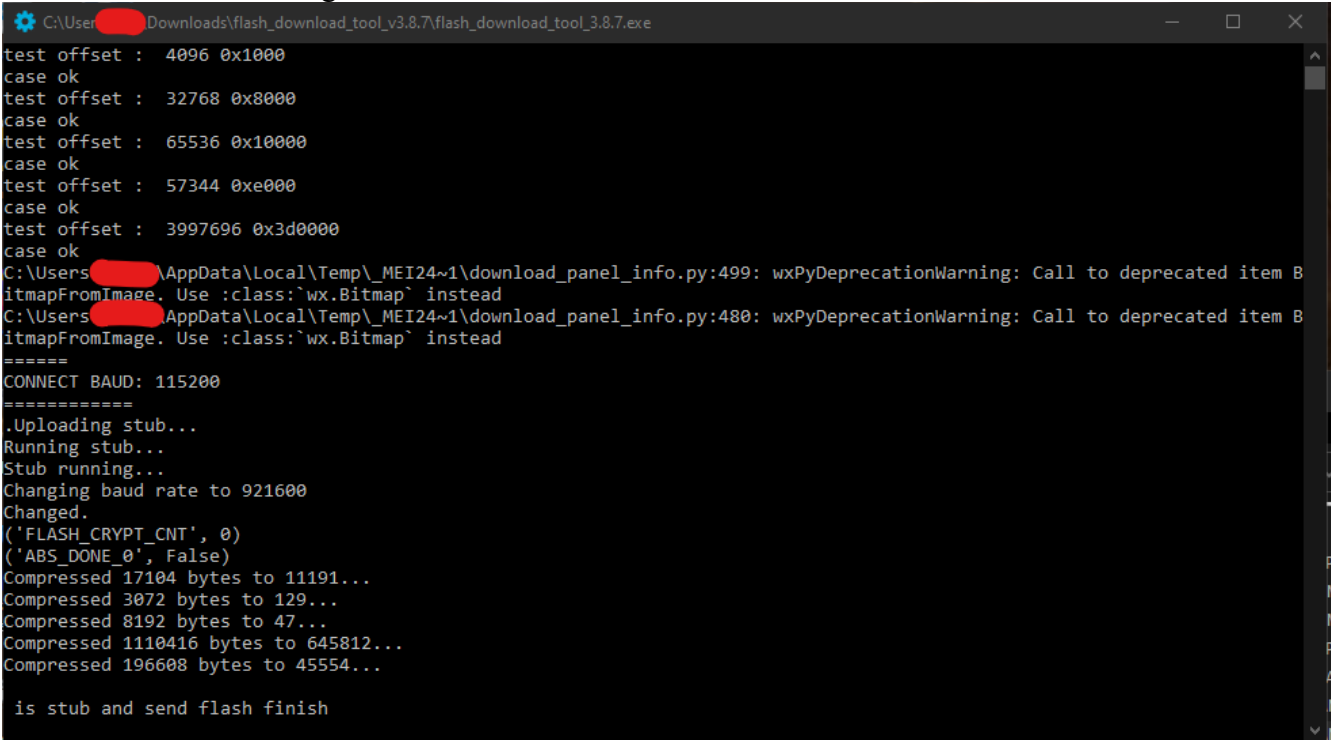
AP: 2462ABF29A81 STA: 2462ABF29A80  
BT: 2462ABF29A82 ETHERNET: 2462ABF29A83

**START** **STOP** **ERASE**

COM: **COM13**

BAUD: 921600

You should see something like this in the terminal



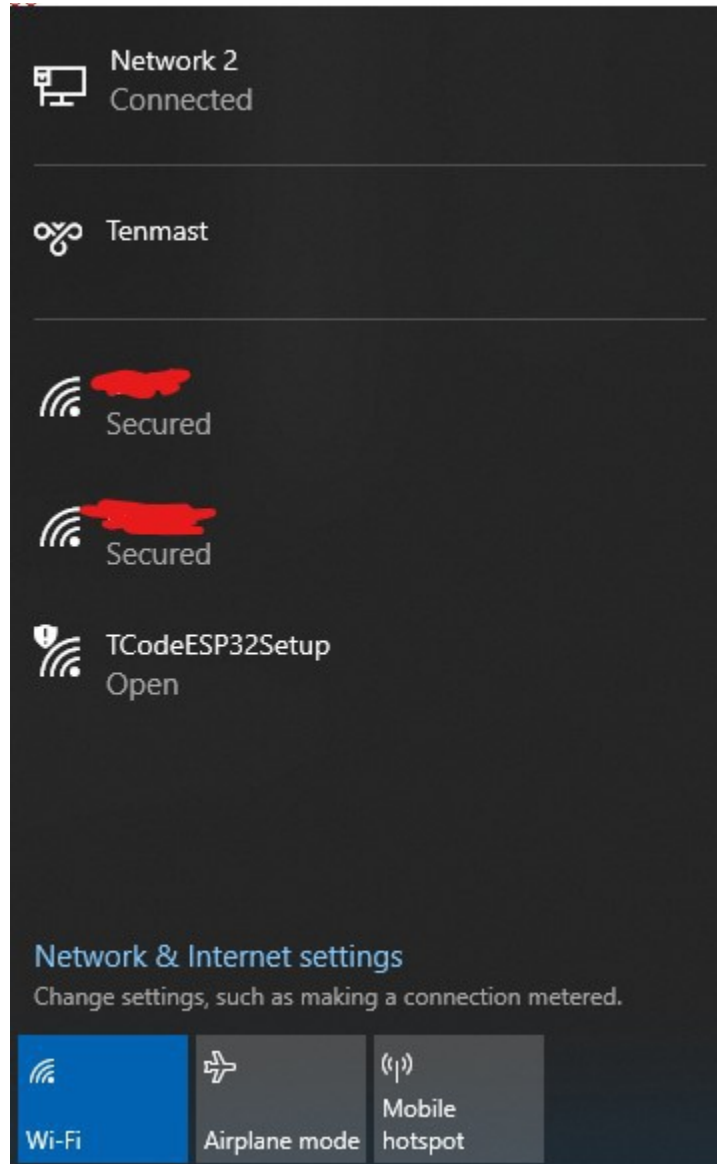
```
C:\Users\... Downloads\flash_download_tool_v3.8.7\flash_download_tool_3.8.7.exe
test offset : 4096 0x1000
case ok
test offset : 32768 0x8000
case ok
test offset : 65536 0x10000
case ok
test offset : 57344 0xe000
case ok
test offset : 3997696 0x3d0000
case ok
C:\Users\... \AppData\Local\Temp\_MEI24~1\download_panel_info.py:499: wxPyDeprecationWarning: Call to deprecated item B
itmapFromImage. Use :class:`wx.Bitmap` instead
C:\Users\... \AppData\Local\Temp\_MEI24~1\download_panel_info.py:480: wxPyDeprecationWarning: Call to deprecated item B
itmapFromImage. Use :class:`wx.Bitmap` instead
=====
CONNECT BAUD: 115200
=====
.Uploading stub...
Running stub...
Stub running...
Changing baud rate to 921600
Changed.
('FLASH_CRYPT_CNT', 0)
('ABS_DONE_0', False)
Compressed 17104 bytes to 11191...
Compressed 3072 bytes to 129...
Compressed 8192 bytes to 47...
Compressed 1110416 bytes to 645812...
Compressed 196608 bytes to 45554...

is stub and send flash finish
```

Now that your image is flashed time to configure the wifi

Reboot the ESP32

Check your available wifi networks



Connect to TcodeESP32Setup (leave connect automatically **unchecked**)

No password

Once connected (It can be slow be patient. About 30 secs or so)

Open your internet browser and navigate to 192.168.1.1



Enter your wifi ssid and password and change the network info if required

### Device Settings

#### General Settings

Servo Frequency50

Auto T-Valve

Inverse T-Valve

RightServo PIN/ZERO131500

LeftServo PIN/ZERO151500

PitchLeftServo PIN/ZERO41500

ValveServo PIN/ZERO251500

TwistServo PIN/ZERO271500

TwistFeedBack PIN26

Continuous twist

Vibe0 PIN18

Vibe1/Lube PIN19

Manual lube PIN23

Manual lube speed (1-255)255

Udp port8000

Host nametcode

Friendly nameESP32 TCode

#### Display Settings

Display enabled

I2C address0x3c

Display rst PIN-1

Screen width128

Screen height64

Sleeve temperature enabled

Temp\_PIN5

Temperature control enabled

Heater\_PIN33

Target Temperature140

#### SR6 (Only) Settings

SR6 mode

Right Upper Servo PIN/ZERO121500

LeftUpper Servo PIN/ZERO21500

Pitch Right Servo PIN/ZERO141500

#### Wireless Settings

SSIDYOUR SSID HERE

Password

Show Password

Static IP

IP192.168.0.150

Gateway192.168.0.1

Subnet255.255.255.0

DNS 18.8.8.8

DNS 28.8.4.4

And wait for the Settings saved text to appear..

### SR6 (Only) Settings

SR6 mode

er Servo PIN/ZERO121500

er Servo PIN/ZERO21500

nt Servo PIN/ZERO141500

### Wireless Settings

SSIDYOUR SSID HERE

Password

Show Password

Static IP

IP192.168.0.150

Gateway192.168.0.1

Subnet255.255.255.0

DNS 18.8.8.8

DNS 28.8.4.4

Settings saved!  
Restart required!!

Click restart device or unplug and re-plug the usb powering the ESP32.

Your device should reboot and connect to the network.

You can verify this by either using serial monitor

```

Establishing connection to 
..Connected: IP: 192.168.0.145
UDP Listening
Bluetooth started
TCode v0.2
Ready!

```

You should now be able to access the configuration page from or what ever you type into the Host name field on the configuration.

|                           |  |
|---------------------------|--|
| Manual lube speed (1-255) | <input type="text" value="255"/>         |
| Udp port                  | <input type="text" value="8000"/>        |
| Host name                 | <input type="text" value="tcode"/>       |
| Friendly name             | <input type="text" value="ESP32 TCode"/> |

Or by logging into your router and looking for A Device named “TcodeESP32”

|    |            |               |
|----|------------|---------------|
| 10 | TCodeESP32 | 192.168.0.145 |
|----|------------|---------------|

Once you have this IP address you can get into your machine settings via the web browser.

From here you can view the default pin out and change them if you know what you are doing.

| General Settings   | SR6 (Only) Settings  |
|--|--|
| Servo Frequency <input type="text" value="330"/>   | SR6 mode <input checked="" type="checkbox"/>   |
| Auto T-Valve <input type="checkbox"/>  | Right Upper Servo PIN/ZERO <input type="text" value="12"/> <input type="text" value="1500"/> |
| Inverse T-Valve <input type="checkbox"/>   | LeftUpper Servo PIN/ZERO <input type="text" value="2"/> <input type="text" value="1500"/>    |
| RightServo PIN/ZERO <input type="text" value="13"/> <input type="text" value="1500"/>    | Pitch Right Servo PIN/ZERO <input type="text" value="14"/> <input type="text" value="1500"/> |
| LeftServo PIN/ZERO <input type="text" value="15"/> <input type="text" value="1500"/>     |  |
| PitchLeftServo PIN/ZERO <input type="text" value="4"/> <input type="text" value="1500"/> |  |
| ValveServo PIN/ZERO <input type="text" value="25"/> <input type="text" value="1500"/>    |  |
| TwistServo PIN/ZERO <input type="text" value="27"/> <input type="text" value="1500"/>    |  |
| TwistFeedBack PIN <input type="text" value="26"/>  |  |
| Continuous twist <input type="checkbox"/>  |  |
| Vibe0 PIN <input type="text" value="18"/>  |  |
| Vibe1/Lube PIN <input type="text" value="19"/>   |  |
| Manual lube PIN <input type="text" value="23"/>  |  |
| Manual lube speed (1-255) <input type="text" value="255"/>                               |  |
| Udp port <input type="text" value="8000"/>   |  |
| Host name <input type="text" value="tcode"/>   |  |
| Friendly name <input type="text" value="ESP32 TCode"/>                                   |  |

You can also set the default servo zeros.

If you are using this in an **OSR MAKE SURE YOU UNCHECK “SR6 Mode”**

The ranges are only for receiving data in json format.

The only thing that does this at the time of this writing is Tcode Remote Gamepad output over the network. This was done so the OSR user has control over the range and speed for safety concerns.

The screenshot shows a web interface titled "TCode Settings" on a light gray background. At the top center is a button labeled "Restart device". In the top right corner, the text "Restart required!!" is displayed in red. Below the title, a small note in parentheses states "(only affects json input)". The interface features four horizontal sliders, each with a white circular handle on the left and a white circular handle on the right, connected by a dark blue line. The first slider is labeled "X Range" with "99%" below it. The second slider is labeled "Y Roll Range" with "99%" below it. The third slider is labeled "X Roll Range" with "99%" below it. The fourth slider is labeled "Speed" with "1000ms" below it. At the bottom center, there is a button labeled "Reset ALL settings".

Enjoy your wireless device!

PS.. this release is in its early stages with missing features and bugs. if you find any issues please report them on Github.