EXTRACT ON LOADING MICROPYTHON INTO AN ESP32 NICROCONTROLLER

https://randomnerdtutorials.com/getting-started-thonny-micropython-python-ide-esp32-esp8266/



Downloading MicroPython Firmware

Go to the MicroPython Downloads page: https://micropython.org/download/. Select the type of board you're using. Here are the quick links for "regular" ESP32 and ESP8266 boards:

•ESP32 MicroPython firmware

•ESP8266 MicroPython firmware

You should see a similar web page (see figure below) with links to download .bin files. Download the latest release.

Firmware
Releases
v1.17 (2021-09-02) .bin [.elf] [.map] [Release notes] (latest)
v1.16 (2021-06-23) .bin [.elf] [.map] [Release notes] v1.15 (2021-04-18) .bin [.elf] [.map] [Release notes] v1.14 (2021-02-02) .bin [.elf] [.map] [Release notes] v1.13 (2020-09-02) .bin [.elf] [.map] [Release notes] v1.12 (2019-12-20) .bin [.elf] [.map] [Release notes]
Nightly builds
v1.17-333-gcf258c898 (2022-01-15) .bin [.elf] [.map] v1.17-330-g895738625 (2022-01-14) .bin [.elf] [.map] v1.17-325-gf2ccf87e0 (2022-01-13) .bin [.elf] [.map] v1.17-322-gb47b245c2 (2022-01-12) .bin [.elf] [.map]
Firmware (Compiled with IDF 3.x)
Releases
v1.14 (2021-02-02) .bin [.elf] [.map] [Release notes] (latest) v1.13 (2020-09-02) .bin [.elf] [.map] [Release notes] v1.12 (2019-12-20) .bin [.elf] [.map] [Release notes] v1.11 (2019-05-29) .bin [.elf] [.map] [Release notes]

v1.10 (2019-01-25) .bin [.elf] [.map] [Release notes] v1.9.4 (2018-05-11) .bin [.elf] [.map] [Release notes]

Flashing MicroPython Firmware using Thonny IDE

In this section, you'll learn how to flash MicroPython firmware on your boards using Thonny IDE. Follow the next steps:

1) Connect your ESP32 or ESP8266 board to your computer.

2) Open Thonny IDE. Go to Tools > Options > Interpreter.

3) Select the interpreter you want to use accordingly to the board you're using and select the COM port your board is connected to. Finally, click on the link **Install or update firmware**.

The Thonny of	ptions								×
General Int	terpreter	Editor	Theme & Font	Run & Debug	Terminal	Shell A	ssistant		
Which inte MicroPyth	erpreter or hon (ESP32	device)	should Thonny	use for running	your code?				~
Details – Connec Connec (look fo If you c Connec If you c (import < WebR	ting via US t your dev or your dev an't find it, ting via W device sup webrepl_s REPL > belo	B cable ice to the you ma ebREPL ports W etup), c ww	: e computer and e, "USB Serial" o ay need to instal (EXPERIMENTAI ebREPL, first cor onnect your cor	d select correspi or "UART"). Il proper USB dr L): nnect via serial, mputer and dev	onding port iver first. make sure \ ice to same	below VebREPL is network as	enabled nd select		
Port or Silicon	WebREPL Labs CP210	Dx USB t	o UART Bridge ((COM3)					~
							Install or u	pdate firmwa	are
								OK	Cancel

4) Select the port once again, and then click on the **Browse** button to open the **.bin** file with the firmware you've downloaded on the previous step. Select the options as shown in the picture below and finally click on **Install**.

This dialog If you nee Note that	allows installing or updating firmware on ESP32 using the set other options, then please use 'esptool' on the co	he most common settings. mmand line. If the firmware provided
at micropy alternative	s look around in your device's documentation or at M	here may exist better icroPython forum.
Port	Silicon Labs CP210x USB to UART Bridge (COM3)	 ✓ Reload
Firmware	C:/Users/sarin/Downloads/esp32-20210902-v1.17.bin	Browse
Flash mo	de mage file (keep) () Quad I/O (qio) O (dio) () Dual Output (dout)	
Erase fl	ash before installing	

Testing the Installation

Connect the board to your computer using a USB cable. To test the installation, you need to tell Thonny that you want to run MicroPython Interpreter and select the board you are using.

Go to Tools > Options and select the Interpreter tab. Make sure you've selected the right interpreter for your board as well as the COM port.
 You can also select the "Try to detect automatically" option, but *only* if you just have one board connected to your computer at a time. Otherwise, select the specific port for the board you're using.

2. Thonny IDE should now be connected to your board and you should see the prompt on the Shell.



3. Type the command **help()** in the Shell and see if it responds back.

Thonny - C:\Users\Sara\Desktop\untitled.py @ 1:1	_		Х	
File Edit View Run Device Tools Help				
untitled.py ×				
1			< >	
Shell ×				
MicroPython v1.9.4-779-g5064df207 on 2019-01-13; ESP32 modul	le wit	h ESP	^	
Type "help()" for more information. [backend=ESP32]				
>>> help()				
Welcome to MicroPython on the ESP32!				
For generic online docs please visit http://docs.micropython.org/				
For access to the hardware use the 'machine' module:				
import machine			¥	

PINOTS

ESP32 DEVKIT V1 - DOIT version with 36 GPIOs

