Flowcode ESP32 Toolchain Installation

Download the Toolchain

Download the ESP toolchain installation executable from one of the following URLs.

https://dl.espressif.com/dl/esp-idf-tools-setup-2.3.exe

https://www.flowcode.co.uk/download/

Later versions of the ESP IDF tools can be used if available but please note there may be unexpected problems with these as they have not been tested.

Please report any problems or issues on the Flowcode user forum.

Installation

Once the download has finished run the installation file.



Select the item - I accept the agreement and click Next

If you have Python already installed then you can select your version of Python.

Otherwise select Install Python 3.7

당 Setup - ESP-IDF Tools 2.3	_	
Python choice Please choose Python version		
Available Python versions		
Python 3.8 (32-bit) C:\Program Files (x86)\Python38-32\python.exe Install Python 3.7		
< <u>B</u> ack	<u>N</u> ext >	Cancel

Please note some versions of Python may cause the installer to fail, if this happens then try again and use the supplied version 3.7

If you have Git already installed then you can select your version of Git.

Otherwise select Install Git

弱 Setup - ESP-IDF Tools 2.3	_		×
Git choice Please choose Git version		(Ð
Available Git versions			
Install Git 2.21.0 Custom git.exe location			
Enter custom location of git.exe	E	rowse	
< <u>B</u> ack	<u>N</u> ext >	Car	ncel

If you have an ESP-IDF already downloaded then you can select your version of ESP-IDF.

Otherwise select Download ESP-IDF

😼 Setup - ESP-IDF Tools 2.3	_		×
Download or use ESP-IDF Please choose ESP-IDF version to download, or use an existing ESP-IDF copy		0	
Available ESP-IDF versions			
Download ESP-IDF Use an existing ESP-IDF directory			
Choose existing ESP-IDF directory			
	B(owse	
< Back	Next >	Car	ncel

Select which ESP-IDF to install, we recommend v4.1

Install to a location on your system with no spaces in the path.

For example C:\esp-idf

影 Setup - ESP-IDF Tools 2.3	_		×
Download ESP-IDF Please choose ESP-IDF version to download			
For more information about ESP-IDF versions, see https://docs.espressif.com/projects/esp-idf/en/latest/versions.html			
v4.1 (release version) v4.0.2 (release version) v3.3.4 (release version) release/v4.2 (release branch) release/v4.1 (release branch) release/v4.1 (release branch) release/v4.0 (release branch) release/v3.3 (release branch) release/v3.3 (release branch) master (development branch) Choose a directory to download ESP-IDF to C:\esp-idf	B	l <u>r</u> owse	
< <u>B</u> ack	<u>N</u> ext >	Car	ncel

Select a location for the ESP-IDF Tools to be installed, again use a path that contains no spaces

For example C:\esp-idf-tools

谩 Setup - ESP-IDF Tools 2.3	_		×
Select Destination Location Where should ESP-IDF Tools be installed?		¢	
Setup will install ESP-IDF Tools into the following folder.			
To continue, click Next. If you would like to select a different folder, click Browse.			
C:\esp-idf-tools	Br	owse	
At least 391.0 MB of free disk space is required.			
< <u>B</u> ack <u>N</u> ext	t >	Can	icel

Select addition tasks, recommend keep all options checked and click Next.

🕞 Setup - ESP-IDF Tools 2.3		_		×
Select Additional Tasks Which additional tasks should be performed?			(
Select the additional tasks you would like Setup to perform while i	nstalling ESP-IDF Too	ols, then clic	k Next.	
Create Start Menu shortcut for the ESP-IDF Tools Command	Prompt			
Create Desktop shortcut for the ESP-IDF Tools Command Pro	ompt			
Register the ESP-IDF Tools executables as Windows Defende speed, requires elevation)	er exclusions (improv	es compilati	on	
	< <u>B</u> ack <u>N</u>	lext >	Can	icel

On the confirmation screen check the paths are correct and click Install



The various selected files will be downloaded and installed.

骨 Setup - ESP-IDF Tools 2.3		_	
Downloading additional files Please wait while Setup is downloading additional files			
Downloading	69.69 of 447.13 MB		
	Details		
	Ne	xt >	Cancel

During the installation process you may get some of the following pop ups appearing



Click Yes to allow Git to be installed



Click Yes to allow Windows PowerShell to be installed



Installation complete

You do not need to run the ESP-IDF command prompt as we will be invoking this from Flowcode.

Flowcode Configuration

In Flowcode click the View tab on the main Ribbon and select Global Settings.

Ī				÷								ESPTest.fcfx	
	File	Edit	View	Command Icons	Components Libraries	User Macros	Debug	Build	Window	Help			
	🔢 Proje	t Explor	er 🖻	Component Properties	🟨 Data Recorder	🕌 Component Deb	ugger 💿 <u>\</u>	<u>V</u> atch wind	ow Wi	ki 🔅 Target Device	Ð	Ø.,	🗌 <u>S</u> tatus Bar
	2D 2D: D	ashboar	d Panel 🔤	ै Find/Replace	👯 Oscilloscope	Analog Inputs			💷 Lice	ensing 🔚 Icon Lists	~		
	🗊 3D: <u>S</u>	/stem Pa	nel 🔊	Change History	∑ Consoles	1010 Digital Pins			🖵 For	ums	200m	Settings	
			Develop	ment		Debugging				Reference	Zoom	Appe	earance

In the Global Settings window select the Locations tab.

Enter the ESP-IDF path into the ESP: setting.

Options				×			
Application Flowcha	rt Scheme Locations						
Send compiler output to	J						
\$(srcdir)		-					
Create an embedde	d project backup file as						
\$(srcdir)\\$(t	arget).fcfx.001	-					
Create an App Deve	eloper project backup file as						
\$(srcdir)\\$(t	arget).fcsx.001	-					
Override toolchain loca	tions:						
PIC:	C: \Program Files (x86) \Flowcode \Common \Compilers \pic \						
PIC16:	C:\Program Files (x86)\Flowcode\Common\Compilers\pic16\						
PIC32:	C: \Program Files (x86) \Flowcode \Common \Compilers \pic32 \	C:\Program Files (x86)\Flowcode\Common\Compilers\pic32\					
AVR:	: \Program Files (x86) \Flowcode \Common \Compilers \avr\						
ARM:							
STARM	C:\Program Files (x86)\Flowcode\Common\Compilers\starm\			i			
		_					
500		_					
ESP:	C:\esp-ldf						
Look for components in		_					
C: \Users\Ben\OneDriv C: \Users\Ben\OneDriv	ve - MATRIX TECHNOLOGY SOLUTIONS\Electrical Machines\SCADA Projects\Howcode ve - MATRIX TECHNOLOGY SOLUTIONS\Control Applications\Component;			1			
C:\Users\Ben\OneDriv C:\Users\Ben\OneDriv	ve - MATRIX TECHNOLOGY SOLUTIONS\FC9\Components\release;						
en poero pen joneon		- bo					
	Clear component ca	une					
Restore	Preview OK	Са	incel				

Click OK

Flowcode ESP32 Projects

When you create a new Flowcode ESP32 project the first time you compile a folder will be created in the Flowcode project directory with the same name as the Flowcde project file. The folder contains all the standard build output for an ESP32 project.

The first compilation of a project will take a while to complete – around 5 minutes as all of the ESP32 libraries are pulled in from the ESP-IDF and compiled one by one. After the initial compilation subsequent compilations will be much faster.

Inside the folder is a file called sdkconfig, this file is a text file that contains the configuration for the ESP32 device. Any changes to this file will automatically trigger another extended compilation.

If you connect your ESP board before running Flowcode then the boards COM port will appear in the Flowcode project options. This will need to be selected and correct for the Compile to Chip menu option to function correctly.



Choose a Target				Project information
Chip	# Pins Max MHz	Flash Bytes	EEPROM By 🗢	Project title :
 Misc ESP32_DEVKITV1 ESP32_T-Camera Heltec_WIFI_Kit_32 Lolin32_Lite 				Detailed description:
 LolinD32_Pro TTOO T D: 1 			* }	4
Configure				Other options
Write config on download		Downloa	d config now	Clock speed (MHz): [defines delay-related timings]
Show descriptive names				Auto clear watchdog Use #f in constant decisions Programmer Port: COM34 (USB-SERIAL CH340)