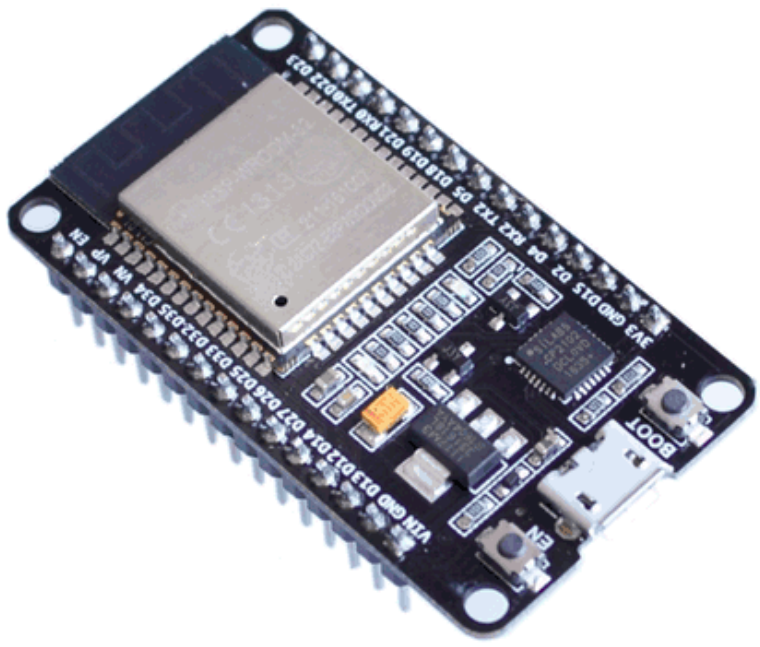
REVIEW

DOIT ESP32 Development Board Review

by Tony P | Published September 15, 2017 | 2 comments

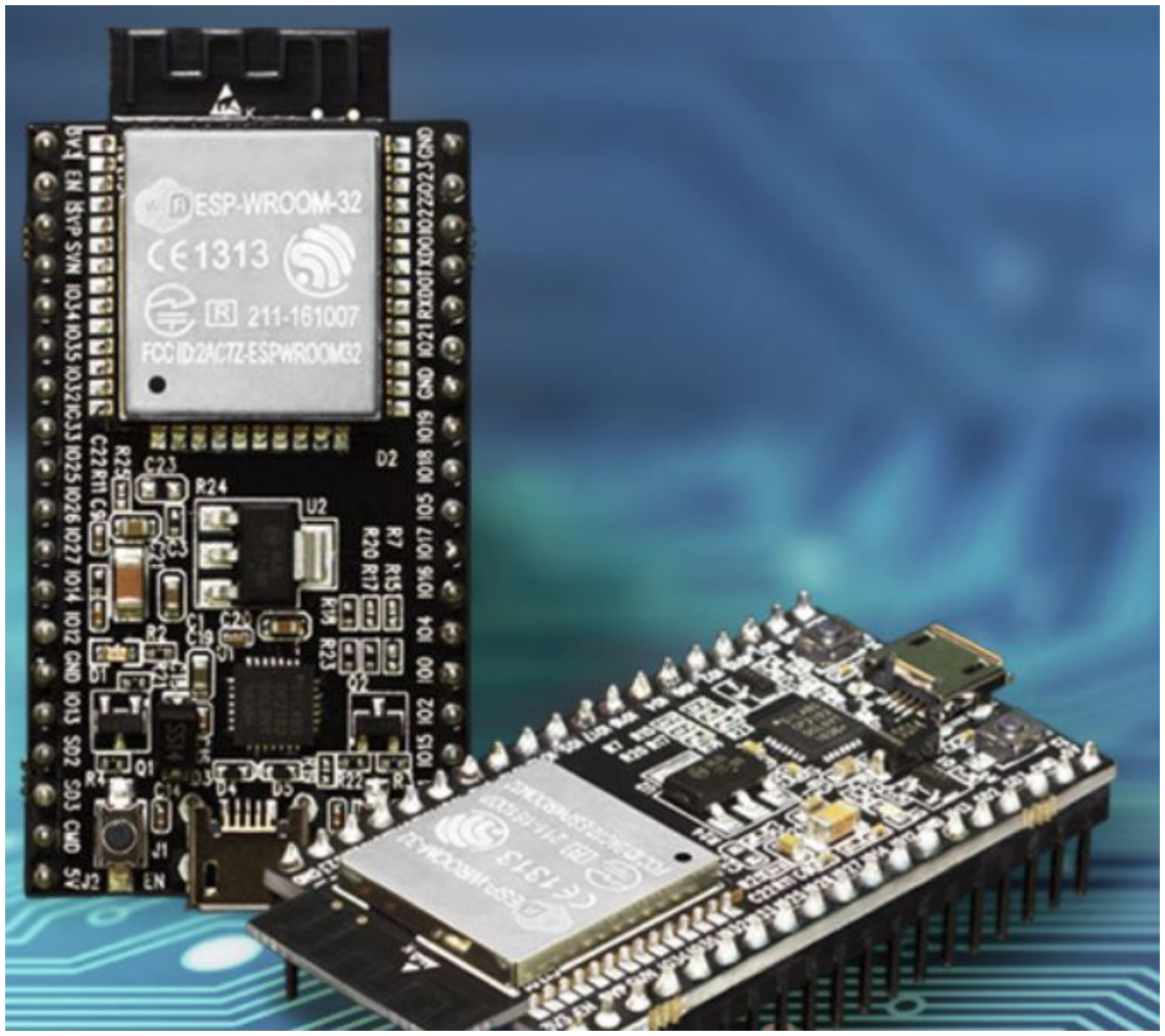
> **There are many different kind of ESP32 boards out there; but the DOIT is by far the most popular one. It's simple: if you type ESP32 in Banggood, Aliexpress or Taobao, it is the first design that comes up.**
>
> **Quite simply, if you are starting with ESP32, it is probably the development board you will buy, similarly to how a the Uno R3 is the recommended board for an Arduino beginner.**



The board used in this review was bought from Aliexpress

The design

Let's cut to the chase: the DOIT ESP32 is a lazy design. It is strikingly similar to Espressif's official DevKitC. This would not be a bad thing, since the official design is a good board, but for some weird reason DOIT ESP32 managed to butcher it.



Espressif's official devkit. Looking familiar? Let's just say the DOIT32 is "heavily inspired"!

Starting with the pinout. The official board has 2×19 pins on each side, the DOIT... 2×15. This is extremely infuriating as it is clear this is just an attempt to shave off a few cents out of the PCB size. You end up with a board that is very close but not pin compatible.

LEFT SIDE		RIGHT SIDE	
DevKitC	**DOIT ESP32**	**DevKitC**	**DOIT ESP32**
3V3		GND	
EN	EN	IO23	IO23
SVP	SVP	IO22	IO22
SVN	SVN	TXD0	TXD0
IO34	IO34	RXD0	RXD0
IO35	IO35	IO21	IO21
IO32	IO32	GND	
IO33	IO33	IO19	IO19
IO25	IO25	IO18	IO18
IO26	IO26	IO5	IO5
IO27	IO27	IO17	IO17
IO14	IO14	IO16	IO16
IO12	IO12	IO4	IO4
GND		IO0	
IO13	IO13	IO2	IO2
SD2		IO15	IO15
SD3		SD1	
CMD	GND	SD0	
5V	5V	CLK	
			GND
			3V3

And that's not all! Espressif provides of course some sort of "hello world" program and a "blink" sketch. Loading this blink sketch will not work with the on board LED. Indeed, the default Blink sketch uses GPIO 5 for the on board LED on the official board; but DOIT ESP32 has a LED connected to... GPIO 2. I was getting really frustrated for a few minutes until I realized this subtle design change.

Using the board

OK so the DOIT ESP32 has a few quirks; but is it a bad board because of this? Absolutely not! Sketches load flawlessly on it and the manufacturers included a pre-loaded program that prints a few lines of text to the serial port and blinks the on board LED. It's really useful to check from the get go that the board is indeed working and that you can connect to it.

Another good thing is that it uses the CP2102 USB to UART chip to convert the logic between USB and raw serial. This chip should work out of the box on all modern operating systems; whether you work on Windows, Linux or MacOS.

Not only that, the board embarks the chip as a soldered on board. You could technically program the board, desolder it, and solder it back into a permanent design. Some boards have made the choice to not use Espressif's design (for example the ESP32 thing from Sparkfun) and it seems to be an odd design choice.

Conclusion

As far as bang for your buck goes, the DOIT ESP32 is amazing; but it is truly regrettable that they chose not to break out some GPIOs. Isn't that the whole purpose of a development board?

Verdict: Fair

The Good	The Bad
▪ Good board to get started on the ESP32 hype train. ▪ Excellent value for money. ▪ Breadboard friendly.	▪ Not exposing some GPIOs is unforgivable.

DevKitC DOIT ESP-32 esp32 Espressif

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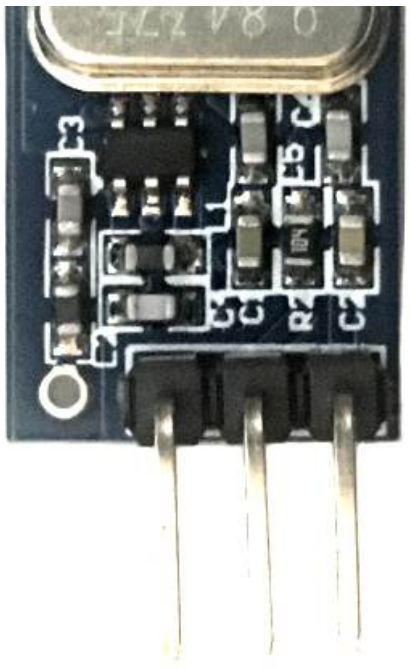

Published February 11, 2017

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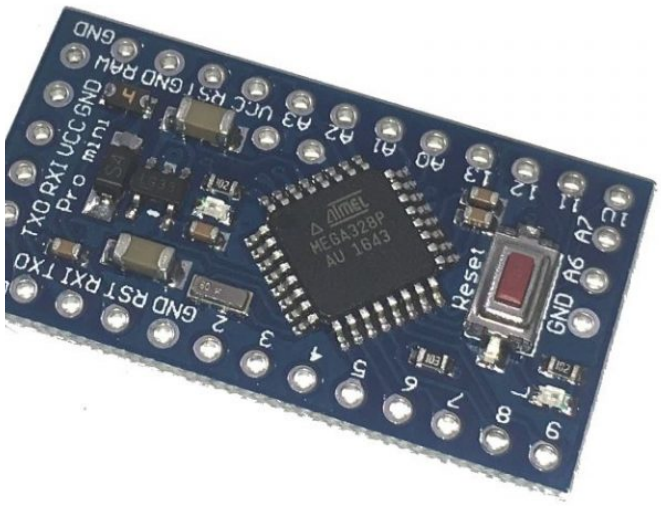

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2 thoughts on “DOIT ESP32 Development Board Review”

2 comments

Peweiss

December 29, 2017, 8:07 am

Hi,
I ordered one of those but mine is NOT breadboard friendly!
It is to wide and only leaves an open row on one side of the board – so I can´t attach anything on the other side …

I´m looking for a board that would be not as wide and really make all pins available on a breadboard.

Cheers – Pete

REPLY

Tony P Post author

December 29, 2017, 3:50 pm

Hi Pete,
Breadboard friendly as in the header pitch is 100mil and separated by a multiple of 100mil. You can remove the power line of a typical breadboard and stack two of them together.
Cheers!

REPLY

‹ ARDUINO ATTINY PROGRAMMER SHIELD

DO NOT BUY ICS FROM CHINA ›