ESP8266EX Small Modules – Comparison

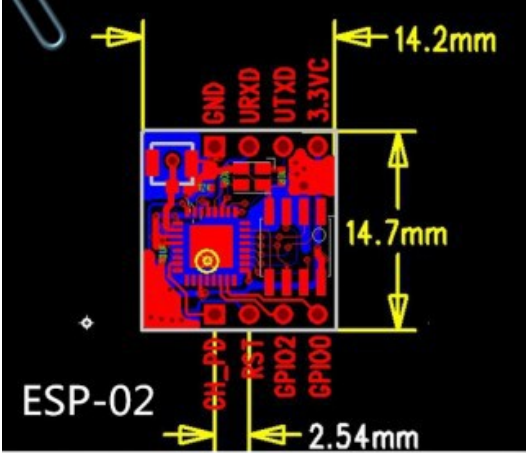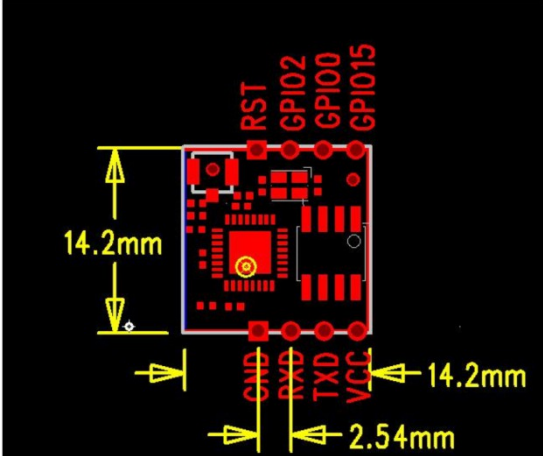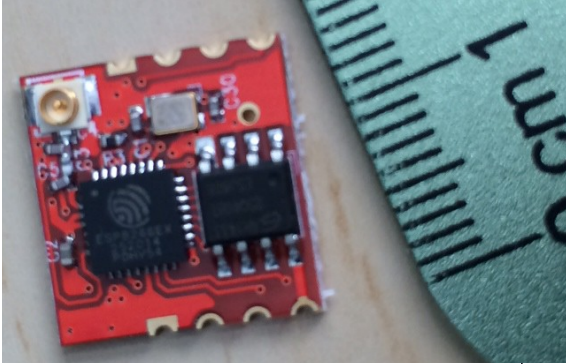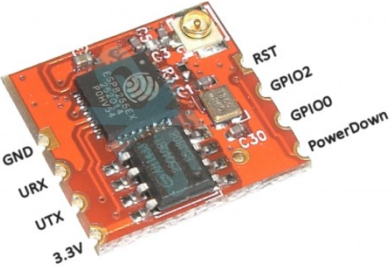| Module	Antenna	Package	Dim (mm)			UA	RT					J	T	A	G					Notes
ESP-01	Built-in (on PCB)	2x4 header 0.1"	14.3 x 24.8	✓	✓	✓	✓	✓	✓							✓		✓			The most common module with printed PCB antenna
ESP-02 a	External (U.FL conn.)	DIP[1] 8-pin 0.1"	14.7 x 14.2	✓	✓	✓	✓	✓	✓								✓	✓			A less common module, may be compatible with breadboards
ESP-02 b			14.2 x 14.2	✓	✓	✓	✓	✓	✓				✓					✓			New version?
ESP-02de			?	✓	✓	✓	✓	✓	✓								✓	✓			Alternate pinout version of "a"?
ESP-03	Built-in (ceramic)+pin	SMT[2] 14-pin 2mm	12.2 x 17.4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	Surface mount, many I/O (voted most wanted)
ESP-04	External (pin)	SMT 14-pin 2mm	12.0 x 15.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	Same as ESP-03 without built-in antenna
ESP-05 a	External (U.FL conn.)	1x4 header 0.1"	14.2 x 14.2	✓	✓	✓	✓													Simple UART-only module with antenna connector
ESP-05 b		1x5 header	14.2 x 14.2	✓	✓	✓	✓										✓			New version?
ESP-06	External (pin)	bot. mount 2.6/2.9mm	13.1 x 16.3	✓	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓		FCC CE metal shield
ESP-07	U.FL + Built-in (ceramic)+pin	semi-hole 2mm	16.0 x 20.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	FCC CE metal shield
ESP-08	External (pin)	semi-hole 2mm	16.0 x 17.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	Like ESP-07 minus built-in antenna
ESP-09	External (pin)	bot. mount 1.9mm	10.0 x 10.0	✓	4	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓		Ultra-small footprint, 4-layer, 1MB flash
ESP-10	External (extra hole)	1x5 edge?	10.0 x 14.2	✓	✓	✓	✓										✓			Narrow body, for light w/controller
ESP-11	Built-in (ceramic)	1x8 edge?	13.0 x 18.0	?	✓	?	?	✓	✓							?	?			Small size
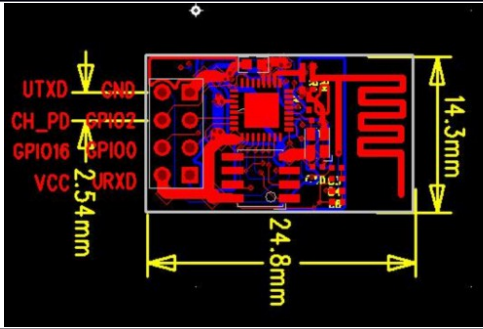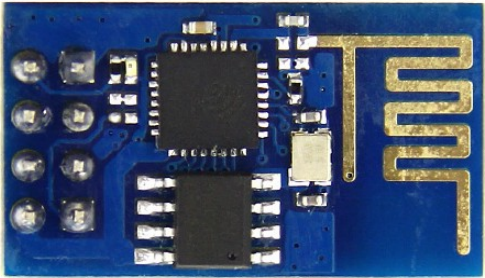
CH_PD = Chip Powerdown = CHIP_EN (tied also to reset if no separate reset line ???)

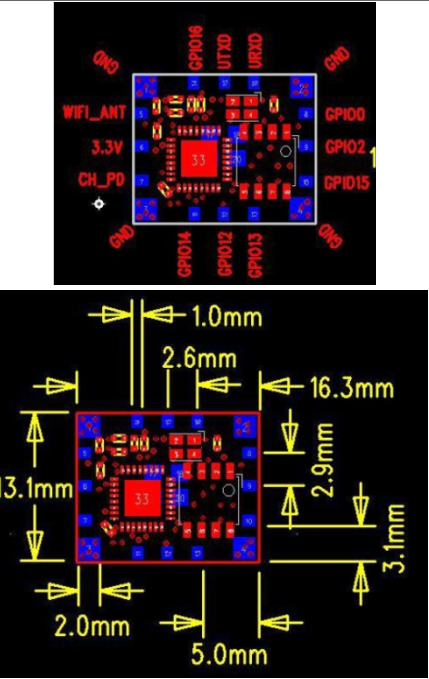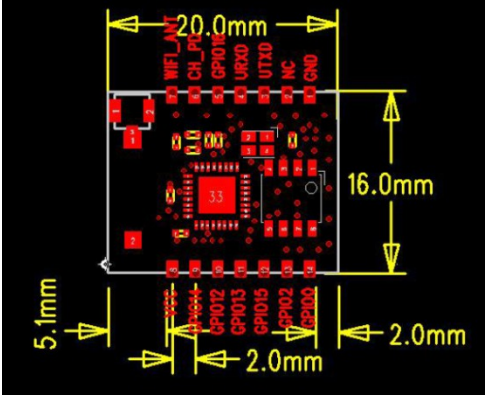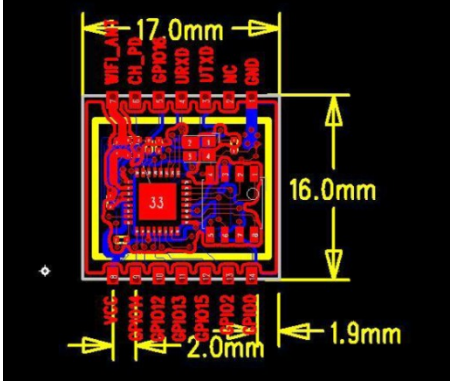Is this meaningful to mention?: ESP-09 impedance matching through the bottom mount technology

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1Dual Inline Package, two rows of pins, on both sides of module

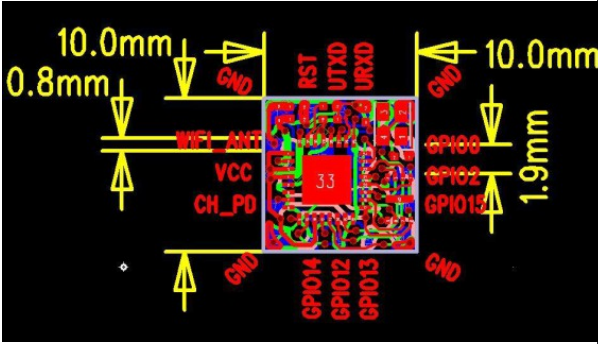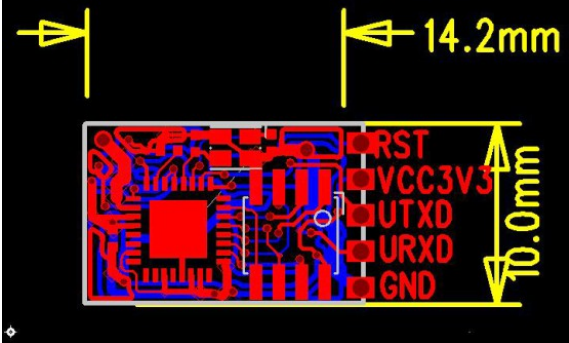2Surface Mount Technology, with pins as castellated pads, on both sides of module
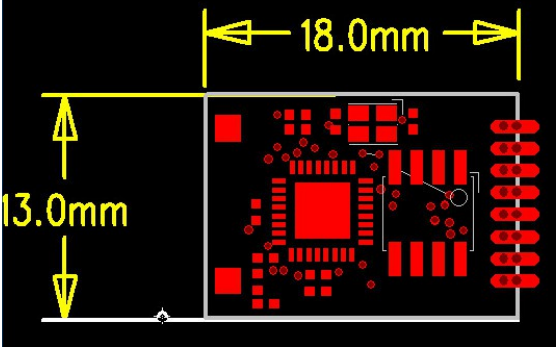
And some pictures:

Module	Module Pinout	Picture
ESP-01		
ESP-02 "a" ("a" and "b" and "de" are not official; added to distinguish)		?
ESP-02 "b"		
ESP-02 "de"	(see picture on right) From https://ex-store.de/Funk/Wireless-Netzwerk/ESP8266-ESP-02-Version-2-WIFI-Wlan2Serial::161.html	

Module	Module Pinout	Picture
ESP-03		
ESP-04		
ESP-05 "a" ("a" and "b" are not official; added to distinguish)		
ESP-05 "b"		?

Module	Module Pinout	Picture
ESP-06		
ESP-07		
ESP-08		

Module	Module Pinout	Picture
ESP-09		
ESP-10		
ESP-11		