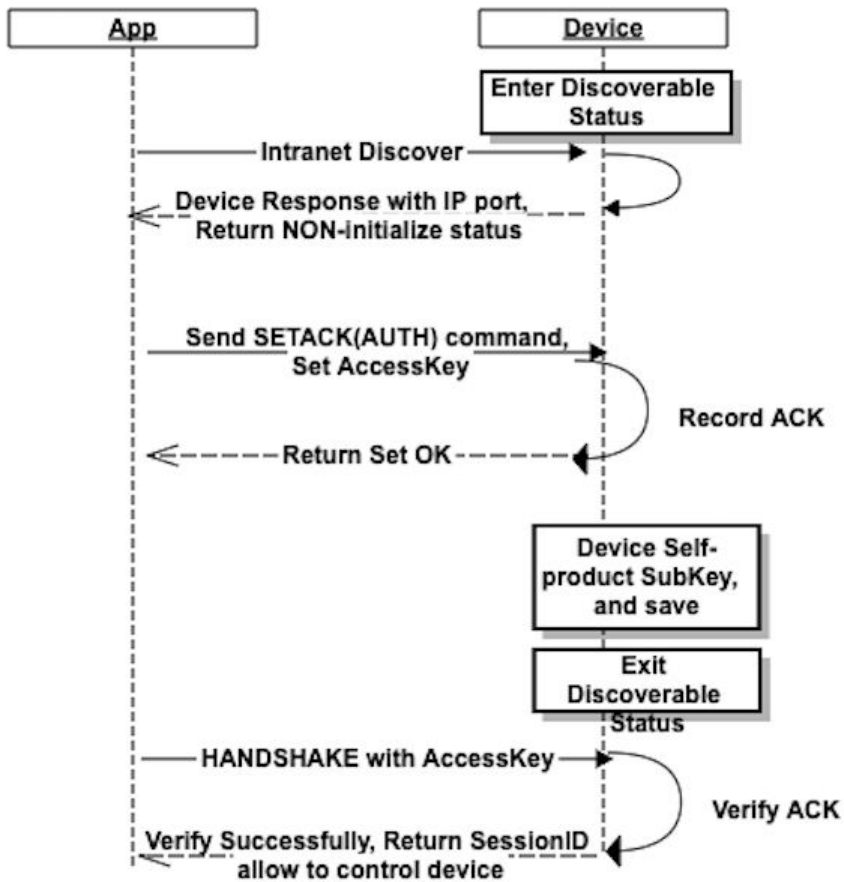


Reference – Initialize Device Connect



ESP32 Wi-Fi JAP Compatibility Test Report



Version 1.1
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1.

Test Report

In this test, the number of successful connections between ESP32 and Access Points (APs) in 10 connection attempts of every single router is counted to calculate the connection success rate, thus to verify if ESP32, as a Wi-Fi Station, is compatible with different APs. In total, 166 router models from 30 manufacturers are tested.

1.1. Test Equipment

Test equipment required for this test include:

- ESP32 modules
- *bootloader.bin*, *partitions_singleapp.bin* and *ssc.bin*
- SecureCRT debugger
- Linux or Windows 7 operating systems
- routers
- test scripts

1.2. Test Version

IDF V3.0

1.3. Test Environment

Open environment

1.4. Test Method

In this test, the number of successful connections between ESP32 and APs in 10 connection attempts of every single router is counted to calculate the connection success rate, thus to verify if ESP32, as a Wi-Fi Station, is compatible with different APs. If the router can successfully obtain IP within 30 seconds, this connection is considered as successful, otherwise as failed.

Scripts are used in this test to “connect and disconnect” routers continuously.

1.5. Test Result

Brand	Model	Channel	Mode	Authentication mode	Hide SSID	Success Rate
BUFFALD	WHR-HP-G300N	14	11gn mixed	WPA2-Personal-TKPI&AES	N	100%



Brand	Model	Channel	Mode	Authentication mode	Hide SSID	Success Rate
360	C403	1	Auto	WPA/WPA2-PSK-AES	Y	100%
Apple	AT392	6	11bgn mixed	Open	N	100%
ASUS	RT-N56U	7	11n only	WPA2-Personal	N	80%
	RT-N16	10	11n only	Open	N	90%
	RT-N16	8	11n only	WPA2-PSK	N	90%
	RT-AC51U	11	Auto	WPA2-Personal-AES	N	100%
	RT-AC87U	9	Auto	Open	N	100%
	RT-N66U	Auto	Auto	WPA2-Personal-AES	N	100%
	RT-AC66U	5	Auto	WPA2-Personal-AES	N	100%
BELKIN	F9K1001V5	12	11bgn mixed	WPA2-PSK-AES	N	100%
	F5D8230-4	7	11g only	WPA-PSK-TKIP	N	100%
Cisco	RV100W	6	11bgn mixed	WPA2-Personal-AES	N	100%
	CVR100W	5	11bgn mixed	WPA2-Personal	N	100%
D-Link	DIR-619L	6	Auto	WPA/WPA2-PSK	N	100%
	DIR-619L	6	Auto	Open	N	100%
	DIR-612	11	11gn mixed	WPA/WPA2-PSK-TKIP&AES	N	100%
	DIR-809	11	Auto	WPA/WPA2-TKIP	N	100%
	DIR-809	9	Auto	Open	N	100%
	DIR-842	1	11bgn mixed	WPA-Personal	N	100%
	DIR-629	1	11bgn mixed	WPA/WPA2-PSK-TKIP&AES	N	100%
	DIR-615	11	Auto	WPA/WPA2-Personal	N	100%
	DIR-822	12	11g only	WEP	N	100%
	DIR-822	1	11bgn mixed	Open	N	100%
DIR-859	13	11bgn mixed	WEP	N	100%	
FAST	FWR310	1	11n only	Auto	N	100%
	FWR310	Auto	11bgn mixed	Auto	N	100%
	FW450R	4	11bgn mixed	Auto	N	100%
	FW325R	1	11n only	Auto	N	100%



Brand	Model	Channel	Mode	Authentication mode	Hide SSID	Success Rate
HiWiFi	HC5761	10	Auto	WPA/WPA2	N	100%
	HC5761	2	Auto	WPA/WPA2-Personal		
	HC5861	6	Auto	Open	N	100%
HUAWEI	HG255d	11	11g only	WEP-Open	Y	80%
	WS851	12	11bgn mixed	Open	N	100%
	WS318	Auto	11bgn mixed	WPA/PSK/WPA2-PSK-TKIP&AES	N	100%
	WS330	Auto	11bgn mixed	WPA2-PSK-AES	N	100%
	WSR20	5	11bgn mixed	WPA-PSK/WPA2-PSK-TKIP&AES	N	100%
	WS831	Auto	11bgn mixed	WPA-PSK/WPA2-PSK-AES	N	100%
	WS860s	Auto	11bgn mixed	WPA	N	100%
	WS832	Auto	11b only	WPA/WPA2-PSK-TKIP&AES	N	100%
JCG	JHR-AC836PRO	6	Auto	Auto	N	100%
	JHR-N835R	11	11b only	WPA/WPA2-PSK-TKIP	N	100%
LB Link	BL-WR4000	1	Auto	Auto	N	100%
	BL-845R	Auto	11b only	WPA/WPA2-Personal-AES	N	100%
	BL-845R	Auto	11bgn mixed	WPA/WPA2-AES	N	100%
	BL-D9101	11	Auto	Auto	N	100%
	WR308	13	Auto	Auto	N	100%
	Unknow	2	11bgn mixed	WPA/WPA2-Personal-AES	N	100%
	BL-AC886M	11	Auto	WPA/WPA2-PSK	N	100%
	BL-WR4000	1	11bgn mixed	WPA/WPAS-TKIP	N	100%
Lenovo	BL-WR4000	13	Auto	WPA/WPA2-PSK	N	100%
	R6400	6	11n only	WPA2-AES	N	100%
	R3220	11	Auto	WPA/WPA2-PSK-TKIP&AES	N	100%
	MW325R	1	11bgn mixed	Auto	N	100%



Brand	Model	Channel	Mode	Authentication mode	Hide SSID	Success Rate
MERCURY	MW325R	8	11n only	Auto	N	100%
	WM325R	4	11bgn mixed	Auto	N	100%
	MW300R	9	11bgn mixed	WPA/WPA2-PSK-AES	N	100%
	MW460R	7	11bgn mixed	WPA/WPA2-PSK-AES	N	100%
	MAC_1200R	Auto	11bgn mixed	Auto	N	100%
	MW315R	5	11bgn mixed	Auto	N	100%
	MW315R	5	11bgn mixed	Auto	N	100%
	MW313R	2	11bgn mixed	Auto	N	100%
	MW300R	9	11bgn mixed	WEP-ASCII	N	100%
	MW310R	Auto	11bgn mixed	Auto	N	100%
	MW305R	4	11bg mixed	Auto	N	100%
	MW316R	6	11n only	WPA-PSK-AES	N	100%
NETGEAR	WNDR3700	3	11bgn mixed	WPA2-PSK-AES	N	100%
	WNDR3800	1	Auto	WPA-PSK-TKIP	N	100%
	KWGR614	7	11gb mixed	WPA-PSK-TKIP	N	100%
	R6220	9	Auto	WPA2-PSK-AES	N	100%
	R7000	11	Auto	WPA-PSK/WPA2-AES	N	100%
	JNDR3000	11	11g only	Open	N	100%
	WNDR3700v4	2	Auto	WPA-PSK	N	100%
	R2000	Auto	11bgn mixed	WPA2-PSK	N	100%
	R6220	9	Auto	WPA2-PSK-AES	N	100%
	R6250	1	11bgn mixed	Open	N	100%
newifi	R6830	Auto	Auto	WPA/WPA2-PSK	N	100%
	D1	7	Auto	WPA/WPA2-PSK	N	100%
	R6830	7	Auto	WPA/WPA2-Personal	N	100%
	newifi D1	11	Auto	Auto	N	100%
	NC935	6	11bgn mixed	WPA-PSK-AES	N	100%



Brand	Model	Channel	Mode	Authentication mode	Hide SSID	Success Rate
netcore	AC1	9	11bgn mixed	WPA/WPA2-PSK-TKIP&AES	N	100%
	NW710	6	Auto	WPA/WPA2-SPK-AES	N	90%
	NW737	12	Auto	WPA/WPA2-PSK-AES	N	80%
	NW737	13	11gn mixed	WPA/WPA2-PSK-AES	N	80%
Tenda	N300v3	7	11bgn mixed	Auto	N	100%
	W304R	11	11b only	WPA2-PSK-AES	N	100%
	FH456	2	Auto	Auto	Y	100%
	FH456	2	11bgn mixed	WPA/WPA2-Personal-AES	Y	100%
	FH1202	1	11bgn mixed	WPA2-PSK-AES	N	100%
	FH1202	2	11bgn mixed	WEP-ASCII	N	100%
	AC10	4	11bgn mixed	Open	N	100%
	AC6	Auto	11bgn mixed	WPA/WPA2-PSK	N	100%
	AC6	Auto	11bgn mixed	WPA/WPA2	N	100%
	837R	1	11bgn mixed	WPA2-PSK-TKIP&AES	N	100%
		7	11bgn mixed	WPA-PSK-AES	N	100%
	811RV2	10	11g only	Open	N	90%
	N318	Auto	11bg mixed	WPA/WPA2-PSK	N	100%
	W302R	7	11b only	WEP	N	100%
	F3	4	11bgn mixed	WPA/WPA2-PSK	Y	100%
	F6	Auto	11bgn mixed	WPA/WPA2-PSK	N	100%
	F9	8	11bgn mixed	WPA2-PSK	Y	80%
N6	1	11bgn mixed	Open	N	90%	
TOTOLINK	N600Rv2	9	11bgn mixed	WPA-PSK-AES	N	100%
	N650R	10	11bgn mixed	WPA2-PSK-AES	N	100%
	N200RS+	11	11bgn mixed	WPA-PSK/WPA2-PSK-AES	N	100%
	N310RT	11	11bgn mixed	Open	N	100%



Brand	Model	Channel	Mode	Authentication mode	Hide SSID	Success Rate	
	A700R	9	11bgn mixed	WPA2-PSK-AES	N	100%	
TP-LINK	TL-MR3020	Auto	11bgn mixed	WPA/WPA2- Personal-Auto	N	100%	
	TL- WAR1200L	Auto	11bgn mixed	WPA-PSK/WPA2- PSK-auto	N	100%	
	TL-WR720N	Auto	11bgn mixed	WPA/WPA2	N	90%	
	TL-WR886N	1	11bgn mixed	Auto	N	100%	
	TL-WR740N	11	11bgn mixed	WPA2-PSK	N	100%	
	TL-WR740N	9	11n only	WPA/WPA2-PSK- AES	N	100%	
	TL-WR882N	6	11bgn mixed	WPA-PSK/WPA2- PSK-AES	N	100%	
	TL- WR1043ND	7	11bgn mixed	WEP-ASCII	N	100%	
	TL- WR1043ND	712	11bgn mixed	WPA2-PSK-AES	N	100%	
	TL-WR960N	1	11bgn mixed	Auto	N	100%	
	TL- WDR5700	Auto	11bgn mixed	Auto	N	100%	
	TL-WVR300	Auto	11bgn mixed	WPA-PSK/WPA2- PSK-AES	N	100%	
	TL- WDR6320	Auto	11bgn mixed	Auto	N	100%	
	TL- WDR6300	2	11bgn mixed	Auto	N	100%	
	TL-WR890N	Auto	11bgn mixed	Auto	N	100%	
	TL_	WR845_	Auto	11bgn mixed	WPA/WPA2-PSK- AES	N	100%
	TL-WR885N	4	11bgn mixed	Auto	N	100%	
	TL-WR885N	Auto	11bgn mixed	WPA/WPA2-PSK- AES	N	100%	
	TL-TW845N	11	11bgn mixed	WPA-PSK/WPA2- PSK-AES	N	100%	
	TL-WR847N	6	11n only	Open	N	100%	
TL-WR840N	12	11bgn mixed	WPA2-PSK-AES	N	100%		
TL-WR840N	15	11b only	WPA-PSK-AES	N	100%		



Brand	Model	Channel	Mode	Authentication mode	Hide SSID	Success Rate
	C9	3	11gn mixed	WEP-Open	N	100%
	C2	1	11bgn mixed	WPA/WPA2-Personal-Auto	N	100%
	C2	11	11bgn mixed	WPA/WPA2-Personal-AES	N	100%
	TL-WDR5600	5	11bgn mixed	Auto	Y	100%
	TL-WDR5600	1	11bgn mixed	WPA-PSK/WPA2-PSK-Auto	N	100%
	Archer C9	3	11gn mixed	WEP-Open	N	100%
	TL-WDR7300	3	11n only	Auto	N	100%
	TL-WDR7400	8	11bgn mixed	Auto	N	100%
	TL-WR941N	5	11bgn mixed	WPA2-PSK-AES	N	100%
	TL-W89941N	7	11bgn mixed	WPA-PSK/WAP2-PSK-auto	N	100%
	TL-WR2041N	12	11g only	WEP	N	100%
	TL-WDR6300	6	11bgn mixed	Auto	N	100%
UTT	755W	6	11bgn mixed	WPA/WPA2-PSK	N	100%
wavlink	WL-WN529N2A	1	Auto	Auto	N	100%
	WL-WN521N2A	Auto	Auto	Auto	N	100%
Domywifi	DW22D	Auto	Auto	Auto	N	
		Auto	Auto	Auto	N	100%
PHICOM M	PSG618	9	11n only	WPA2-PSK-TKIP+AES	N	80%
	PSG1208	4	11bgn mixed	WPA/WPA2-PSK	N	100%
	PSG1218	3	11bgn mixed	Auto	N	100%
	FIR302C	7	11bgn mixed	WPA2-SPK-AES	N	80%
	FIR300C	Auto	11bgn mixed	WPA/WPA2-PSK-AES	N	100%
CAOKE	Q363	1	11bgn mixed	Open	N	100%



Brand	Model	Channel	Mode	Authentication mode	Hide SSID	Success Rate
GAOKE	Q307R	3	11bgn mixed	WEP-Open	N	100%
LeTV	LBA-047-CH	12	Auto	Auto	N	100%
	LBA-047-CH	11	Auto	Auto	Y	100%
Antbang	A3S	11	Auto	Auto	N	100%
		1	Auto	Auto	N	100%
Xiaomi	R1CL	10	Auto	Open	N	100%
	R2D	13	Auto	WPA2-Personal	N	100%
	R3L	Auto	Auto	WPA/WPA2-PSK	N	100%
	R1C	Auto	Auto	WPA2-Personal	N	100%
	R1C	11	Auto	WPA/WPA2	Y	100%
Youku	YK-L1C	11	Auto	Auto	N	100%
ZTE	5501S	11	11bgn mixed	WPA2-PSK-AES	N	100%
	E5560	4	11bgn mixed		N	100%

1.6. Conclusion

ESP32, as a Wi-Fi Station, is compatible with all of the 166 routers from 30 manufacturers in the test.



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