

Operational Description

This device is a IEEE 802.11 a/b/g/n Wireless LAN and Bluetooth Combo LGA Module, which operates in both of the 5GHz and 2.4GHz bands and can transmitting simultaneously, the maximum data rate could be up to 300Mbps which OFDM technique. If the signal to noise ratio is too poor which could not support 300Mbps, the 11Mbps data rate with DSSS technique will be applied.

The transmitter of the EUT is powered from DC 3.3V.

The antennas provided to the EUT, please refer to the following table:

Ant.	Brand	Model	Antenna Type	Connector	Antenna Gain <include cable lose> (dB)	Antenna Cable Loss (dB)	Cable Length (mm)	Frequency range (MHz to MHz)
1	MAG.LAYERS	MSA-4008-25GC1-A1	PIFA	I-PEX	2.98	0.5	150	2400 ~ 2500
					5.16			4900 ~ 5900
2	INPAQ	WA-C-XT-02-001	PIFA	I-PEX	2.14	1	721	2400 ~ 2500
					2.06			5150 ~ 5850
3	INPAQ	WA-P-LB-02-035	PIFA	I-PEX	2.97	1	440	2400 ~ 2500
					2.77			5150 ~ 5850
4	WHA YU	SSR-31604	PIFA	I-PEX	2.6	0.5	125	2400 ~ 2500
					4.3			4900 ~ 5825
5	Smart Approach Co., Ltd	SE-ECJH0-001	PIFA	I-PEX	-0.56	0.66	206	2400 ~ 2500
					1.25	0.98		5150 ~ 5350
					0.08	1.03		5740 ~ 5725
					0.75	1.06		5725 ~ 5850
6	Smart Approach Co., Ltd	SE-ECJH0-002	PIFA	I-PEX	-0.57	0.14	43	2400 ~ 2500
					-0.64	0.20		5150 ~ 5350
					1.79	0.22		5740 ~ 5725
					1.27	0.22		5725 ~ 5850
7	JiengtaiCorporation	JT1301209Y0311	PIFA	I-PEX	1.82	0.76	208	2400 ~ 2500
					0.45	1.22		5150 ~ 5350
					0.76	1.27		5740 ~ 5725
					0.38	1.32		5725 ~ 5850
8	JiengtaiCorporation	JT1301209Y1511	PIFA	I-PEX	-0.44	0.13	48	2400 ~ 2500
					2.08	0.25		5150 ~ 5350
					2.48	0.26		5740 ~ 5725
					1.66	0.33		5725 ~ 5850
9	Hua Chen Technology Co.,Ltd	DC33001FK00	PIFA	I-PEX	-1.04	0.12	213	2400 ~ 2500
					-1.67	0.19		5150 ~ 5350
					-0.64	0.20		5740 ~ 5725
					-0.75	0.21		5725 ~ 5850
10	Hua Chen Technology Co.,Ltd	DC33001FK10	PIFA	I-PEX	-5.82	0.5	49	2400 ~ 2500
					0.54	0.77		5150 ~ 5350
					2.33	0.80		5740 ~ 5725
					2.33	0.82		5725 ~ 5850

From the above antennas, antenna 1 was selected for the test and its data was recorded in this report.

The other instruction, please have a look at the users manual.

FCC 15.407(c) states: The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met”

Data transmission is always initiated by software, which is then pass down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets (ACKs, CTS, PSPoll, etc...) are initiated by the MAC. There are the only ways the digital baseband portion will turn on the RF transmitter, which it then turns off at the end of the packet. Therefore, the transmitter will be on only while one of the aforementioned packets are being transmitted.