

Technical Description

This device is an IEEE 802.11a/b/g/n MiniPCI Card operates in both the 5GHz and 2.4GHz Bands with DSSS and OFDM technique. The transmitter rate could be 11Mbps for 11b; 54Mbps for 11a/b; 144.4Mbps for Draft 802.11n (20MHz); 300Mbps for Draft 802.11n (40MHz). The transmitter of the EUT is powered from power adapter.

1. There are two antennas provided to this EUT, please refer to the following table:

No	Model No.	Antenna Gain	For 2.4GHz Gain (dBi)	For 5.15~5.25GHz Gain (dBi)	For 5.25~5.35GHz Gain (dBi)	For 5.47~5.725GHz Gain (dBi)	For 5.725~5.850GHz Gain (dBi)	Antenna Type	Connector		
1	DAP-2590	Gain (dBi)	4	6.10	6.42	6.21	7.12	Dipole	Reverse SMA		
		Cable Loss (dB)	0.3	0.6							
		Net Gain (dB)	3.7	5.5	5.82	5.61	6.52				
2	ALP05-220170	Gain (dBi)	4.83	4.98	5.10	5.25	6.00	Dipole	RP SMA Plug		
		Cable Loss (dB)	0.3	0.6							
		Net Gain (dB)	4.53	4.38	4.5	4.65	5.4				

Note: From above antennas, 2.4GHz worst case was antenna 1 and 5GHz worst case was antenna 2.

2. The EUT incorporates a MIMO function with 802.11a, 802.11b, 802.11g, draft 802.11n. Physically, the EUT provides three completed transmit and three completed receivers.
3. The EUT is 3 * 3 spatial MIMO (3Tx & 3Rx) without beam forming function. The antenna configurations are three transmitter antennas and three receiver antennas, as there are 3 dipole antennas. Spatial multiplexing modes for simultaneous transmission using 3 antennas, and for simultaneous receiver using 3 antennas.
4. When the EUT operating in draft 802.11n, the software operation, which is defined by manufacturer, MCS (Modulation and Coding Schemes) from 0 to 15.
5. The EUT complies with draft 802.11n standards and backwards compatible with 802.11a, 802.11b, 802.11g products.
6. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

FCC ID: RRKWMPND03

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 passed down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets (ACKs, CTS, PS-Poll, 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.