Technical Description

This device is a D-Link AirPremier N Dual Band Exterior PoE Access Point with Dual-Band 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/g; 144.444Mbps for Draft 802.11n (20MHz); 300Mbps for Draft 802.11n (40MHz). The transmitter of the EUT is powered from host equipment.

NOTE:

1. The EUT was powered by following POE (Power Over Ethernet):

POE:	
Brand:	Base-Unit
Model No.:	EBU-101G-T2 LF
Output power :	48V, 0.4A

2. The POE can be powered with following power adapter:

Brand:	Bothhand Enterprise Inc.
Model No.:	SA06-20S48-V
Input power :	100-240V, 0.6A, 50~60Hz AC input cable (unshielded, 1.8m, core with pin)
Output power :	DC 48V, 0.4A DC output cable (unshielded, 1.8m, with one core)

3. The EUT was pre-tested in chamber under the following modes:

Test Mode	**Description**
Mode A	Level-set (Put on tabletop)
Mode B	**Tower-set (Wall-mounted)**

From the above modes, worse case was found in **Mode B**. Therefore only the test data of the mode was recorded in this report.

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

Antenna Set 1 (Internal antenna):						
Transmitter Circuit	Manufacture	Antenna Model	For 2.4GHz Gain (dBi)	For 5GHz Gain (dBi)	Antenna Type	Connector
Chain(0)	SmartAnt Telecom Co., Ltd.	DWL08-220190	8	10	PCB	MMCX R/A plug
Chain (1)	SmartAnt Telecom Co., Ltd.	DWL08-220190	8	10	PCB	MMCX R/A plug

Antenna Set 2 (External antenna):						
Transmitter Circuit	Manufacture	Antenna Model	Antenna Gain	Only 2.4GHz	Antenna Type	Connector
Chain(0)	SmartAnt Telecom Co., Ltd.	ANT24-0800 (DWL07-050660)	Gain (dBi)	8	DIPOLE	N-jack
			Cable Loss (dB)	3		
			Net Gain (dBi)	5		
			Cable length (m)	6		
Chain(1)	SmartAnt Telecom Co., Ltd.	ANT24-0800 (DWL07-050660)	Gain (dBi)	8	DIPOLE	N-jack
			Cable Loss (dB)	3		
			Net Gain (dBi)	5		
			Cable length (m)	6		
Note: While EUT connect with antenna set 2, the function of antenna set 1 were lose.						

5. The EUT incorporates a MIMO function with 802.11a, 802.11b, 802.11g, draft 802.11n. Physically, the EUT provides two completed transmit and two completed receivers.

6. The EUT is 2 * 2 spatial MIMO (2Tx & 2Rx) without beam forming function. The antenna configurations are two transmitter antennas and two receiver antennas, as there are 2 Dipole antennas or 2 PCB antennas. Spatial multiplexing modes for simultaneous transmission using 2 antennas, and for simultaneous receiver using 2 antennas.

7. 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.

8. The EUT complies with draft 802.11n standards and backwards compatible with 802. 11a, 802.11b, 802.11g products.

9. 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.

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.