RF EXPOSURE REPORT

REPORT NO.:	SA141201E10
MODEL NO.:	DAP-2553B1
FCC ID:	KA2AP2553B1
RECEIVED:	Dec. 01, 2014
TESTED:	Dec. 18 to 22, 2014
ISSUED:	Dec. 30, 2014

APPLICANT:	D-Link Corporation
ADDRESS:	No.289, Sinhu 3rd Rd., Neihu District, Taipei City 114, Taiwan, R.O.C.

ISSUED BY:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
LAB ADDRESS :	No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan, R.O.C.
TEST LOCATION (1):	No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan, R.O.C.
TEST LOCATION (2):	No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan, R.O.C.

This report should not be used by the client to claim product certification, approval, or endorsement by any government agencies.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA141201E10	Original release	Dec. 30, 2014

1. CERTIFICATION

PRODUCT:	D-Link AirPremier N Dual Band PoE Access Point, D-Link Wireless N Dual Band PoE Access Point
BRAND NAME:	D-Link
MODEL NO.:	DAP-2553B1
TEST SAMPLE:	R&D SAMPLE
APPLICANT:	D-Link Corporation
TESTED:	Dec. 18 to 22, 2014
STANDARDS:	FCC Part 2 (Section 2.1091)
	KDB 447498 D03
	IEEE C95.1

The above equipment (Model: DAP-2553B1) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** Dec. 30, 2014
(Lori Chung, Specialist)

Approved by : _____ , **Date:** Dec. 30, 2014
(May Chen, Manager)

2. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm^2)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$Pd = (Pout*G) / (4*pi*r^2)$

where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

pi = 3.1416

r = distance between observation point and center of the radiator in cm

4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

5. ANTENNA GAIN

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

Transmitter Circuit	Brand	Model	Gain (dBi) Without cable loss	Cable loss (dB)	Net Gain (dBi)	Frequency range (MHz to MHz)	Cable Length (mm)	Antenna Type	Connecter Type
Chain (0)	WHA YU GROUP	C037-510912-A (SSR-82286)	3.08	0.6	3.02	2400~2483.5	120	Dipole	SMA Plug Reverse
			5.96	1.1	4.86	5150~5250			
			6.23	1.1	5.13	5250~5350			
			6.17	1.1	5.07	5470~5725			
Chain (1)	WHA YU GROUP	C037-510912-A (SSR-82286)	3.08	0.7	2.38	2400~2483.5	140	Dipole	SMA Plug Reverse
			5.96	1.2	4.76	5150~5250			
			6.23	1.2	5.03	5250~5350			
			6.17	1.2	4.97	5470~5725			
Chain (2)	WHA YU GROUP	C037-510912-A (SSR-82286)	3.08	0.7	2.38	2400~2483.5	170	Dipole	SMA Plug Reverse
			5.96	1.2	4.76	5150~5250			
			6.23	1.2	5.03	5250~5350			
			6.17	1.2	4.97	5470~5725			

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

For 15.247:

802.11b:

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
2412 ~ 2462	191.102	7.18	20	0.19861	1

Directional gain = 10 log[($10^{G1/20} + 10^{G2/20} + 10^{G3/20}$)^2 / 3] = 7.18dBi

802.11g:

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
2412 ~ 2462	156.814	7.18	20	0.16297	1

Directional gain = 10 log[($10^{G1/20} + 10^{G2/20} + 10^{G3/20}$)^2 / 3] = 7.18dBi

802.11n (HT20):

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
2412 ~ 2462	157.691	7.18	20	0.16388	1

Directional gain = 10 log[($10^{G1/20} + 10^{G2/20} + 10^{G3/20}$)^2 / 3] = 7.18dBi

802.11n (HT40):

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
2422 ~ 2452	60.288	7.18	20	0.06266	1

Directional gain = 10 log[($10^{G1/20} + 10^{G2/20} + 10^{G3/20}$)^2 / 3] = 7.18dBi

For 15.407:

802.11a:

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
5180 – 5240	315.189	9.56	20	0.56663	1
5745 - 5825	319.714	9.77	20	0.60324	1

For 5150-5250MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2$ / 3] = 9.56dBi
For 5725-5850MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2$ / 3] = 9.77dBi

802.11n (HT20)

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
5180 – 5240	311.734	9.56	20	0.56042	1
5745 - 5825	353.51	9.77	20	0.66701	1

For 5150-5250MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2$ / 3] = 9.56dBi
For 5725-5850MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2$ / 3] = 9.77dBi

802.11n (HT40)

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
5190 – 5230	227.548	9.56	20	0.40907	1
5755 - 5795	140.871	9.77	20	0.26580	1

For 5150-5250MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2$ / 3] = 9.56dBi
For 5725-5850MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2$ / 3] = 9.77dBi

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