

1.1. Test Result of RF Exposure Evaluation

- . Product: High Power Wireless-N Dual Band Directional USB Adapter
- . Test Item: RF Exposure Evaluation Data
- . Test site: OATS2-SD
- . Test Mode: Normal Operation

1.1.1. Antenna Gain

802.11b/g/n:

ANT R: Dipole antenna, 4 dBi

ANT L: Dipole antenna, 4 dBi

802.11a/n:

ANT R: Dipole antenna, 6 dBi

ANT L: Dipole antenna, 6 dBi

1.1.2. EUT Operation condition

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

1.1.3. Output Power into Antenna & RF Exposure Evaluation Distance

Test Date: Jun. 01, 2012

Temperature: 25°C

Atmospheric pressure: 1020 hPa

Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	Output Power to Antenna (dBm)		Power Density (S) (mW/cm ²)	
			ANT R	ANT L	ANT R	ANT L
802.11b (11Mbps)	01	2403	22.50	22.60	0.089	0.091
	06	2438	22.86	22.78	0.097	0.095
	11	2478	22.48	22.44	0.088	0.088
802.11g (54Mbps)	01	2412	22.36	22.59	0.086	0.091
	06	2437	22.86	22.86	0.097	0.097
	11	2462	22.24	22.32	0.084	0.085

Modulation Standard	Channel	Frequency (MHz)	Output Power to Antenna (dBm)			Power Density (S) (mW/cm ²)		
			ANT R	ANT L	R+L	ANT R	ANT L	R+L
802.11n HT20 (130Mbps)	01	2412	22.35	22.42	25.40	0.086	0.087	0.347
	06	2437	22.85	22.87	25.87	0.096	0.097	0.386
	11	2462	22.27	22.47	25.38	0.084	0.088	0.345
802.11n HT40 (270Mbps)	03	2422	22.35	22.44	25.41	0.086	0.088	0.347
	06	2437	22.88	22.84	25.87	0.097	0.096	0.386
	09	2452	22.21	22.42	25.33	0.083	0.087	0.341

Test Date: Jun. 06, 2012
 Atmospheric pressure: 1020 hPa

Temperature: 25°C
 Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	Output Power to Antenna (dBm)		Power Density (S) (mW/cm ²)	
			ANT R	ANT L	ANT R	ANT L
802.11a (54Mbps)	36	5180	9.22	8.14	0.007	0.005
	44	5220	8.34	8.83	0.005	0.006
	48	5240	8.50	8.90	0.006	0.006
	149	5745	19.66	20.41	0.073	0.087
	157	5785	14.90	19.96	0.024	0.078
	165	5825	14.02	20.05	0.020	0.080

Modulation Standard	Channel	Frequency (MHz)	Output Power to Antenna (dBm)			Power Density (S) (mW/cm ²)		
			ANT R	ANT L	R+L	ANT R	ANT L	R+L
802.11n HT20 (130Mbps)	36	5180	9.24	8.98	12.12	0.007	0.006	0.026
	44	5220	8.31	8.43	11.38	0.005	0.006	0.022
	48	5240	8.20	8.79	11.52	0.005	0.006	0.022
	149	5745	19.61	20.32	22.99	0.072	0.085	0.315
	157	5785	14.87	19.75	20.97	0.024	0.075	0.198
	165	5825	13.90	19.84	20.83	0.019	0.076	0.192

Modulation Standard	Channel	Frequency (MHz)	Output Power to Antenna (dBm)			Power Density (S) (mW/cm ²)		
			ANT R	ANT L	R+L	ANT R	ANT L	R+L
802.11n HT40 (270Mbps)	38	5190	10.29	10.90	13.62	0.008	0.010	0.036
	46	5230	10.72	9.59	13.20	0.009	0.007	0.033
	151	5755	19.02	20.23	22.68	0.063	0.084	0.294
	159	5795	14.07	19.68	20.73	0.020	0.074	0.187

The MPE is calculated as $0.386\text{mW} / \text{cm}^2 < \text{limit } 1\text{ mW} / \text{cm}^2$. So, RF exposure limit warning or SAR test are not required.

For 2412-2462 MHz, 5150-5250 MHz, and 5725-5825 MHz, the EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47CFR2.1091 (b).