



Neutron Engineering Inc.

FCC RF EXPOSURE REPORT

FCC ID: W59XWR1750

Project No. : 1308C047
Equipment : Dual Band Wireless AC1750 Gigabit Router
Model : XWR-1750
Applicant : Luxul Wireless
Address : 14203 Minuteman Drive, Suite 201, Draper, UT USA
According: : FCC Guidelines for Human Exposure IEEE C95.1

Neutron Engineering Inc.

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MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi^2} = \frac{EIRP}{4\pi^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Ant.	Brand	M/N	Antenna Type	Connector	Gain (dBi)	Note
0	LUXUL	Q5100	Dipole Antenna	N/A	5.0	TX/RX
1	LUXUL	Q5100	Dipole Antenna	N/A	5.0	TX/RX
2	LUXUL	Q5100	Dipole Antenna	N/A	5.0	TX/RX

TEST RESULTS

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX A Mode /CH149, CH157, CH165		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	25.13	325.8367	0.20509278	1	Complies
5	3.1623	25.11	324.3396	0.20415046	1	Complies
5	3.1623	25.28	337.2873	0.21230018	1	Complies



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EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N20 Mode /CH149, CH157, CH165 - ANT 0		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	25.23	333.4264	0.20987000	1	Complies
5	3.1623	25.21	331.8945	0.20890574	1	Complies
5	3.1623	25.19	330.3695	0.20794590	1	Complies

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N20 Mode /CH149, CH157, CH165 - ANT 1		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	25.16	328.0953	0.20651441	1	Complies
5	3.1623	25.19	330.3695	0.20794590	1	Complies
5	3.1623	25.11	324.3396	0.20415046	1	Complies

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N20 Mode /CH149, CH157, CH165 – ANT 2		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	25.26	335.7376	0.21132475	1	Complies
5	3.1623	25.12	325.0873	0.20462108	1	Complies
5	3.1623	25.16	328.0953	0.20651441	1	Complies



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EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N20 Mode /CH149, CH157, CH165 - ANT 0+ANT 1+ANT 2		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	29.98	995.4054	0.62654226	1	Complies
5	3.1623	29.94	986.2795	0.62079809	1	Complies
5	3.1623	29.92	981.7479	0.61794578	1	Complies

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N40 Mode /CH151, CH159 - ANT 0		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	25.13	325.8367	0.20509278	1	Complies
5	3.1623	25.16	328.0953	0.20651441	1	Complies

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N40 Mode /CH151, CH159 - ANT 1		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	25.19	330.3695	0.20794590	1	Complies
5	3.1623	25.14	326.5878	0.20556557	1	Complies



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EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N40 Mode /CH151, CH159 - ANT 2		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	25.21	331.8945	0.20890574	1	Complies
5	3.1623	25.28	337.2873	0.21230018	1	Complies

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N40 Mode /CH151, CH159 – ANT 0+ANT 1+ANT 2		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	29.94	986.2795	0.62079809	1	Complies
5	3.1623	29.96	990.8319	0.62366356	1	Complies

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N20 Mode /CH149, CH157, CH165 – ANT 0		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	25.22	332.6596	0.20938732	1	Complies
5	3.1623	25.16	328.0953	0.20651441	1	Complies
5	3.1623	25.16	328.0953	0.20651441	1	Complies



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EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N20 Mode /CH149, CH157, CH165 – ANT 1		

Antenn a Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	25.18	329.6097	0.20746764	1	Complies
5	3.1623	25.21	331.8945	0.20890574	1	Complies
5	3.1623	25.14	326.5878	0.20556557	1	Complies

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N20 Mode /CH149, CH157, CH165 – ANT 2		

Antenn a Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	25.26	335.7376	0.21132475	1	Complies
5	3.1623	25.27	336.5116	0.21181191	1	Complies
5	3.1623	25.23	333.4264	0.20987000	1	Complies

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N20 Mode /CH149, CH157, CH165 – ANT 0 + ANT 1 + ANT 2		

Antenn a Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	29.99	997.7001	0.62798659	1	Complies
5	3.1623	29.98	995.4054	0.62654226	1	Complies
5	3.1623	29.94	986.2795	0.62079809	1	Complies



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EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N40 Mode /CH151, CH159 – ANT 0		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	25.15	327.3407	0.20603944	1	Complies
5	3.1623	25.08	322.1069	0.20274510	1	Complies

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N40 Mode /CH151, CH159 – ANT 1		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	25.19	330.3695	0.20794590	1	Complies
5	3.1623	25.17	328.8516	0.20699048	1	Complies

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N40 Mode /CH151, CH159 – ANT 2		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	25.16	328.0953	0.20651441	1	Complies
5	3.1623	25.11	324.3396	0.20415046	1	Complies



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EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N40 Mode /CH151, CH159 – ANT 0 + ANT 1 + ANT 2		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	29.93	984.0111	0.61937029	1	Complies
5	3.1623	29.89	974.9896	0.61369187	1	Complies

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N80 Mode /CH155 – ANT 0		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	24.93	311.1716	0.19586208	1	Complies

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N80 Mode /CH155 – ANT 1		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	24.86	306.1963	0.19273047	1	Complies



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EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N80 Mode /CH155 – ANT 2		

Antenn a Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	24.82	303.3891	0.19096350	1	Complies

EUT:	Dual Band Wireless AC1750 Gigabit Router	Model Name :	XWR-1750
Temperature:	25 °C	Relative Humidity:	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX AC N80 Mode /CH155 – ANT 0 + ANT 1 + ANT 2		

Antenn a Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
5	3.1623	29.64	920.4496	0.57936248	1	Complies

Note:

1) The calculation distance is 20 cm.