

FCC RF EXPOSURE REPORT

FCC ID: XU8TEW816DRM

Project No. : 1503C269
Equipment : AC750 Wireless VDSL2/ADSL2+ Modem Router
Model : TEW-816DRM
Applicant : TRENDnet, Inc.
Address : 20675 Manhattan Place, Torrance, CA 90501

According: : FCC Guidelines for Human Exposure IEEE C95.1

B T L I N C .

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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

Table for Filed Antenna

2.4G

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
0	N/A	N/A	Printed	N/A	3
1	N/A	N/A	Printed	N/A	3

5G

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
3	Airgain	M5X35T	Embedded	N/A	2.8

TEST RESULTS

2.4G

EUT :	AC750 Wireless VDSL2/ADSL2+ Modem Router	Model Name :	TEW-816DRM
Temperature :	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX B MODE /CH01, CH06, CH11		

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
3	1.9953	16.47	44.3609	0.01761775	1	Complies
3	1.9953	17.04	50.5825	0.02008863	1	Complies
3	1.9953	16.97	49.7737	0.01976744	1	Complies

EUT :	AC750 Wireless VDSL2/ADSL2+ Modem Router	Model Name :	TEW-816DRM
Temperature :	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX G MODE /CH01, CH06, CH11		

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
3	1.9953	19.34	85.9014	0.03411539	1	Complies
3	1.9953	19.92	98.1748	0.03898974	1	Complies
3	1.9953	19.85	96.6051	0.03836634	1	Complies

EUT :	AC750 Wireless VDSL2/ADSL2+ Modem Router	Model Name :	TEW-816DRM
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-20M MODE_ Total /CH01, CH06, CH11		

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
3	1.9953	23.36	216.7704	0.08608954	1	Complies
3	1.9953	23.24	210.8628	0.08374336	1	Complies
3	1.9953	23.15	206.5380	0.08202578	1	Complies

EUT :	AC750 Wireless VDSL2/ADSL2+ Modem Router	Model Name :	TEW-816DRM
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-40M MODE_ Total /CH03, CH06, CH09		

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
3	1.9953	21.33	135.8313	0.05394490	1	Complies
3	1.9953	23.28	212.8139	0.08451823	1	Complies
3	1.9953	20.3	107.1519	0.04255498	1	Complies

Band 1

EUT :	AC750 Wireless VDSL2/ADSL2+ Modem Router	Model Name :	TEW-816DRM
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX A MODE /CH36, CH40, CH48		

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
2.8	1.9055	16.29	42.5598	0.01614174	1	Complies
2.8	1.9055	16.2	41.6869	0.01581067	1	Complies
2.8	1.9055	16.35	43.1519	0.01636629	1	Complies

EUT :	AC750 Wireless VDSL2/ADSL2+ Modem Router	Model Name :	TEW-816DRM
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-20M MODE_ Total /CH36, CH40, CH48		

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
2.8	1.9055	15.92	39.0841	0.01482349	1	Complies
2.8	1.9055	16.26	42.2669	0.01603062	1	Complies
2.8	1.9055	16.23	41.9759	0.01592027	1	Complies

EUT :	AC750 Wireless VDSL2/ADSL2+ Modem Router	Model Name :	TEW-816DRM
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-40M MODE_ Total /CH38, CH46		

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
2.8	1.9055	13.15	20.6538	0.00783340	1	Complies
2.8	1.9055	15.02	31.7687	0.01204898	1	Complies

EUT :	AC750 Wireless VDSL2/ADSL2+ Modem Router	Model Name :	TEW-816DRM
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC20 MODE /CH36, CH40, CH48		

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
2.8	1.9055	15.89	38.8150	0.01472144	1	Complies
2.8	1.9055	15.89	38.8150	0.01472144	1	Complies
2.8	1.9055	16.37	43.3511	0.01644184	1	Complies

EUT :	AC750 Wireless VDSL2/ADSL2+ Modem Router	Model Name :	TEW-816DRM
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC40 MODE_ Total /CH38, CH46		

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
2.8	1.9055	13.04	20.1372	0.00763748	1	Complies
2.8	1.9055	13.6	22.9087	0.00868861	1	Complies

EUT :	AC750 Wireless VDSL2/ADSL2+ Modem Router	Model Name :	TEW-816DRM
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC80 MODE_ Total /CH42		

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
2.8	1.9055	12.11	16.2555	0.00616525	1	Complies

Band 4

EUT :	AC750 Wireless VDSL2/ADSL2+ Modem Router	Model Name :	TEW-816DRM
Temperature:	25 °C	Relative Humidity:	60 %
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
2.8	1.9055	16.23	41.9759	0.01592027	1	Complies
2.8	1.9055	16.32	42.8549	0.01625363	1	Complies
2.8	1.9055	16.09	40.6443	0.01541524	1	Complies

EUT :	AC750 Wireless VDSL2/ADSL2+ Modem Router	Model Name :	TEW-816DRM
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-20M MODE_ Total /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
2.8	1.9055	15.9	38.9045	0.01475538	1	Complies
2.8	1.9055	15.96	39.4457	0.01496065	1	Complies
2.8	1.9055	15.82	38.1944	0.01448606	1	Complies

EUT :	AC750 Wireless VDSL2/ADSL2+ Modem Router	Model Name :	TEW-816DRM
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-40M MODE_ Total /CH151, CH159		

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
2.8	1.9055	13.32	21.4783	0.00814611	1	Complies
2.8	1.9055	16.97	49.7737	0.01887776	1	Complies

EUT :	AC750 Wireless VDSL2/ADSL2+ Modem Router	Model Name :	TEW-816DRM
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC20 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
2.8	1.9055	15.89	38.8150	0.01472144	1	Complies
2.8	1.9055	16.04	40.1791	0.01523879	1	Complies
2.8	1.9055	16.42	43.8531	0.01663223	1	Complies

EUT :	AC750 Wireless VDSL2/ADSL2+ Modem Router	Model Name :	TEW-816DRM
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC40 MODE_ Total /CH151, CH159		

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
2.8	1.9055	13.41	21.9280	0.00831669	1	Complies
2.8	1.9055	16.11	40.8319	0.01548640	1	Complies

EUT :	AC750 Wireless VDSL2/ADSL2+ Modem Router	Model Name :	TEW-816DRM
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC80 MODE_ Total /CH155		

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
2.8	1.9055	12.5	17.7828	0.00674451	1	Complies

Note: the calculated distance is 20 cm.