

FCC RF EXPOSURE REPORT

FCC ID: XU8TEW731BRV3

Project No. : 1404C267G
Equipment : N300 WiFi Router
Model : TEW-731BR/A
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

Group 1

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	Shen zhen Hong wei yuan	HWY-24EL5B-106	Dipole	N/A	5
2	Shen zhen Hong wei yuan	HWY-24EL5B-106	Dipole	N/A	5

Group 2

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	Dong guan Xin sheng	SSR-1607018	Dipole	N/A	5
2	Dong guan Xin sheng	SSR-1607018	Dipole	N/A	5

Group 3

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	Jiang su Wu tong	K802-240036-A	Dipole	N/A	5
2	Jiang su Wu tong	K802-240036-A	Dipole	N/A	5

Group 4

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	PCB	N/A	N/A
2	N/A	N/A	PCB	N/A	N/A

Note:

- (1) The Group 1, 2, 3 are Dipole antennas, Group 1 is recorded as the worst case in this report, Group 4 is PCB antenna that is not used.
- (2) The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R).

(3) ANT 1 was the worst case for 1TX.

Operating Mode TX Mode	1TX	2TX
802.11b	V (ANT 1)	-
802.11g	V (ANT 1)	-
802.11n(20MHz)	-	V (ANT 1 + ANT 2)
802.11n(40MHz)	-	V (ANT 1 + ANT 2)

TEST RESULTS

EUT :	N300 WiFi Router	Model Name :	TEW-731BR/A
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
5	3.1623	16.95	49.5450	0.03119	1	Complies
5	3.1623	16.85	48.4172	0.03048	1	Complies
5	3.1623	16.92	49.2040	0.03097	1	Complies

EUT :	N300 WiFi Router	Model Name :	TEW-731BR/A
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
5	3.1623	19.75	94.4061	0.05942	1	Complies
5	3.1623	19.63	91.8333	0.05780	1	Complies
5	3.1623	19.7	93.3254	0.05874	1	Complies

EUT :	N300 WiFi Router	Model Name :	TEW-731BR/A
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
5	3.1623	21.61	144.8772	0.09119	1	Complies
5	3.1623	21.78	150.6607	0.09483	1	Complies
5	3.1623	21.93	155.9553	0.09816	1	Complies

EUT :	N300 WiFi Router	Model Name :	TEW-731BR/A
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
5	3.1623	21.64	145.8814	0.09182	1	Complies
5	3.1623	21.68	147.2313	0.09267	1	Complies
5	3.1623	21.66	146.5548	0.09225	1	Complies

Note: the calculated distance is 20 cm.