



**Neutron Engineering Inc.**

# **FCC RF EXPOSURE REPORT**

**FCC ID: W59XWR600**

**Project No.** : 1401C155  
**Equipment** : Dual Band Wireless 600N Router  
**Model Name** : XWR-600  
**Applicant** : Luxul Wireless  
**Address** : 14203 Minuteman Dr, Suite 201, Draper, Utah, United States  
**Manufacturer :** Luxul Wireless  
**Address** : 14203 Minuteman Dr, Suite 201, Draper, Utah, United States  
  
**According:** : FCC Guidelines for Human Exposure IEEE C92.76

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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 | Model Name | Antenna Type | Connector | Gain (dBi) | Note  |
|------|-------|------------|--------------|-----------|------------|-------|
| 1    | LUXUL | Q5095      | Dipole       | N/A       | 6.06       | TX/RX |
| 2    | LUXUL | Q5096      | Dipole       | N/A       | 6.06       | TX/RX |

| Operating Mode<br>TX Mode | 1TX                | 2TX               |
|---------------------------|--------------------|-------------------|
| 802.11a                   | V (ANT 1 or ANT 2) | -                 |
| 802.11n(20MHz)            | -                  | V (ANT 1 + ANT 2) |
| 802.11n(40MHz)            | -                  | V (ANT 1 + ANT 2) |



## TEST RESULTS

|              |                                |                    |         |
|--------------|--------------------------------|--------------------|---------|
| EUT:         | Daul Band Wireless 600N Router | Model Name :       | XWR-600 |
| Temperature: | 25 °C                          | Relative Humidity: | 55 %    |
| Pressure:    | AC 120V/60Hz                   |                    |         |
| Test Mode :  | Band 1/TX A Mode               |                    |         |

| Antenna Gain (dBi) | Antenna Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 6.06               | 4.0365                 | 15.04                   | 31.9154                | 0.02564191                              | 1                                                | Complies    |
| 6.06               | 4.0365                 | 15.26                   | 33.5738                | 0.02697431                              | 1                                                | Complies    |
| 6.06               | 4.0365                 | 14.91                   | 30.9742                | 0.02488573                              | 1                                                | Complies    |

|              |                                |                    |         |
|--------------|--------------------------------|--------------------|---------|
| EUT:         | Daul Band Wireless 600N Router | Model Name :       | XWR-600 |
| Temperature: | 25 °C                          | Relative Humidity: | 55 %    |
| Pressure:    | AC 120V/60Hz                   |                    |         |
| Test Mode :  | Band 1/TX N20 Mode-Total       |                    |         |

| Antenna Gain (dBi) | Antenna Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 6.06               | 4.0365                 | 15.45                   | 35.0752                | 0.02818061                              | 1                                                | Complies    |
| 6.06               | 4.0365                 | 15.31                   | 33.9625                | 0.02728666                              | 1                                                | Complies    |
| 6.06               | 4.0365                 | 15.39                   | 34.5939                | 0.02779396                              | 1                                                | Complies    |

|              |                                |                    |         |
|--------------|--------------------------------|--------------------|---------|
| EUT:         | Daul Band Wireless 600N Router | Model Name :       | XWR-600 |
| Temperature: | 25 °C                          | Relative Humidity: | 55 %    |
| Pressure:    | AC 120V/60Hz                   |                    |         |
| Test Mode :  | Band 1/TX N40 Mode             |                    |         |

| Antenna Gain (dBi) | Antenna Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 6.06               | 4.0365                 | 13.85                   | 24.2661                | 0.01949622                              | 1                                                | Complies    |
| 6.06               | 4.0365                 | 15.28                   | 33.7287                | 0.02709882                              | 1                                                | Complies    |

Note: The calculated distance is 20cm.