

# FCC RF EXPOSURE REPORT

**FCC ID: Q87-RE6250**

**Project No.** : 1702159  
**Equipment** : WiFi repeater  
**Model** : RE6250  
**Applicant** : Linksys LLC  
**Address** : 121 Theory Drive, Irvine, CA, 92617, USA  
  
**According:** : FCC Guidelines for Human Exposure IEEE C95.1

**Technical Manager**

:



(Herbert Liu)

**B T L I N C .**

B1, No. 37, Lane 365, Yang-Guang St.,  
Nei-Hu District, Taipei City 114, Taiwan.  
TEL: +886-2-2657-3299    FAX: +886-2-2657-3331

## MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

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

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 Band:

| Ant. | Manufacturer | Model Name | Antenna Type | Connector | Gain (dBi) | Note  |
|------|--------------|------------|--------------|-----------|------------|-------|
| 1    | Airgain      | N/A        | PCB          | N/A       | 2.5        | TX/RX |
| 2    | Airgain      | N/A        | PCB          | N/A       | 2.5        | TX/RX |

5G Band:

| Ant. | Manufacturer | Model Name         | Antenna Type | Connector | Gain (dBi) | Note  |
|------|--------------|--------------------|--------------|-----------|------------|-------|
| 1    | Airgain      | N2430LTMSS<br>DR4M | PCB          | N/A       | 2.6        | TX/RX |
| 2    | Airgain      | N2430LTMSS<br>DR4M | PCB          | N/A       | 2.6        | TX/RX |

# TEST RESULTS

## 2.4G:

|             |                             |
|-------------|-----------------------------|
| 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 <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.5                | 1.7783                 | 14.61                   | 28.9068                | 0.01023                                 | 1                                                | Complies    |
| 2.5                | 1.7783                 | 14.59                   | 28.7740                | 0.01018                                 | 1                                                | Complies    |
| 2.5                | 1.7783                 | 14.08                   | 25.5859                | 0.00906                                 | 1                                                | Complies    |

|             |                                      |
|-------------|--------------------------------------|
| Test Mode : | TX G Mode / _ Total CH01, CH06, CH11 |
|-------------|--------------------------------------|

| 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 |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.5                | 1.7783                 | 19.55                   | 90.1571                | 0.03191                                 | 1                                                | Complies    |
| 2.5                | 1.7783                 | 25.68                   | 369.8282               | 0.13090                                 | 1                                                | Complies    |
| 2.5                | 1.7783                 | 21.66                   | 146.5548               | 0.05187                                 | 1                                                | Complies    |

|             |                                         |
|-------------|-----------------------------------------|
| 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 <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.5                | 1.7783                 | 20.54                   | 113.2400               | 0.04008                                 | 1                                                | Complies    |
| 2.5                | 1.7783                 | 25.36                   | 343.5579               | 0.12160                                 | 1                                                | Complies    |
| 2.5                | 1.7783                 | 19.32                   | 85.5067                | 0.03027                                 | 1                                                | Complies    |

|             |                                         |
|-------------|-----------------------------------------|
| 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 <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.5                | 1.7783                 | 22.62                   | 182.8100               | 0.06471                                 | 1                                                | Complies    |
| 2.5                | 1.7783                 | 25.62                   | 364.7539               | 0.12911                                 | 1                                                | Complies    |
| 2.5                | 1.7783                 | 21.42                   | 138.6756               | 0.04909                                 | 1                                                | Complies    |

## 5G Band: Non-Beamforming:

|             |                                           |
|-------------|-------------------------------------------|
| Test Mode : | UNII-1/TX A Mode _Total /CH36, CH40, CH48 |
|-------------|-------------------------------------------|

| 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 |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.6                | 1.8197                 | 18.12                   | 64.8634                | 0.02349                                 | 1                                                | Complies    |
| 2.6                | 1.8197                 | 18.57                   | 71.9449                | 0.02606                                 | 1                                                | Complies    |
| 2.6                | 1.8197                 | 18.31                   | 67.7642                | 0.02454                                 | 1                                                | Complies    |

|             |                                             |
|-------------|---------------------------------------------|
| Test Mode : | UNII-1/TX N20 Mode _Total /CH36, CH40, CH48 |
|-------------|---------------------------------------------|

| 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 |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.6                | 1.8197                 | 18.30                   | 67.6083                | 0.02449                                 | 1                                                | Complies    |
| 2.6                | 1.8197                 | 18.60                   | 72.4436                | 0.02624                                 | 1                                                | Complies    |
| 2.6                | 1.8197                 | 18.44                   | 69.8232                | 0.02529                                 | 1                                                | Complies    |

|             |                                       |
|-------------|---------------------------------------|
| Test Mode : | UNII-1/TX N40 Mode _Total /CH38, CH46 |
|-------------|---------------------------------------|

| 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 |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.6                | 1.8197                 | 16.60                   | 45.7088                | 0.01656                                 | 1                                                | Complies    |
| 2.6                | 1.8197                 | 18.45                   | 69.9842                | 0.02535                                 | 1                                                | Complies    |

|             |                                              |
|-------------|----------------------------------------------|
| Test Mode : | UNII-1/TX AC20 Mode _Total /CH36, CH40, CH48 |
|-------------|----------------------------------------------|

| 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 |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.6                | 1.8197                 | 18.27                   | 67.1429                | 0.02432                                 | 1                                                | Complies    |
| 2.6                | 1.8197                 | 18.58                   | 72.1107                | 0.02612                                 | 1                                                | Complies    |
| 2.6                | 1.8197                 | 18.40                   | 69.1831                | 0.02506                                 | 1                                                | Complies    |

|             |                                        |
|-------------|----------------------------------------|
| Test Mode : | UNII-1/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 <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.6                | 1.8197                 | 16.42                   | 43.8531                | 0.01588                                 | 1                                                | Complies    |
| 2.6                | 1.8197                 | 18.38                   | 68.8652                | 0.02494                                 | 1                                                | Complies    |

|             |                                  |
|-------------|----------------------------------|
| Test Mode : | UNII-1/TX AC80 Mode _Total /CH42 |
|-------------|----------------------------------|

| 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 |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.6                | 1.8197                 | 16.55                   | 45.1856                | 0.01637                                 | 1                                                | Complies    |

|             |                                               |
|-------------|-----------------------------------------------|
| Test Mode : | UNII-3/ TX A Mode _Total /CH149, CH157, CH165 |
|-------------|-----------------------------------------------|

| 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 |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.6                | 1.8197                 | 18.34                   | 68.2339                | 0.02471                                 | 1                                                | Complies    |
| 2.6                | 1.8197                 | 18.22                   | 66.3743                | 0.02404                                 | 1                                                | Complies    |
| 2.6                | 1.8197                 | 18.16                   | 65.4636                | 0.02371                                 | 1                                                | Complies    |

|             |                                                |
|-------------|------------------------------------------------|
| Test Mode : | UNII-3/TX N20 Mode _Total /CH149, CH157, CH165 |
|-------------|------------------------------------------------|

| 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 |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.6                | 1.8197                 | 18.31                   | 67.7642                | 0.02454                                 | 1                                                | Complies    |
| 2.6                | 1.8197                 | 18.18                   | 65.7658                | 0.02382                                 | 1                                                | Complies    |
| 2.6                | 1.8197                 | 18.13                   | 65.0130                | 0.02355                                 | 1                                                | Complies    |

|             |                                         |
|-------------|-----------------------------------------|
| Test Mode : | UNII-3/TX N40 Mode _Total /CH151, CH159 |
|-------------|-----------------------------------------|

| 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 |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.6                | 1.8197                 | 18.24                   | 66.6807                | 0.02415                                 | 1                                                | Complies    |
| 2.6                | 1.8197                 | 18.08                   | 64.2688                | 0.02328                                 | 1                                                | Complies    |

|             |                                                 |
|-------------|-------------------------------------------------|
| Test Mode : | UNII-3/TX AC20 Mode _Total /CH149, CH157, CH165 |
|-------------|-------------------------------------------------|

| 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 |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.6                | 1.8197                 | 18.26                   | 66.9885                | 0.02426                                 | 1                                                | Complies    |
| 2.6                | 1.8197                 | 18.14                   | 65.1628                | 0.02360                                 | 1                                                | Complies    |
| 2.6                | 1.8197                 | 18.07                   | 64.1210                | 0.02322                                 | 1                                                | Complies    |

|             |                                          |
|-------------|------------------------------------------|
| Test Mode : | UNII-3/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 <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.6                | 1.8197                 | 18.18                   | 65.7658                | 0.02382                                 | 1                                                | Complies    |
| 2.6                | 1.8197                 | 18.01                   | 63.2412                | 0.02291                                 | 1                                                | Complies    |

|             |                                   |
|-------------|-----------------------------------|
| Test Mode : | UNII-3/TX AC80 Mode _Total /CH155 |
|-------------|-----------------------------------|

| 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 |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.6                | 1.8197                 | 18.37                   | 68.7068                | 0.02489                                 | 1                                                | Complies    |

## 5G Band: Beamforming:

|             |                                             |
|-------------|---------------------------------------------|
| Test Mode : | UNII-1/TX N20 Mode _Total /CH36, CH40, CH48 |
|-------------|---------------------------------------------|

| 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 |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 5.61               | 3.6392                 | 18.03                   | 63.5331                | 0.04602                                 | 1                                                | Complies    |
| 5.61               | 3.6392                 | 18.42                   | 69.5024                | 0.05034                                 | 1                                                | Complies    |
| 5.61               | 3.6392                 | 18.22                   | 66.3743                | 0.04808                                 | 1                                                | Complies    |

|             |                                       |
|-------------|---------------------------------------|
| Test Mode : | UNII-1/TX N40 Mode _Total /CH38, CH46 |
|-------------|---------------------------------------|

| 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 |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 5.61               | 3.6392                 | 16.73                   | 47.0977                | 0.03412                                 | 1                                                | Complies    |
| 5.61               | 3.6392                 | 18.21                   | 66.2217                | 0.04797                                 | 1                                                | Complies    |

|             |                                  |
|-------------|----------------------------------|
| Test Mode : | UNII-1/TX AC80 Mode _Total /CH42 |
|-------------|----------------------------------|

| 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 |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 5.61               | 3.6392                 | 18.73                   | 74.6449                | 0.05407                                 | 1                                                | Complies    |

|             |                                                |
|-------------|------------------------------------------------|
| Test Mode : | UNII-3/TX N20 Mode _Total /CH149, CH157, CH165 |
|-------------|------------------------------------------------|

| 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 |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 5.61               | 3.6392                 | 18.03                   | 63.5331                | 0.04602                                 | 1                                                | Complies    |
| 5.61               | 3.6392                 | 17.98                   | 62.8058                | 0.04549                                 | 1                                                | Complies    |
| 5.61               | 3.6392                 | 17.83                   | 60.6736                | 0.04395                                 | 1                                                | Complies    |

|             |                                         |
|-------------|-----------------------------------------|
| Test Mode : | UNII-3/TX N40 Mode _Total /CH151, CH159 |
|-------------|-----------------------------------------|

| 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 |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 5.61               | 3.6392                 | 18.01                   | 63.2412                | 0.04581                                 | 1                                                | Complies    |
| 5.61               | 3.6392                 | 17.76                   | 59.7035                | 0.04325                                 | 1                                                | Complies    |

|             |                                   |
|-------------|-----------------------------------|
| Test Mode : | UNII-3/TX AC80 Mode _Total /CH155 |
|-------------|-----------------------------------|

| 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 |
|--------------------|------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 5.61               | 3.6392                 | 18.23                   | 66.5273                | 0.04819                                 | 1                                                | Complies    |

Note: the calculated distance is 20 cm.

So for 2.4G+5G simultaneous transmission (Non-Beamforming):  $0.1309/1+0.0262/1=0.1571<1$

So for 2.4G+5G simultaneous transmission (Beamforming):  $0.1309/1+0.05407/1=0.185<1$