

## FCC RF EXPOSURE REPORT

FCC ID: VW7SR630N

**Project No. : 1408C169** 

Equipment: 802.11n VDSL2 IAD

Model : SR630n Applicant : SmartRG Inc.

: 501 SE Columbia Shores Boulevard, Suite 500 Address

Vancouver, Washington 98661

According: : FCC Guidelines for Human Exposure IEEE

C95.1

# BTL INC.

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### 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

| Ant. | Brand   | Model Name | Antenna Type Connector |     | Gain(dBi) | Note |
|------|---------|------------|------------------------|-----|-----------|------|
| 1    | Airgain | Airgain    | Integral               | N/A | 5.0       |      |
| 2    | Airgain | Airgain    | Integral               | N/A | 5.0       |      |



# **TEST RESULTS**

| EUT:          | 802.11n VDSL2 IAD | Model Name :       | SR630n |  |
|---------------|-------------------|--------------------|--------|--|
| Temperature:  | <b>25</b> ℃       | Relative Humidity: | 55 %   |  |
| Test Voltage: | AC 120V/60Hz      |                    |        |  |
| Test Mode :   |                   |                    |        |  |

| Antenna<br>Gain<br>(dBi) | Antenna Gain<br>(numeric) | Peak Output<br>Power (dBm) | Peak Output<br>Power (mW) | Power<br>Density (S)<br>(mW/cm²) | Limit of Power<br>Density (S)<br>(mW/cm²) | Test<br>Result |
|--------------------------|---------------------------|----------------------------|---------------------------|----------------------------------|---|----------------|
| 5                        | 3.1623                    | 17.83                      | 60.6736                   | 0.03819006                       | 1   | Complies       |
| 5                        | 3.1623                    | 17.64                      | 58.0764                   | 0.03655530                       | 1   | Complies       |
| 5                        | 3.1623                    | 17.89                      | 61.5177                   | 0.03872134                       | 1   | Complies       |

| EUT:          | 802.11n VDSL2 IAD           | Model Name :       | SR630n |
|---------------|-----------------------------|--------------------|--------|
| Temperature:  | <b>25</b> ℃                 | Relative Humidity: | 55 %   |
| Test Voltage: | AC 120V/60Hz                |                    |        |
| Test Mode :   | TX G MODE /CH01, CH06, CH11 | 1                  |        |

| Antenna<br>Gain<br>(dBi) | Antenna Gain<br>(numeric) | Peak Output<br>Power (dBm) | Peak Output<br>Power (mW) | Power<br>Density (S)<br>(mW/cm²) | Limit of Power<br>Density (S)<br>(mW/cm²) | Test<br>Result |
|--------------------------|---------------------------|----------------------------|---------------------------|----------------------------------|---|----------------|
| 5                        | 3.1623                    | 18.58                      | 72.1107                   | 0.04538897                       | 1   | Complies       |
| 5                        | 3.1623                    | 21.45                      | 139.6368                  | 0.08789221                       | 1   | Complies       |
| 5                        | 3.1623                    | 21.69                      | 147.5707                  | 0.09288602                       | 1   | Complies       |



| EUT:          | 802.11n VDSL2 IAD                      | Model Name :       | SR630n |  |  |  |
|---------------|--|--------------------|--------|--|--|--|
| Temperature:  | <b>25</b> ℃                            | Relative Humidity: | 55 %   |  |  |  |
| Test Voltage: | AC 120V/60Hz                           |                    |        |  |  |  |
| Test Mode :   | TX N-20M MODE_ Total /CH01, CH06, CH11 |                    |        |  |  |  |

| Antenna<br>Gain<br>(dBi) | Antenna Gain<br>(numeric) | Peak Output<br>Power (dBm) | •        | Power<br>Density (S)<br>(mW/cm²) | Limit of Power<br>Density (S)<br>(mW/cm²) | Test<br>Result |
|--------------------------|---------------------------|----------------------------|----------|----------------------------------|---|----------------|
| 5                        | 3.1623                    | 25.48                      | 353.1832 | 0.22230558                       | 1   | Complies       |
| 5                        | 3.1623                    | 25.11                      | 324.3396 | 0.20415046                       | 1   | Complies       |
| 5                        | 3.1623                    | 22.6                       | 181.9701 | 0.11453820                       | 1   | Complies       |

| EUT:   | 802.11n VDSL2 IAD         | Model Name :       | SR630n |  |  |  |
|--|---------------------------|--------------------|--------|--|--|--|
| Temperature:                                     | <b>25</b> ℃               | Relative Humidity: | 55 %   |  |  |  |
| Test Voltage:                                    | est Voltage: AC 120V/60Hz |                    |        |  |  |  |
| Test Mode: TX N-40M MODE_Total /CH03, CH06, CH09 |                           |                    |        |  |  |  |

| Antenna<br>Gain<br>(dBi) | Antenna Gain<br>(numeric) | Peak Output<br>Power (dBm) | Peak Output<br>Power (mW) | Power<br>Density (S)<br>(mW/cm²) | Limit of Power<br>Density (S)<br>(mW/cm²) | Test<br>Result |
|--------------------------|---------------------------|----------------------------|---------------------------|----------------------------------|---|----------------|
| 5                        | 3.1623                    | 22.27                      | 168.6553                  | 0.10615742                       | 1   | Complies       |
| 5                        | 3.1623                    | 25.69                      | 370.6807                  | 0.23331914                       | 1   | Complies       |
| 5                        | 3.1623                    | 21.51                      | 141.5794                  | 0.08911491                       | 1   | Complies       |

Note: the calculated distance is 20 cm.