# RF Exposure Evaluation Declaration

| | |
|---|---|
| **FCC ID:** | 2AD8UFZCWO4A1 |
| **APPLICANT:** | Nokia Solutions and Networks |

| | |
|---|---|
| **Application Type:** | Certification |
| **Product:** | US WI-FI AP 4X4 OD ext. antenna |
| **Model No.:** | WO4A-AC400, WO4B-AC400, WO4C-AC400 |
| **Trademark:** | Nokia |
| **FCC Classification:** | Digital Transmission System (DTS)<br>Unlicensed National Information Infrastructure (UNII) |

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Testing Laboratory
3261

The test results relate only to the samples tested.
The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.
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# Revision History

| Report No. | Version | Description | Issue Date | Note |
|---|---|---|---|---|
| 1608TW0110-U3 | Rev. 01 | Initial report | 03-02-2017 | Valid |
| | | | | |

# 1. PRODUCT INFORMATION

## 1.1. Equipment Description

| | |
|---|---|
| Product Name | US WI-FI AP 4X4 OD ext. antenna |
| Model No. | WO4A-AC400, WO4B-AC400, WO4C-AC400 |
| Brand Name | Nokia |
| Hardware Version: | AM3 |
| Frequency Range | **2.4GHz:**<br>For 802.11b/g/n-HT20:<br>2412 ~ 2462 MHz<br>For 802.11n-HT40:<br>2422 ~ 2452 MHz<br>**5GHz:**<br>For 802.11a/n-HT20/ac-VHT20<br>5180~5240MHz, 5745~5825MHz<br>For 802.11n-HT40/ac-VHT40:<br>5190~5230MHz, 5755~5795MHz<br>For 802.11ac-VHT80:<br>5210MHz, 5775MHz<br>For 802.11ac-VHT80+80:<br>5210 MHz + 5775 MHz |
| Type of Modulation | 802.11a/n/ac: OFDM |
| Modulation Technology | CCK, DQPSK, DBPSK for DSSS<br>16QAM, 64QAM, QPSK, BPSK for OFDM |

Note 1: We select the POE adapter (M/N: PoE35-54A) to perform all RF testing.

Note 2: The change of the measured voltage at the radio part of the EUT is below ±1%, when input voltage from external power supply to the equipment under test, thus the RF items are tested with AC adapter only.

Note 3: The model difference as below:

- when the device has been connected the Galtronics Omni antenna, the model number is “WO4A-AC400”;
- when the device has been connected the Galtronics Directional antenna, the model number is “WO4B-AC400”;
- when the device has been connected the PCTEL antenna & HUBER+SUHNER, the model number is “WO4C-AC400”;

## 1.2. Antenna Description

| Antenna | Manufacturer | Frequency Band (GHz) | Product Number | Tx Paths |
|---|---|---|---|---|
|  | PCTEL, Inc. | 2.4 | FPMI2458-DP4RPSMA | 4 |
| | | 5 | | 4 |
|  | | 2.4 | FPMI2458-DP2RPSMA | 2 |
| | | 5 | | 2 |
|  | Galtronics | 2.4 | Galtronics Omni Antenna | 2 |
| | | 5 | | 2 |
|  | | 2.4 | Galtronics Directional Antenna | 2 |
| | | 5 | | 2 |
|  | HUBER+ SUHNER | 5 | Sector-Antenna 1356.17.0011 | 1 |
|  | | 5 | Directional Antenna 1356.17.0077 | 1 |

Note 1: This device make the transmission with two “FPMI2458-DP2RPSMA” directional antenna, there is not any superposition of transmit signal between two antennas.

Note 2: For “FPMI2458-DP2RPSMA” directional antenna, one antenna port be connected with device’s Ant 0 & Ant 1, the other antenna port be connect with device’s Ant 2 & Ant 3, and this installation has been showed in the professional installation manual.

Note 3: For HUBER+SUHNER antenna, this device make the transmission with four antenna, they were installed by the four sides of the perpendicular. So the antenna was Independent of each other and had no MIMO, CDD or Beamforming mode.

| Antenna Product Number | Frequency Band (MHz) | Tx Paths | Per Chain Max Antenna Gain (dBi) | | | | Beam Forming Directional Gain (dBi) | CDD Directional Gain (dBi) |
|---|---|---|---|---|---|---|---|---|
| | | | Ant 0 | Ant 1 | Ant 2 | Ant 3 | | |
| FPMI2458-DP4RPSMA | 2412 ~2462 | 4 | 6.70 | 6.40 | 6.80 | 6.80 | 12.70 | 12.70 |
| | 5150 ~ 5250 | 4 | 5.79 | 5.57 | 5.89 | 5.05 | 11.60 | 11.60 |
| | 5150 ~ 5250 30°elevation angle | 4 | 5.10 | 2.27 | 4.94 | 4.06 | N/A | N/A |
| | 5725 ~ 5850 | 4 | 5.24 | 5.09 | 6.73 | 5.62 | 11.71 | 11.71 |
| FPMI2458-DP2RPSMA | 2412 ~2462 | 2 | 6.70 | 6.40 | -- | -- | 9.56 | 9.56 |
| | | | -- | -- | 6.70 | 6.40 | 9.56 | 9.56 |
| | 5150 ~ 5250 | 2 | 5.79 | 5.57 | -- | -- | 8.69 | 8.69 |
| | | | -- | -- | 5.79 | 5.57 | 8.69 | 8.69 |
| | 5150 ~ 5250 30°elevation angle | 2 | 5.10 | 2.27 | -- | -- | N/A | N/A |
| | | | -- | -- | 5.10 | 2.27 | N/A | N/A |
| | 5725 ~ 5850 | 2 | 5.24 | 5.09 | -- | -- | 8.18 | 8.18 |
| | | | -- | -- | 5.24 | 5.09 | 8.18 | 8.18 |

| Antenna Product Number | Frequency Band (MHz) | Tx Paths | Per Chain Max Antenna Gain (dBi) | | | | Beam Forming Directional Gain (dBi) | CDD Directional Gain (dBi) |
|---|---|---|---|---|---|---|---|---|
| | | | Ant 0 | Ant 1 | Ant 2 | Ant 3 | | |
| Galtronics Omni Antenna | 2412 ~2462 | 2 | 2.93 | 3.02 | 2.93 | 3.02 | 9.00 | 9.00 |
| | 5150 ~ 5250 | 2 | 6.68 | 6.53 | 6.68 | 6.53 | 12.63 | 12.63 |
| | 5150 ~ 5250 30°elevation angle | 2 | -1.32 | -1.53 | -1.32 | -1.53 | N/A | N/A |
| | 5725 ~ 5850 | 2 | 6.78 | 6.55 | 6.78 | 6.55 | 12.69 | 12.69 |
| Galtronics Directional Antenna | 2412 ~2462 | 2 | 6.75 | 6.75 | 6.75 | 6.75 | 12.77 | 12.77 |
| | 5150 ~ 5250 | 2 | 8.39 | 8.16 | 8.39 | 8.16 | 14.30 | 14.30 |
| | 5150 ~ 5250 30°elevation angle | 2 | -1.54 | -2.86 | -1.54 | -2.86 | N/A | N/A |
| | 5725 ~ 5850 | 2 | 8.92 | 8.82 | 8.92 | 8.82 | 14.89 | 14.89 |

| Antenna Product Number | Frequency Band (MHz) | Tx Paths | Per Chain Max Antenna Gain (dBi) | | | | Beam Forming Directional Gain (dBi) | CDD Directional Gain (dBi) |
|---|---|---|---|---|---|---|---|---|
| | | | Ant 0 | Ant 1 | Ant 2 | Ant 3 | | |
| Sector-Antenna 1356.17.0011 | 5150 ~ 5250 | 1 | 16.00 | 16.00 | 16.00 | 16.00 | N/A | N/A |
| | 5150 ~ 5250 30°elevation angle | 1 | -1.22 | -1.22 | -1.22 | -1.22 | N/A | N/A |
| | 5725 ~ 5850 | 1 | 17.00 | 17.00 | 17.00 | 17.00 | N/A | N/A |
| Directional Antenna 1356.17.0077 | 5150 ~ 5250 | 1 | 14.00 | 14.00 | 14.00 | 14.00 | N/A | N/A |
| | 5150 ~ 5250 30°elevation angle | 1 | 1.52 | 1.52 | 1.52 | 1.52 | N/A | N/A |
| | 5725 ~ 5850 | 1 | 14.00 | 14.00 | 14.00 | 14.00 | N/A | N/A |

Note

1. The EUT supports Cyclic Delay Diversity (CDD) technology for 802.11a/b/g mode, and CDD signals are correlated.
2. The EUT supports Beam Forming technology for 802.11n/ac mode, and exclude 802.11b/g mode. Correlated signals include, but are not limited to, signals transmitted in any of the following modes:
   - Any transmit Beam Forming mode, whether fixed or adaptive (e.g., phased array modes, closed loop MIMO modes, Transmitter Adaptive Antenna modes, Maximum Ratio Transmission (MRT) modes, and Statistical Eigen Beam Forming (EBF) modes).
   - CDD signals are correlated and create unintended array gain that varies with signal bandwidth, antenna geometry, and cyclic delay values. Consequently, depending on system parameters, it may be appropriate to use different values of array gain for compliance with power limits versus compliance with powerspectral density limits.
3. Unequal Antenna gains, with equal transmit powers. For Antenna gains given by $G_1$, $G_2$, …, $G_N$ dBi transmit signals are correlated, then
   - Directional gain = $10*\log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/N_{ANT}]$ dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

# 2. RF Exposure Evaluation

## 2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| Frequency Range (MHz) | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density ($mW/cm^2$) | Average Time (Minutes) |
|---|---|---|---|---|
| (A) Limits for Occupational/ Control Exposures | | | | |
| 300-1500 | -- | -- | f/300 | 6 |
| 1500-100,000 | -- | -- | 5 | 6 |
| (B) Limits for General Population/ Uncontrolled Exposures | | | | |
| 300-1500 | -- | -- | f/1500 | 6 |
| 1500-100,000 | -- | -- | 1 | 30 |

f= Frequency in MHz

Calculation Formula: Pd = (Pout*G)/(4*pi*r2)

Where
Pd = power density in mW/cm2
Pout = output power to antenna in mW
G = gain of antenna in linear scale
Pi = 3.1416
r = distance between observation point and center of the radiator in cm

Pd is the limit of MPE, $1mW/cm^2$. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

## 2.2. Test Result of RF Exposure Evaluation

| | |
|---|---|
| Product | US WI-FI AP 4X4 OD ext. antenna |
| Test Item | RF Exposure Evaluation (For General Population) |

**FPMI2458-DP4RPSMA Antenna:**

| Test Mode | Frequency Band (MHz) | Maximum EIRP (dBm) | Safety Distance (cm) | Power Density ($mW/cm^2$) | Limit of Power Density ($mW/cm^2$) |
|---|---|---|---|---|---|
| 802.11b/g/n-HT20/ n-HT40 | 2412 ~ 2462 | 35.85 | 25 | 0.4897 | 1 |
| 802.11a/n-HT20/ n-H40/ac-VHT20 ac-VHT40/ac-VHT80/ ac-VHT80+80 | 5150 ~ 5250, 5725 ~ 5850 | 35.83 | 25 | 0.4874 | 1 |

Note: Directional Gain Calculation as below:

2412 ~ 2462MHz Directional Gain = $10*\log[(10^{6.70/20} + 10^{6.40/20} + 10^{6.80/20} + 10^{6.80/20})^2/4]$ = 12.70 dBi

5150 ~ 5250MHz Directional Gain = $10*\log[(10^{5.79/20} + 10^{5.57/20} + 10^{5.89/20} + 10^{5.05/20})^2/4]$ = 11.60 dBi

5725 ~ 5850MHz Directional Gain = $10*\log[(10^{5.24/20} + 10^{5.09/20} + 10^{6.73/20} + 10^{5.62/20})^2/4]$ = 11.71 dBi

**FPMI2458-DP2RPSMA Antenna:**

| Test Mode | Frequency Band (MHz) | Maximum EIRP (dBm) | Safety Distance (cm) | Power Density ($mW/cm^2$) | Limit of Power Density ($mW/cm^2$) |
|---|---|---|---|---|---|
| 802.11b/g/n-HT20/ n-HT40 | 2412 ~ 2462 | 35.65 | 25 | 0.4676 | 1 |
| 802.11a/n-HT20/ n-H40/ac-VHT20 ac-VHT40/ac-VHT80/ ac-VHT80+80 | 5150 ~ 5250, 5725 ~ 5850 | 35.81 | 25 | 0.4852 | 1 |

Note: Directional Gain Calculation as below:

2412 ~ 2462MHz Directional Gain = $10*\log[(10^{6.70/20} + 10^{6.40\ 5/20})^2/2]$ = 9.56 dBi

5150 ~ 5250MHz Directional Gain = $10*\log[(10^{5.79/20} + 10^{5.57/20})^2/2]$ = 8.69 dBi

5725 ~ 5850MHz Directional Gain = $10*\log[(10^{5.24/20} + 10^{5.09/20})^2/2]$ = 8.18 dBi

**Galtronics Omni Antenna:**

| Test Mode | Frequency Band (MHz) | Maximum EIRP (dBm) | Safety Distance (cm) | Power Density ($mW/cm^2$) | Limit of Power Density ($mW/cm^2$) |
|---|---|---|---|---|---|
| 802.11b/g/n-HT20/ n-HT40 | 2412 ~ 2462 | 35.66 | 25 | 0.4687 | 1 |
| 802.11a/n-HT20/ n-H40/ac-VHT20 ac-VHT40/ac-VHT80/ ac-VHT80+80 | 5150 ~ 5250, 5725 ~ 5850 | 35.66 | 25 | 0.4687 | 1 |

Note: Directional Gain Calculation as below:

2412 ~ 2462MHz Directional Gain = $10*\log[(10^{2.93/20} + 10^{3.02/20} + 10^{2.93/20} + 10^{3.02/20})^2/4]$ = 9.00 dBi

5150 ~ 5250MHz Directional Gain = $10*\log[(10^{6.68/20} + 10^{6.53/20} + 10^{6.68/20} + 10^{6.53/20})^2/4]$ = 12.63 dBi

5725 ~ 5850MHz Directional Gain = $10*\log[(10^{6.78/20} + 10^{6.55/20} + 10^{6.78/20} + 10^{6.55/20})^2/4]$ = 12.69 dBi

**Galtronics Directional Antenna:**

| Test Mode | Frequency Band (MHz) | Maximum EIRP (dBm) | Safety Distance (cm) | Power Density ($mW/cm^2$) | Limit of Power Density ($mW/cm^2$) |
|---|---|---|---|---|---|
| 802.11b/g/n-HT20/ n-HT40 | 2412 ~ 2462 | 35.81 | 26 | 0.4486 | 1 |
| 802.11a/n-HT20/ n-H40/ac-VHT20 ac-VHT40/ac-VHT80/ ac-VHT80+80 | 5150 ~ 5250, 5725 ~ 5850 | 36.20 | 26 | 0.4907 | 1 |

Note: Directional Gain Calculation as below:

2412 ~ 2462MHz Directional Gain = $10*\log[(10^{6.75/20} + 10^{6.75/20} + 10^{6.75/20} + 10^{6.75/20})^2/4]$ = 12.77 dBi

5150 ~ 5250MHz Directional Gain = $10*\log[(10^{8.39/20} + 10^{8.16/20} + 10^{8.39/20} + 10^{8.16/20})^2/4]$ = 14.30 dBi

5725 ~ 5850MHz Directional Gain = $10*\log[(10^{8.92/20} + 10^{8.82/20} + 10^{8.92/20} + 10^{8.82/20})^2/4]$ = 14.89 dBi

**Sector-Antenna 1356.17.0011 Antenna:**

| Test Mode | Frequency Band (MHz) | Maximum EIRP (dBm) | Safety Distance (cm) | Power Density ($mW/cm^2$) | Limit of Power Density ($mW/cm^2$) |
|---|---|---|---|---|---|
| 802.11a/n-HT20/ n-H40/ac-VHT20 ac-VHT40/ac-VHT80/ ac-VHT80+80 | 5150 ~ 5250, 5725 ~ 5850 | 35.65 | 20 | 0.7307 | 1 |

**Directional Antenna 1356.17.0077 Antenna:**

| Test Mode | Frequency Band (MHz) | Maximum EIRP (dBm) | Safety Distance (cm) | Power Density ($mW/cm^2$) | Limit of Power Density ($mW/cm^2$) |
|---|---|---|---|---|---|
| 802.11a/n-HT20/ n-H40/ac-VHT20 ac-VHT40/ac-VHT80/ ac-VHT80+80 | 5150 ~ 5250, 5725 ~ 5850 | 35.67 | 20 | 0.7341 | 1 |

| Product | US WI-FI AP 4X4 OD ext. antenna |
|---|---|
| Test Item | RF Exposure Evaluation (For Occupational) |

**FPMI2458-DP4RPSMA Antenna:**

| Test Mode | Frequency Band (MHz) | Maximum EIRP (dBm) | Safety Distance (cm) | Power Density ($mW/cm^2$) | Limit of Power Density ($mW/cm^2$) |
|---|---|---|---|---|---|
| 802.11b/g/n-HT20/ n-HT40 | 2412 ~ 2462 | 35.85 | 20 | 0.7651 | 5 |
| 802.11a/n-HT20/ n-H40/ac-VHT20 ac-VHT40/ac-VHT80/ ac-VHT80+80 | 5150 ~ 5250, 5725 ~ 5850 | 35.83 | 20 | 0.7616 | 5 |

Note: Directional Gain Calculation as below:

2412 ~ 2462MHz Directional Gain = $10*\log[(10^{6.70/20} + 10^{6.40/20} + 10^{6.80/20} + 10^{6.80/20})^2/4] = 12.70$ dBi

5150 ~ 5250MHz Directional Gain = $10*\log[(10^{5.79/20} + 10^{5.57/20} + 10^{5.89/20} + 10^{5.05/20})^2/4] = 11.60$ dBi

5725 ~ 5850MHz Directional Gain = $10*\log[(10^{5.24/20} + 10^{5.09/20} + 10^{6.73/20} + 10^{5.62/20})^2/4] = 11.71$ dBi

**FPMI2458-DP2RPSMA Antenna:**

| Test Mode | Frequency Band (MHz) | Maximum EIRP (dBm) | Safety Distance (cm) | Power Density ($mW/cm^2$) | Limit of Power Density ($mW/cm^2$) |
|---|---|---|---|---|---|
| 802.11b/g/n-HT20/ n-HT40 | 2412 ~ 2462 | 35.65 | 20 | 0.7307 | 5 |
| 802.11a/n-HT20/ n-H40/ac-VHT20 ac-VHT40/ac-VHT80/ ac-VHT80+80 | 5150 ~ 5250, 5725 ~ 5850 | 35.81 | 20 | 0.7581 | 5 |

Note: Directional Gain Calculation as below:

2412 ~ 2462MHz Directional Gain = $10*\log[(10^{6.70/20} + 10^{6.40\ 5/20})^2/2] = 9.56$ dBi

5150 ~ 5250MHz Directional Gain = $10*\log[(10^{5.79/20} + 10^{5.57/20})^2/2] = 8.69$ dBi

5725 ~ 5850MHz Directional Gain = $10*\log[(10^{5.24/20} + 10^{5.09/20})^2/2] = 8.18$ dBi

**Galtronics Omni Antenna:**

| Test Mode | Frequency Band (MHz) | Maximum EIRP (dBm) | Safety Distance (cm) | Power Density ($mW/cm^2$) | Limit of Power Density ($mW/cm^2$) |
|---|---|---|---|---|---|
| 802.11b/g/n-HT20/ n-HT40 | 2412 ~ 2462 | 35.66 | 20 | 0.7324 | 5 |
| 802.11a/n-HT20/ n-H40/ac-VHT20 ac-VHT40/ac-VHT80/ ac-VHT80+80 | 5150 ~ 5250, 5725 ~ 5850 | 35.66 | 20 | 0.7324 | 5 |

Note: Directional Gain Calculation as below:

2412 ~ 2462MHz Directional Gain = $10*\log[(10^{2.93/20} + 10^{3.02/20} + 10^{2.93/20} + 10^{3.02/20})^2/4]$ = 9.00 dBi

5150 ~ 5250MHz Directional Gain = $10*\log[(10^{6.68/20} + 10^{6.53/20} + 10^{6.68/20} + 10^{6.53/20})^2/4]$ = 12.63 dBi

5725 ~ 5850MHz Directional Gain = $10*\log[(10^{6.78/20} + 10^{6.55/20} + 10^{6.78/20} + 10^{6.55/20})^2/4]$ = 12.69 dBi

**Galtronics Directional Antenna:**

| Test Mode | Frequency Band (MHz) | Maximum EIRP (dBm) | Safety Distance (cm) | Power Density ($mW/cm^2$) | Limit of Power Density ($mW/cm^2$) |
|---|---|---|---|---|---|
| 802.11b/g/n-HT20/ n-HT40 | 2412 ~ 2462 | 35.81 | 20 | 0.7581 | 5 |
| 802.11a/n-HT20/ n-H40/ac-VHT20 ac-VHT40/ac-VHT80/ ac-VHT80+80 | 5150 ~ 5250, 5725 ~ 5850 | 36.20 | 20 | 0.8293 | 5 |

Note: Directional Gain Calculation as below:

2412 ~ 2462MHz Directional Gain = $10*\log[(10^{6.75/20} + 10^{6.75/20} + 10^{6.75/20} + 10^{6.75/20})^2/4]$ = 12.77 dBi

5150 ~ 5250MHz Directional Gain = $10*\log[(10^{8.39/20} + 10^{8.16/20} + 10^{8.39/20} + 10^{8.16/20})^2/4]$ = 14.30 dBi

5725 ~ 5850MHz Directional Gain = $10*\log[(10^{8.92/20} + 10^{8.82/20} + 10^{8.92/20} + 10^{8.82/20})^2/4]$ = 14.89 dBi

**Sector-Antenna 1356.17.0011 Antenna:**

| Test Mode | Frequency Band (MHz) | Maximum EIRP (dBm) | Safety Distance (cm) | Power Density ($mW/cm^2$) | Limit of Power Density ($mW/cm^2$) |
|---|---|---|---|---|---|
| 802.11a/n-HT20/ n-H40/ac-VHT20 ac-VHT40/ac-VHT80/ ac-VHT80+80 | 5150 ~ 5250, 5725 ~ 5850 | 35.65 | 20 | 0.7307 | 5 |

**Directional Antenna 1356.17.0077 Antenna:**

| Test Mode | Frequency Band (MHz) | Maximum EIRP (dBm) | Safety Distance (cm) | Power Density ($mW/cm^2$) | Limit of Power Density ($mW/cm^2$) |
|---|---|---|---|---|---|
| 802.11a/n-HT20/ n-H40/ac-VHT20 ac-VHT40/ac-VHT80/ ac-VHT80+80 | 5150 ~ 5250, 5725 ~ 5850 | 35.67 | 20 | 0.7341 | 5 |

## 2.3. Summary of Test Result

The maximum calculations of above situations

| Model | Configuration | The formula of calculated the MPE (mW/cm2) | Calculation Power Density (mW/cm2) | Limit | Result |
|---|---|---|---|---|---|
| General Population | 2.4GHz + 5GHz | 0.4897 + 0.4907 | 0.9804 | 1 | Pass |
| Occupational | 2.4GHz + 5GHz | 0.7581 + 0.8293 | 1.5874 | 5 | Pass |

The wireless device described within this report has been shown to be capable of compliance with basic restrictions related to human exposure to electromagnetic fields for both General public and Occupational. The calculations shown in this report were made in accordance the procedures specified in the applied test specifications

| Antenna Product Number | Configuration | Required Compliance Boundary (cm) | |
|---|---|---|---|
| | | General Population | Occupational |
| FPMI2458-DP4RPSMA | 2.4GHz + 5GHz | 25 | 20 |
| FPMI2458-DP2RPSMA | 2.4GHz + 5GHz | 25 | 20 |
| Galtronics Omni Antenna | 2.4GHz + 5GHz | 25 | 20 |
| Galtronics Directional Antenna | 2.4GHz + 5GHz | 26 | 20 |
| Sector-Antenna 1356.17.0011 | 5GHz | 20 | 20 |
| Directional Antenna 1356.17.0077 | 5GHz | 20 | 20 |

The End