



**Timco Engineering Inc.**  
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**Certification Body**  
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**600-700 Mountain Avenue, Room 5A-107**  
**Murray Hill, NJ 07974, USA**

July 27, 2022

**Subject: Application for Original Equipment Certification under FCC ID: VBNAEQM-02 for Nokia AirScale MAA 64T64R 192AE B48 AEQM**

Dear Examiner:

The Nokia **AirScale MAA 64T64R 192AE B48 AEQM** (hereinafter referred to as “AEQM”) is the subject of this application for Original Equipment Certification under FCC ID: VBNAEQM-02. The AEQM is an LTE-TDD (Long Term Evolution-Time Division Duplex) and 5G-NR transceiver which operates in Band 48 Citizens Broadband Radio Service (CBRS) spectrum (3550-3700 MHz).

The AEQM supports 10MHz and 20 MHz single LTE carriers, plus 10+20 MHz and 20+20 MHz multiple carriers. The AEQM also supports 5G-NR 20, 30, 40, 50, 60, 70, 80, 90 and 100 MHz single carriers with 8-Beam 32T/32R modes or 16-Beam 64T/64R modes of operation and a maximum total RF power output capacity of 32W at its 64T/64R transmit ports. The AEQM also supports cross-polarized 32T/32R 4 streams per polarization and 64T/64R 8 streams per polarization MIMO operations. The AEQM is equipped with an integrated antenna with a maximum total gain of 24.5 dBi for 32T/32R, 1 stream per polarization and 27.5 dBi for 64T/64R, 1 stream per polarization operations. Nokia Bell Labs, part of the Nokia family of companies, hereby requests this certification for LTE and 5G-NR operation.

The power will be listed as 20, 30, 40, 50, 60, 70, 80, 90, and 100 MHz on the Grant with the EIRPS as follows:

20 MHz - 151 W EIRP  
30 MHz - 239.3 W EIRP  
40 MHz - 302.7 W EIRP  
50 MHz - 500.0 W EIRP  
60 MHz - 530.9 W EIRP  
70 MHz - 563.6 W EIRP \*  
80 MHz - 563.6 W EIRP \*  
90 MHz - 563.6 W EIRP \*  
100 MHz - 563.6 W EIRP \*

\* - These bandwidths allow power that exceeds the product capability therefore they will be listed at maximum power of the product.

The key data are summarized below.

**FCC ID:** VBNAEQM-02  
**FCC Rules:** Part 96  
**Frequency Range:** E-UTRAN Band 48, 3550-3700 MHz  
**Conducted Output Power:** Up to 40.56 dBm (11.39 W) Average Total  
**EIRP Power:** Up to 57.51dBm (563.6 W) Average Total  
**Frequency Tolerance:**  $\pm 0.05$  ppm  
**LTE Emissions Designators** 9M27F9W, 18M3F9W, 29M2F9W and 40M0F9W LTE with QPSK, 16QAM, 64QAM and 256QAM

**NR Emissions Designators** 18M2W7W, 28M0W7W, 37M7W7W, 47M7W7W, 57M7W7W, 67M7W7W, 77M4W7W, 87M6W7W, 97M4W7W

**Carriers:** Single 5G-NR Carriers: 20, 30, 40, 50, 60, 70, 80, 90, & 100 MHz  
Single LTE Carriers: 10 and 20 MHz  
Multiple LTE Carriers: 10+20 MHz and 20+20 MHz

Enclosed in this application package are FCC 731 Form, letters of Request for Permanent Confidentiality, agent authorization letter, the required measurement data and other required exhibits specific to this request for authorization of the subject product. The measurement exhibits attached to this application demonstrate full compliance with FCC Part 96 following the procedural requirements specified in FCC Part 2 Subpart J – Equipment Authorization Procedures. The supporting exhibits are assembled and presented in accordance with the *Table of Contents* attached below.

Should there be any questions or procedural issues please feel free to contact me by email and/or phone.

Sincerely,



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**Required Exhibits:**

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Winn Forum Spectrum Allocation Server-Citizens Band Radio Service Device Conformity  
Assessment Test Report