



Bell Labs

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February 14, 2019

Subject: Application for Original Equipment Certification under FCC ID: VBNAAHJ-01 for Nokia AirScale MAA 64T64R 128AE B41 120W AAHJ Radio Unit, Operating in Band 41

Dear Examiner:

The Nokia Solutions and Networks USA LLC AirScale MAA 64T64R 128AE B41 AAHJ Radio Unit (hereinafter referred to as "AAHJ") is the subject of this application for a new FCC Product Certification under FCC ID: VBNAAHJ-01. The AAHJ is a LTE-TDD (Long Term Evolution-Time Division Duplex) transceiver and operates in Band 41 Broadband Radio Service (BRS) spectrum (2590 – 2690MHz). The AAHJ supports one to three 10MHz and/or 20MHz carriers and 64x64 MIMO operation with a maximum total RF output power of 120W at its 64T/64R transmit ports. Nokia Bell Labs, part of the Nokia family of companies, hereby requests this certification for multicarrier operation.

The key data are summarized below.

| | |
|------------------------------|--|
| FCC ID: | VBNAAHJ-01 |
| FCC Rules: | Part 27 |
| Frequency Range: | E-UTRAN Band 41, 2590 – 2690 MHz |
| Output Power: | 120 Watts Total for all ports with 64Tx 64R MIMO Configuration |
| Frequency Tolerance: | ± 0.05 ppm |
| Emissions Designators | 10M0F9W and / or 20M0F9W LTE with QPSK, 16QAM, 64QAM and 256QAM |
| Carriers: | 1 to 3 Carriers |

Enclosed in this application package are FCC 731 Form, letters of Request for Permanent and Short-Term 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 27 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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Cover Letter

Confidentiality Request Letter

Short Term Confidentiality Request Letter

Agent Authorization Letter

Required Exhibits:

| Exhibit Number | FCC Rule Number | Description | |
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| 1 | Section 2.1033(a) | FCC Form 731 | |
| 2 | Section 2.911(d) | Qualifications and Certifications | |
| 3 | Section 2.1033(c)(1,2, 4-7) | Manufacturers, FCC Identifier, Emission, Range of RF Power & Frequency | |
| 4 | Section 2.1033(c)(11) | Drawing of the Identification Label | |
| 5 | Section 2.1033(c)(8,9) | Active Circuit Devices Drive Levels, Tune-Up procedure | (Confidential) |
| 6 | Section 2.1033(c)(10,13) | Block Diagram, Operational Description, Circuitry for determining frequency | (Confidential) |
| 7 | Section 2.1033(c)(10) | Complete Circuit Diagrams | (Confidential) |
| 8 | Section 2.1033(c)(12,3) | Installation Manual | (Confidential) |
| 8a | Section 2.1033(c)(12,3) | Manual - NDA (Non-Disclosure Agreement) | |
| 9 | Section 2.1033(c)(12) | Internal Photographs of the Equipment | (Confidential) |
| 10 | Section 2.1033(c)(12) | External Photographs of the Equipment | |
| 11 | Section 2.1033(c)(10, 13) | Description of Modulation System, | |
| 12 | Section 2.1033(c)(21) | Photographs of the Test Setups | |

FCC Test Report

RF Exposure Assessment (MPE Report)