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Timco Engineering Inc.
FCC Authorized
Telecommunication Certification Body (TCB)
849 N.W. State Road 45
P.O. Box 370
Newberry, Florida 32669

December 20, 2018

Subject: Application for C2PC Equipment Authorization under FCC ID: 2AD8UAZRBRH1 for Nokia Low Power AirScale Micro LAA RRH, Operating in the Band 46 UNII-2 Bands

Dear Examiner:

The Nokia AirScale Micro Remote Radio Head (RRH) (hereinafter referred to as “AZRB”) is a low power RRH operating in the EUTRA Band 46 unlicensed spectrum. The AZRB received its initial FCC certification on April 25, 2018 under FCC ID: 2AD8UAZRBRH1 for operation in the Band 46 UNII-1 (5.18-5.24) and UNII-3 (5.745-5.825) frequency spectrums under the regulations of FCC Title 47 Part 15 Subpart E, Unlicensed National Information Infrastructure (UNII) Devices, as a Point-to-Multipoint Master Device. The AZRB supports LTE (Long Term Evolution) License Assisted Access (LAA) technology and one to three 20MHz carriers with (aggregated) bandwidth of 20/40/60MHz and a maximum RF power of 0.5W at each of its two MIMO transmit ports. Four omni-directional antennas and three directional antennas have been approved in its original and two following C2PC certifications.

The purpose of this Class II Permissive Change Application is to get authorization for the above AZRB for operating in the 5260-5320 MHz and 5500-5720MHz UNII-2 bands.

Per FCC 2.1041(a), the technical requirements specified in FCC 15 Subpart E Section 15.407 needs to be met. Per 2.1043(b)(2), when a Class II permissive change is made by the grantee, the grantee shall provide complete information and the results of tests of the characteristics affected by such change. In accordance with Parts 2 and 15 of the Commission’s Rules and Regulations, we are submitting herewith statements and supporting data to show compliance with the requirements of the Commission for the Class II permissive change certification of the Nokia AirScale Micro Remote Radio Head (RRH) under FCC ID 2AD8UAZRBRH1 for operation in the UNII-2 bands. The guidelines and guidance provided in the KDB 789033 D02 v02r01 (Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E), KDB 905462 D02 v02 (UNII DFS Compliance Procedures), and ANSI C63.10-2013 were followed for measurement procedures and methods.

Per KDB 388624 D02 (v1603) Section II.B.1, U-NII devices with Dynamic Frequency Selection (DFS) capability (Part 15 Subpart E) are in the list of the devices for which a sample may be requested by the Commission, which reserves the right to waive sample submittal at its discretion, to be submitted to the FCC for pre-approval testing prior to approval by a TCB.

Enclosed in this application package are FCC 731 Form, the required measurement data, RF exposure report, and setup photos exhibits specific to this application. There is no change in the hardware. Those documents and responses submitted to the FCC in the previous certification applications under 2AD8UAZRBRH1, including the descriptions of security procedures, software operation and security and antennas, which are still valid for this application, are not being resubmitted.

The measurement exhibits attached to this application demonstrate full compliance with FCC Part 15.407 following the procedural requirements specified in FCC Part 2 Subpart J – Equipment Authorization Procedures.

The key data are summarized below.

FCC ID:	2AD8UAZRBRH1
FCC Rules:	Part 15 Subpart E Section 15.407 – UNII Devices
Frequency Range:	E-UTRAN Band 46, 5260-5320MHz & 5500-5720 MHz (UNII-2)
Conducted Output Power:	Up to 24dBm (250mW)
Maximum EIRP Power:	Up to 30dBm (1W)
Operation Mode:	Master Device, Point to Multipoint
Carriers:	1~3 20MHz Carriers with (Aggregated) Bandwidth 20/40/60MHz
Changes:	New Bands

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. The contacts at Nokia will comply with any request for additional information should the need arise.

Sincerely,



Terry Schwenk

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Confidentiality Request Letter

Required Exhibits*:

EXHIBIT	FCC RULES	CONTENTS
Exhibit 1	Section 2.1033(a)	TCB Application Form 731
Exhibit 2	Sections 2.1033 (b)(4)	Description of Operation→ Confidential
Exhibit 3	Sections 2.1033 (b)(6), 2.911 (e) & 15.407	Test Reports
Exhibit 4	Sections 1.1307 & 1.1310	RF Exposure Assessment
Exhibit 5	Section 2.1033 (b)(14)	Setup Drawings or Photographs

*The information in the exhibits submitted in the original filing and C2PC filings about Certification and Qualification of Engineers, Manufacturer, Applicant and Identifier, Descriptions of Security and Antennas, Block Diagrams, Schematics and Parts List, Photos, User's Manual and Product Label are still valid and will not be resubmitted here.