Bell Labs

FCC ID: 2AD8UAWHNB01



Timco Engineering Inc.
FCC Authorized Telecommunication
Certification Body
13146 NW 86th Drive Suite 400
Alachua, FL 32615

Nokia Global Product Compliance Laboratory 600-700 Mountain Avenue, Room 5A-107

Murray Hill, NJ 07974, USA

November 30, 2023

Subject: Application for Original Equipment Certification under FCC ID: 2AD8UAWHNB01 for

AWHNB AirScale Micro RRH 4T4R Band-53 1W.

Dear Examiner:

The Nokia AWHNB AirScale Micro RRH 4T4R Band-53 1W (hereinafter referred to as "AWHNB") is the subject of this application for Original Equipment Certification under FCC ID: 2AD8UAWHNB01. The AWHNB is a 5G-NR transceiver which operates in Band 53 spectrum (2483.5-2495 MHz).

The **AWHNB** supports 10 MHz single LTE carriers, plus 10 MHz 5G-NR single carriers. The **AWHNB** operates with a maximum total RF power output capacity of 1.0 W at its 4T/4R transmit ports.

The **AWHQU** is equipped with an external antenna with a maximum total gain of 6.0 dBi for 4T/4R. Nokia Bell Labs, part of the Nokia family of companies, hereby requests this certification for LTE and 5G-NR operation.

The key data are summarized below.

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FCC Rules: Part 25

Frequency Range: E-UTRAN Band 53, 2483.5 - 2495 MHz

Conducted Output Power: Up to 30.0 dBm (1.0 W) Total

EIRP Power: Up to 36.0 dBm (4 W) Average Total

Frequency Tolerance: ± 0.05 ppm LTE Emissions Designators 8M90F9W

NR Emissions Designators 8M60W7W

Carriers: Single 5G-NR Carriers: 10 MHz

Single LTE Carriers: 10 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 25 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.

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

Sincerely,

Raymond J. Johnson Technical Manager

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Global Product Compliance Laboratory

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Cover Letter

Agent Authorization Letter

Letter of Confidentiality Request

Attestation Statements Part 2.911(d)(5)(i) Filing

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Required Exhibits:

Exhibit		
	FCC Rule Number	<u>Description</u>
1	Section 2.1033(a), 2.911(d)	FCC Form 731
2	Section 2.911(e)	Qualifications and Certifications
3	Section 2.1033(c)(1,5, 7-10)	Manufacturers, FCC Identifier, Emission, Range of RF Power & Frequency
4	Section 2.1033(c)(14),	Drawing of the Identification Label
	2.925(a)(1)	
5	Section 2.1033(c)(11,12)	Active Device - Tune-Up procedure (Confidential)
6	Section 2.1033(c)(13)	Block Diagram, Operational Description, Circuitry for determining frequency (Confidential)
7	Section 2.1033(c)(13)	Complete Circuit Diagrams (Confidential)
8	Section 2.1033(c)6)	Installation Manual (Confidential)
8a	Section 2.1033(c)(6)	Manual - NDA (Non-Disclosure Agreement)
9	Section 2.1033(c)(15)	Internal Photographs of the Equipment (Confidential)
10	Section 2.1033(c)(15)	External Photographs of the Equipment
11	Section 2.1033(c)(16)	Description of Modulation System
12	Section 2.1033(c)(24)	Photographs of the Test Setups
13	Sections 2.1033(f), 1.1307 & 1.1310	RF Exposure Assessment (MPE Report)

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- 14 Section 2.1033(c)(13) Parts List (Confidential)
- 15 Section 2.1033(17), 2.911(e) Test Report