NOKIA Bell Labs

Timco Engineering Inc.
FCC Authorized Telecommunications
Certification Body (TCB)

Nokia, Global Product Compliance Laboratory
600-700 Mountain Avenue
Room 5B-108
Murray Hill, New Jersey 07974-0636 USA

May 17, 2019

Bruno Clavier- General Manager
Timco Engineering Inc.
849 N.W. State Road 45
P.O. Box 370
Newberry, Florida 32669

Dear Mr. Clavier
The Nokia **AirScale 28 GHz Radio Unit (AEUA)** is the subject of this request for a FCC Product Certification Class II Change under **FCC ID: VBNAEUA-01.** The **AEUA** is an 800 MHz bandwidth LTE / New Radio Transceiver with a total power output capability of 57 dBm EIRP per polarization for a total power of 60 dBm EIRP. It operates as a 2x2 MIMO transmitter in the **Part 30 Upper Microwave Flexible Use Service** spectrum utilizing **5G New Radio (NR)** technology.

The initial filing was for single carrier operation in each of the polarizations. This Class II Change documents operation using two through four non overlapping carriers in each polarization. The total power is unchanged from the initial filing and remains 60 dBm total.

There is no change to the product hardware design, or output power rating of the product. For the maximum four carriers configuration a Carrier Aggregation Emissions designator of 397M7G7W is appropriate. Operation otherwise continues within the parameters as originally filed.

The measurement exhibits attached to this application demonstrate full compliance with FCC Part 30 following the procedural requirements specified in FCC Part 2 Subpart J – Equipment Authorization Procedures.

The data, summarized below, is in the form presently used by the Commission's Radio Equipment List.

Equipment Identification:	**VBNAEUA-01**
Rules Part Number:	**Part 30**
Emissions Designator:	**97M5G7W and 397M7G7W (5G-NR) (LTE-TDD Based)**
Frequency Range:	**Transmit/ Receive: 27.5 – 28.35**
Output Power:	**57 dBm EIRP per polarization, 60 dBm EIRP Total Output for 2 polarizations operating in a 2x2 MIMO configuration. Multi Carrier Operation for One to Four carriers**
Frequency Tolerance:	**± 0.05 ppm**

Grant Notes:
MO: This Multiple Input Multiple Output (MIMO) device was evaluated for multiple transmitted signals as indicated in the filing. This Class II change is for MIMO operation with one to four carriers per polarization.

Attached are the FCC Form 731 (Application for Equipment Authorization – Radio Frequency Devices), the required measurement data and exhibits specific to this request for authorization of the **AirScale 28 GHz Radio Unit (AEUA)**. The technical or non-technical contact at Nokia Bell Labs will comply with any request for additional information should the need arise. The attached exhibits with the applicable FCC Rule section are assembled and presented in accordance with the *Table of Contents* attachment. Included is a formal letter requesting confidentiality for the following exhibits:

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

Raymond J. Johnson
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Att. Table of Contents for the **AirScale 28 GHz Radio Unit (AEUA)** Product Certification Report

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