



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

**Nokia**  
Building 5A-107  
600 Mountain Avenue  
Murray Hill, NJ 07974

September 24, 2018

**Sid Sanders - President**  
**Timco Engineering Inc.**  
849 N.W. State Road 45  
P.O. Box 370  
Newberry, Florida 32669

Dear Mr. Sanders:

The Nokia **700 MHz TRDU** is the subject of this request for an FCC Class II Permissive Change Authorization under FCC ID: AS5BBTRX-01, for operation in the domestic 700 Upper band C (Tx: 746 - 756 MHz and Rx 777 - 787 MHz), i.e. E-UTRAN band 13, with Long Term Evolution (LTE) technology. Nokia of America Corporation, hereby requests this Class II change to add regular 5 MHz Bandwidth Carrier LTE capability and 10 MHz Bandwidth with Guardband NB-IoT capability to the existing Grant.

The **700 MHz TRDU** has 2 antenna ports. The **700 MHz TRDU** supports 2x40W MIMO with 1 transmit and 1 receive stream. The maximum output power of the 2x40 configurations is 80 watts or 49.0 dBm per unit. The TRDU was powered by a DC power supply with +24VDC. The 700 MHz TRDU with regular 5 MHz LTE capability and 10 MHz Bandwidth with Guardband NB-IoT capability is in the E-UTRAN band 13, with Long Term Evolution (LTE) spectrum for Block C.

The measurement exhibits attached to this application demonstrate full compliance with FCC Part 27, Subpart C 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.

<b>Equipment Identification:</b>	<b>AS5BBTRX-01</b>
<b>Rules Part Number:</b>	<b>Part 27</b>
<b>Frequency Range:</b>	<b>Transmit: 746 – 756 MHz; Receive: 777 – 787 MHz</b>
<b>Output Power:</b>	<b>40 Watts Maximum per Antenna Port</b>
<b>Tolerance:</b>	<b>± 0.05 ppm</b>
<b>Emission Designator:</b>	<b>4M78F9W, 9M45F9W</b>

Attached are the FCC Form 731 (Application for Equipment Authorization – Radio Frequency Devices) and the required measurement data and exhibits specific to this request for authorization of the 700 MHz TRDU. The technical or non-technical contact at Nokia 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.

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



Steve Gordon

Member of Technical Staff

email: [Steve.gordon@nokia-bell-labs.com](mailto:Steve.gordon@nokia-bell-labs.com)

Reviewed by:



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Att. Table of Contents for the **700 MHz TRDU** Product Certification Report

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### Cover Letter

<u>Exhibit #</u>	<u>FCC Rule Number</u>	<u>Description</u>
Exhibit 1	Section 2.1033(a)	FCC Form 731
Exhibit 2	Section 2.911 (d)	Qualifications and Certifications
Exhibit 3		Setup Photographs
Exhibit 4		Test Report