



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

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

September 28, 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 **LTE 9442 RRH2X40-AWS** is the subject of this request for an FCC Class II Permissive Change Authorization under FCC ID: AS5BBTRX-02, henceforth 'RRH'. The RRH is a radio, amplifier and filter combination cabinet System which uses the 3GPP standards Long Term Evolution (LTE) technology for use in Domestic Miscellaneous Wireless Communication Services (WCS) spectrum for Blocks A through F. The RRH was previously certified for operations in 5MHz, 10MHz, 15MHz and 20 MHz bandwidths. Nokia of America Corporation, hereby requests this Class II change to add 10+5 MHz Contiguous and Non-Contiguous Dual Carriers to the existing Grant.

The RRH, under FCC ID: AS5BBTRX -02 is designed to be operated and marketed as RF cabinet system. Each RRH contains two identical Transceiver paths and ports. Each transceiver port outputs 40W maximum of at the External antenna connector (EAC) port. The RRH will be typically operated in Multiple Input and Multiple Output (MIMO) mode using multiple antennas. Each Transceiver path is supported by its own RF path filter.

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.

Equipment Identification:	AS5BBTRX-02
Rules Part Number:	Part 27 – MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES
Frequency Range:	Transmit: 2110 – 2155 MHz; Receive: 1710– 1755 MHz
Output Power:	40 Watts Maximum per Antenna Port
Tolerance:	± 0.05 ppm

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 LTE 9442 RRH2X40-AWS. 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.

Applicant: Nokia

FCC ID: AS5BBTRX-02

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

Reviewed by:



Raymond J. Johnson

Technical Manager

FCC Compliance Test Group

Nokia, Global Product Compliance Laboratory

Phone: +1 908 679 6220

email: ray.johnson@nokia-bell-labs.com

Att. Table of Contents for the **LTE 9442 RRH2X40-AWS** Product Certification Report

TABLE OF CONTENTS

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