



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

Alcatel-Lucent USA, Inc.
Building 5B-111
600 Mountain Avenue
Murray Hill, NJ 07974

May 20, 2016

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

Dear Mr. Sanders:

The Alcatel-Lucent **ASSET 1.0 B25 4T4R RRH (B25 RRH 4x30)** is the subject of this request for an FCC Class II Permissive Change Authorization under **FCC ID: AS5BBTRX-22**. Alcatel-Lucent USA Inc., part of the Nokia family of companies, hereby requests this Class II change to add Three Carrier capability to the Grant. The **B25 RRH 4x30** is a 65 MHz bandwidth LTE Transceiver with a power output capability of either 60 W per antenna port, when operated at 2x60 MIMO 2T4R, or 30W, when operated at 4x30 MIMO 4T4R per transmit port output; the total composite power from all antenna ports is 120 W (50.79 dBm). FCC Grants to-date cover single and dual carrier operation at fundamental bandwidths (BW) of 5 MHz, 10 MHz, 15 MHz and 20 MHz. The objective of this Class II Permissive Change request is to obtain authorization for Three Carrier Operation, with BWs of 5 MHz and 10 MHz. Since the product evaluated was configured for 2T4R operation at 2x60 MIMO, each carrier was set to 20 W (43.01 dBm) for a total composite power of 60 W (47.78 dBm). This product is now capable of transmitting either 3 contiguous carriers or 3 non-contiguous carriers over the spectrum 1930 – 1995 MHz, configured as 5 + 5 + 5 MHz, 10 + 5 + 5 MHz and 5 + 5 + 10 MHz. The corresponding emission designators are 5M00F9W and 10M0F9W, respectively, with supported operation under the 3GPP2 Long Term Evolution (LTE) communication standard.

This authorization request is for **B25 RRH 4x30** operation for both the **5M00F9W** and **10M0F9W** emission designators in the **Broadband PCS** spectrum for Blocks A through G. The measurement exhibits attached to this application demonstrate full compliance with FCC Part 24, Subpart E – Broadband PCS, 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-22
Rules Part Number:	Part 24 Subpart E – Broadband PCS
Frequency Range:	Transmit 1930 – 1995 MHz (Blocks A-D-B-E-F-C-G)
Output Power:	60 Watts Maximum per Antenna Port (2T4R)
Frequency Tolerance:	± 0.05 ppm
Emission Designator:	5M00F9W and 10M0F9W

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 **B25 RRH 4x30**. 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.

The following Exhibits were granted permanent confidentiality in the original filing and are unchanged and remain confidential. As such, they are not included with this application.

<u>Exhibit #</u>	<u>FCC Rule Section</u>	<u>Exhibit Title</u>
Exhibit 5	Section 2.1033(c) (3)	Instruction Book (Installation Manual or Users Manual)
Exhibit 6	Section 2.1033(c) (10)	Block Diagram, Schematic Diagrams, Operational Description
Exhibit 7	Section 2.1033(c) (12)	Internal Photographs of the Equipment
Exhibit 8	Section 2.1033(c) (13)	Description of Modulation System and Circuitry

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



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Att. Table of Contents for the **B25 RRH 4x30** Product Certification Report

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Request for Confidentiality

<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	Section 2.1033(c) (1,2,4,5,6,7,8,9,10)	Manufactures, FCC Identifier, Emission, Frequency Range, RF Power Range, Dc Voltages, Tune-Up	
Exhibit 4	Section 2.1033(c) (11)	Drawing of the Identification Label	
Exhibit 5	Section 2.1033(c) (3)	Instruction Book (Installation Manual or Users Manual)	(Confidential)
Exhibit 6	Section 2.1033(c) (10)	Block Diagram, Schematic Diagrams, Operational Description	(Confidential)
Exhibit 7	Section 2.1033(c) (12)	Internal Photographs of the Equipment	(Confidential)
Exhibit 8	Section 2.1033(c) (13)	Description of Modulation System and Circuitry	(Confidential)
Exhibit 9	Section 2.1033(c) (12)	External Photographs of the Equipment	

Test Report Exhibit 10

<u>Section #</u>	<u>FCC Rule Number</u>	<u>Description of Test Report Exhibits</u>
2.	Section 2.1033(c) (14)	Listing of Required Measurements
4.1	Section 2.1046	Measurement of Radio Frequency Power Output
4.2	Section 2.1047	Measurement of Modulation Characteristics
4.3	Section 2.1049	Measurement of Occupied Bandwidth
4.4	Section 2.1051	Measurement of Spurious Emissions at Antenna
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