Federal Communications Commission
Office of Engineering and Technology
Equipment Authorization Division
Application Processing Branch

7435 Oakland Mills Road
Columbia, MD 21046

Global Product Compliance Laboratory
MH 5A-115, Alcatel-Lucent
600, Mountain Avenue
Murray Hill, NJ 07974-0636

June 23, 2015

Dear Examiner:

This request is for FCC Class II permissive change Certification of Alcatel-Lucent "LTE **TD-RRH8X20-25" FCC ID: AS5BBTRX-15.** In accordance with **Parts 2, and 27** of the Commission's Rules and Regulations, we are submitting herewith, statements and supporting data to show compliance with the requirements of the Commission for Product Certification of the Alcatel-Lucent "LTE **TD-RRH8X20-25**", henceforth '**RRH'**, **FCC ID: AS5BBTRX-15**. The RRH is radio, amplifier and filter combination cabinet systems uses the 3GPP standards Long time Evolution (LTE) technology, for use in Domestic Broadband Radio Service (BRS) and the Educational Broadband Service (EBS) bands. The 'RRH', FCC ID: AS5BBTRX-15 was originally and subsequently through Class II permissive was certified for 20W for 20MHz BW and 20W for 40MHz BW. This Class II certification is for 10W (20MHz) plus10W (10MHz) non-contiguous carriers for a total of 20W per antenna port.

This application for the RRH under FCC ID: AS5BBTRX-15**,** is for operation in the domestic Broadband Radio Service (BRS) and the Educational Broadband Service (EBS) bands with a LTE signal. The data summarized below is in the form presently used by the Commission's Radio Equipment List.

Manufacturer	**Alcatel-Lucent**
Equipment Identification	**AS5BBTRX-15**
Rules Part Number	**27.5 (h) (1) (i) and 27.53(m)**
Frequency Range	**2496 -2690MHz**
Output Power	**+3 dBm (.002W) to 40dBm (10W) for 20MHz BW plus +40dBm (10W) for 10MHz BW Varied by Software**
Frequency Tolerance	**+/- 0.05 ppm**
Emission Designator	**18M5F9W for 20 MHz Bands and 9M42F9W for 10 MHz Bands**

The RRH, under FCC ID: AS5BBTRX-15 is designed to be operated and marketed as RF cabinet system. Each of the RRH contains eight identical Transceiver paths and ports. Each transceiver ports outputs 20W maximum of at the External antenna connector (EAC) port. The RRH will be typically operated in Multiple

and input and Multiple output (MIMO) mode using multiple antennas. Each Transceiver path is supported by its own RF path filter. The RRH were evaluated total of eight transceiver ports. During all antenna port conducted emissions, the transceiver ports were randomly selected for each of the tests. The RRH will be marketed as indoor/outdoor cabinets.

The RRH is designed operate at large number of sub-carriers which are modulated with QPSK, 16QAM, and 64QAM formats. The RRH was evaluated and data is provided for all three modulation formats.

(a) QPSK
(b) 16QAM
(c) 64QAM

The actual power level delivered by the **RRH** to transmit antenna is under the software control of remotely located radio equipment control (REC) through its Common Public Radio Interface (CPRI).

The **RRH /AS5BBTRX-15** is designed and manufactured by Alcatel-Lucent.

List of exhibits attached with this submission is indicated in the following page of this cover letter.

The attached exhibits contain the technical data, and the required statements and documents for Product Certification. The technical contact at Alcatel-Lucent will comply with any request for additional information should the need arise.

Sincerely,

D. Moongilan

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List of Exhibits

	COVER LETTER
	Cover Letter
	Product Configuration – Explained in test reports
	Letter for Confidential Treatment of Exhibits
	ATTESTATION STATEMENT – Same as original filing
Section 2.911 (d)	**Qualifications and Certifications**
Section 2.1033 (c) (1,2)	**Manufacturers, FCC Identification**
Section 2.1033 (c) (4-7)	**Emissions, Frequency Range, Power Level**
	USERS MANUAL – Same as original filing and no additional data submitted
Section 2.1033 (c) (3)	**Users Manual**
Section 2.1033 (c) (9)	**PARTS LIST/TUNE-UP PROCEDURE -Same as original filing and no additional data submitted**
Section 2.1033 (c) (13)	**OPERATIONAL DESCRIPTION -Same as original filing and no additional data submitted**
	Description of Modulation System and Block diagrams
Section 2.1033 (c) (10)	**SCHEMATICS -Same as original filing and changes are submitted**
Section 2.1033 (c) (11) and 2.925 (a) (1)	**ID LABEL/LOCATION INFORMATION -Same as original filing and no additional data submitted**
Section 2.1033 (c) (12)	**EXTERNAL PHOTOS -Same as original filing and no additional data submitted**
	INTERNAL PHOTOS -Same as original filing and no additional data submitted
Section 2.1033 (c) (12)	**Internal Photos**
	TEST REPORT
Section 2.1033 (c) (8)	**Measurement of DC Power - Same as original filing**
Section 2.1033 (c) (14)	**Listing of Required Measurements**
Section 2.1046	**Measurement of Radio Frequency Power Output**
Section 2.1047 and 27.50(d)(5)	**Measurement of Modulation Characteristics**
Section 2.1049, Section 27.53(h) and OET Rules 662911 D01 and D02	**Measurement of Occupied Bandwidth**
27.53 (h) and OET Rules 662911 D01 and D02	**Measurement of Spurious Emissions at Antenna**
Section 2.1053 and OET Rules 662911 D01 and D02	**Field Strength of Spurious Radiation**
Section 2.1055	**Measurement of Frequency Stability -Same as original filing and no additional data submitted**
Section 2.1057	**Frequency Spectrum to be Investigated**
	Test Instruments Used for Test – See Test Reports

RF Exposure Information

Section 24.51 (c) **Human Exposure – Not performed**