



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

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

**7435 Oakland Mills Road
Columbia, MD 21046**

June 6, 2013

Dear Examiner:

This request is for FCC Class II permissive change Certification of Alcatel-Lucent “LTE **9442 RRH2X40-AWS**”, **FCC ID: AS5BBTRX-02**, henceforth ‘**RRH**. The RRH is a radio, amplifier and filter combination cabinet system which uses the 3GPP standards Long time Evolution (LTE) technology for use in Domestic Miscellaneous Wireless Communication Services (WCS). The RRH was originally certified for operations in 5MHz, 10MHz and 20 MHz bandwidths.. This class II filing is operation of RRH in 15MHz bandwidths. The RRH will be operated henceforth in 5MHz, 10MHz, 15MHz and 20 MHz bandwidths.

In accordance with **Parts 2, 27** and **OET Rules 662911 D01 and D02** 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 RRH for 15MHz BW

This application for the **RRH** under FCC ID: AS5BBTRX-02 is for operation in the domestic WCS band 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-02
Rules Part Number	27.53 (h) and 27.50(d)(5) and OET Rules 662911 D01 and D02
Frequency Range	2110-2155 MHz (A, B, C, D, E and F Blocks)
Output Power	+3dBm (.002W) to +46dBm (40W) Varied by Software
Frequency Tolerance	+/- 0.001 ppm
Emission Designator	14M28F9W for 15MHz Bands

The RRH, under FCC ID: AS5BBTRX-02 is designed to be operated and marketed as RF cabinet system. Each of the RRH contains two identical Transceiver paths and ports. Each transceiver ports outputs 40W 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 two transceiver ports. During all antenna port conducted emissions, the transceiver ports were randomly selected for each of the tests. The RRH will be marketed in indoor/outdoor cabinets. The RRH is manufactured in two models. **9442 RRH2X40-AWS and 9442 RRH2X40-AWS R4X** cabinets. Both are identical except that there are additional two receive port that is available in **9442 RRH2X40-AWS R4X**.

The **RRH** is designed to operate a 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

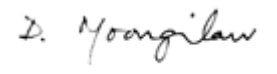
The actual power level delivered by the **RRH** to transmit antenna is under the software control of the Switching and Control Center.

The **RRH /AS5BBTRX-02** 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,



Dheena Moongilan
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List of Exhibits

	<p>COVER LETTER Cover Letter Product Configuration – Explained in test reports Letter for Confidential Treatment of Exhibits –Not applicable</p>
<p>Section 2.911 (d) Section 2.1033 (c) (1,2) Section 2.1033 (c) (4-7)</p>	<p>ATTESTATION STATEMENT *Qualifications and Certifications *Manufacturers, FCC Identification Emissions, Frequency Range, Power Level</p>
<p>Section 2.1033 (c) (3)</p>	<p>*USERS MANUAL Users Manual</p>
<p>Section 2.1033 (c) (9)</p>	<p>*PARTS LIST/TUNE-UP PROCEDURE</p>
<p>Section 2.1033 (c) (13)</p>	<p>*OPERATIONAL DESCRIPTION Description of Modulation System and Block diagrams</p>
<p>Section 2.1033 (c) (10)</p>	<p>*SCHEMATICS Schematic</p>
<p>Section 2.1033 (c) (11) and 2.925 (a) (1) Section 2.1033 (c) (12)</p>	<p>*ID LABEL/LOCATION INFORMATION *EXTERNAL PHOTOS</p>
<p>Section 2.1033 (c) (12)</p>	<p>INTERNAL PHOTOS *Internal Photos</p>
<p>Section 2.1033 (c) (8) Section 2.1033 (c) (14) Section 2.1046 Section 2.1047 and 27.50(d)(5) Section 2.1049, Section 27.53(h) and OET Rules 662911 D01 and D02</p>	<p>TEST REPORT *Measurement of DC Power Listing of Required Measurements Measurement of Radio Frequency Power Output Measurement of Modulation Characteristics Measurement of Occupied Bandwidth</p>
<p>27.53 (h) and OET Rules 662911 D01 and D02</p>	<p>Measurement of Spurious Emissions at Antenna</p>
<p>Section 2.1053 and OET Rules 662911 D01 and D02</p>	<p>Field Strength of Spurious Radiation</p>
<p>Section 2.1055 Section 2.1057</p>	<p>*Measurement of Frequency Stability Frequency Spectrum to be Investigated Test Instruments Used for Test – See Test Reports</p>
<p>Section 24.51 (c)</p>	<p>RF Exposure Information Human Exposure – Not performed</p>

* Same as original filing no additional information submitted