



**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**

March 14, 2011

Dear Examiner:

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 “700 MHz Transceiver Duplexer Unit”, henceforth ‘**LTE TRDU 700 MHz**’, **FCC ID: AS5BBTRX-01**. The **LTE TRDU 700 MHz** is used in **Alcatel-Lucent’s 9412 eNodeB Compact (700 MHz)** cabinet systems using the 3GPP standards Long Term Evolution (LTE) technology, for use in Domestic Miscellaneous Wireless Communication Services (WCS).

FCC authorization was originally granted for **LTE TRDU 700 MHz under FCC ID: AS5BBTRX-01**. This filing is for an electrically equivalent and mechanically similar device manufactured by a different vendor. The report is filed as **Class II permissive change** and all test data submitted for this device is identified as Manufacturer – 2 (Simply as M-2). We will be marketing both the originally manufacturer’s device as well as the second manufacturer’s device.

This application for the **LTE TRDU 700 MHz M-2** is being filed as **Class II permissive change** under FCC ID: AS5BBTRX-01, 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.

<b>Manufacturer</b>	<b>Alcatel-Lucent</b>
<b>Equipment Identification</b>	<b>AS5BBTRX-01</b>
<b>Rules Part Number</b>	<b>27.53 (C) e-CFR Data is current as of March 10, 2011</b>
<b>Frequency Range</b>	<b>746-756 MHz WCS Band; (10 MHz)</b>
<b>Output Power</b>	<b>+3 dBm (.002W) to +46dBm (40W) Varied by Software</b>
<b>Frequency Tolerance</b>	<b>+/- 0.001 ppm</b>
<b>Emission Designator</b>	<b>9M38F9W</b>

The **LTE TRDU 700 MHz -M2**, under FCC ID: AS5BBTRX-01 is designed to be operated and marketed in Alcatel-Lucent's 9412 eNodeB Compact (700 MHz) cabinet systems. Each of the 700MHz TRDU contains two identical Transceiver paths and ports. Each transceiver ports outputs 40W maximum at the External antenna connector (EAC) port. The **LTE TRDU 700 MHz -M2** will be typically operated in Multiple input and Multiple output (MIMO) mode using multiple antennas. Each Transceiver path is supported by its own RF filter. The **LTE TRDU 700 MHz -M2** was evaluated in a 9412 eNodeB Compact (700 MHz) cabinet with three TRDUs with a total of six transceiver ports. During all antenna port conducted emissions, the transceiver ports were randomly selected for each of the tests. The TRDU will be marketed in indoor/outdoor cabinets. The integrated cabinet shall continue to be compliant with FCC emissions requirements.

The **LTE TRDU 700 MHz -M2** is designed to operate a large number of sub-carriers which are modulated with QPSK, 16QAM, and 64QAM formats. The **LTE TRDU 700 MHz -M2** was evaluated and data is provided for all three modulation formats.

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

The actual power level delivered by the **LTE TRDU 700 MHz-M2** to transmit antenna is under the software control of the Switching Center of the local Cellular system.

The **LTE TRDU 700 MHz -M2 /AS5BBTRX-01** is produced by Manufacturer -2 for incorporation into Alcatel-Lucent products.

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  
Distinguished Member of Technical Staff  
Global Product Compliance Laboratory  
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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 – No Change from original filing**

Qualifications and Certifications – Not submitted

Manufacturers, FCC Identification

Emissions, Frequency Range, Power Level

Section 2.911 (d)  
Section 2.1033 (c) (1,2)  
Section 2.1033 (c) (4-7)

**USERS MANUAL**

Users Manual - No Change from original filing – Not submitted

Section 2.1033 (c) (3)

**PARTS LIST/TUNE-UP PROCEDURE - No Change from original filing – Not submitted**

Section 2.1033 (c) (9)

**OPERATIONAL DESCRIPTION - No Change from original filing – Not submitted**

Section 2.1033 (c) (13)

Description of Modulation System

**SCHEMATICS**

Schematic

Block Diagrams - No Change from original filing – Not submitted

Section 2.1033 (c) (10)

Section 2.1043 (b) (2)

**ID LABEL/LOCATION INFORMATION -- No Change from original filing**

Section 2.1033 (c) (11) and 2.925 (a) (1)

**EXTERNAL PHOTOS**

Section 2.1033 (c) (12)

**INTERNAL PHOTOS**

Internal Photos

Section 2.1033 (c) (12)

**TEST REPORT**

Measurement of DC Power - - No Change from original filing – Not submitted

Section 2.1033 (c) (8)

**Listing of Required Measurements**

Measurement of Radio Frequency Power Output

Measurement of Modulation Characteristics – No Change from original filing – Not submitted

Section 2.1033 (c) (14)  
Section 2.1046  
Section 2.1047

**Measurement of Occupied Bandwidth**

Section 2.1049 and Section 24.238 (b) and 27.58 (g)

<b>Section 2.1051</b>	<b>Measurement of Spurious Emissions at Antenna</b>
<b>Section 2.1053</b>	<b>Field Strength of Spurious Radiation</b>
<b>Section 2.1055</b>	<b>Measurement of Frequency Stability</b>
<b>Section 2.1057</b>	<b>Frequency Spectrum to be Investigated</b>
	<b>Test Instruments Used for Test – See Test Reports</b>
	<b>RF Exposure Information</b>
<b>Section 24.51 (c)</b>	<b>Human Exposure – Not performed</b>