



Subject: **Application for Class II Permissive Change Authorization under FCC ID: AS5ONEBTS-24, to Add the UMTS Emission Designator 4M10F9W to the Initial Filing.**

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**October 21, 2011**

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

**Dear Mr. Sanders:**

Alcatel-Lucent's **850MHz High Efficiency RF Power Amplifier (HE PAM)** will be deployed in the **9391 OneBTS Macrocells**, in combination with the previously authorized **MCR 850MHz radio** for Universal Mobile Telecommunications System (UMTS) operation in the North America Region (NAR). The initial Grant of Equipment Authorization was issued 8/10/2009 for CDMA operation (1M23F9W). The purpose of **this Class II Permissive Change request** is to add the UMTS emission designator **4M10F9W** to the initial filing.

The Frequency Spectrum subject of this application is **Part 22—Public Mobile Services 869-894 MHz**. The RF power at the downlink (DL) antenna terminal to be authorized, and subject of this Class II Permissive Change request, is:

- 1) single carrier operation (3S1C) at 60 Watts (+47.8 dBm) with a single HE PAM
- 2) **single carrier operation (3S1C) at 80 Watts (+49.0 dBm) with a two HE PAM in parallel**
- 3) two carrier operation (3S2C) at 30W/C (+44.8 dBm/C) with a single HE PAM @ Total Composite = 60W
- 4) two carrier operation (3S2C) at 50W/C (+47.0 dBm/C) with a two HE PAM in parallel @ Total Composite = 100W

The RF power rating is based the 3-second average, employing the Aggregate Overload Control (AOC) algorithm (Lucent Technologies Patent # 6415153 B1, July 2, 2002). Enhanced Digital Predistortion (EDPD) and Closed Loop Gain Control (CLGC) are also features that are enabled with each carrier setting. The total composite RF power rating for a single 850 MHz HE PAM is 60W and the total composite power for 2 HE PAM in parallel is 100W, which is the maximum allowable power.

The footnote on the Grant should read:

*The 9391 OneBTS Macrocell is rated for 60W RF power per single Power Amplifier (PA) and 100W total composite power for 2 PA in parallel. A single UMTS carrier is rated at 60W for 1 PA and 80W for 2 PA in parallel. Two carriers are rated at 30W/C for 1 PA with total composite power at 60W, and at 50W/C for 2 PA in parallel with total composite power at 100W.*

The single UMTS carrier has a 5 MHz bandwidth with an emission designator at 4M10F9W, based on measurement of the Necessary Bandwidth.

In accordance with Sec. 2.1043 *Changes In Certificated Equipment*, only the characteristics affected by the change need to be reported. As such, the applicable measurements affected are contained in the Test Report Exhibit, and all other Exhibits submitted with the initial filing that remain unchanged will not be repeated for brevity. All initial exhibits that were granted permanent confidentiality are unchanged and continue to remain confidential, and will not be repeated with this submission.

This system complies both with the Federal Communication Commission (FCC) Rules and Regulations (47 CFR Part 22H), and with the European Telecommunications Standards Institute (ETSI) 3<sup>rd</sup> Generation Partnership Project (3GPP) Technical Specifications TS 25.104 and TS 25.141. UMTS functionality was developed in accordance to the guidelines of the standard: ETSI TS 125 141 V7.15.0 (2010-02) Universal Mobile Telecommunications System (UMTS); Base Station (BS) conformance testing (FDD); (3GPP TS 25.141 version 7.15.0 Release 7). The measurement exhibits attached to this application demonstrate full compliance with both FCC Part 22—Public Mobile Services, Subpart H—Cellular Radiotelephone Service and with ETSI TS 25.141, 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 Acceptable for Licensing.

Manufacturer	Alcatel-Lucent USA, Inc.
Equipment Identification	AS5ONEBTS-24
Rules Part Number	Part 22—Public Mobile Services, Subpart H—Cellular Radiotelephone Service
Frequency Ranges	Transmit 869–894 MHz
Output Power	80 Watts (+47.77 dBm) 3-second average total composite at the Tx antenna terminal
Frequency Tolerance	± 0.05 ppm
Emission Designator	4M10F9W

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 Class II Permissive Change authorization. The technical contact at Alcatel-Lucent USA, Inc., will comply with any request for additional information should the need arise. The attached exhibits are assembled and presented in the sequence recommended by Timco Engineering, in accordance with the *Table of Contents* attachment.

In the initial filing, permanent confidentiality was requested and granted for the initial exhibits re-stated below. Alcatel-Lucent hereby requests that they continue to be held permanently confidential. Since none have changed, they will not be re-submitted.

- 07-IntPhotoConfidential\_AS5ONEBTS-24\_CONFIDENTIAL
- 09-OpDes\_AS5ONEBTS-24\_CONFIDENTIAL
- 10-BlkDia\_AS5ONEBTS-24\_CONFIDENTIAL
- 11-Schem\_AS5ONEBTS-24\_CONFIDENTIAL
- 13-UserMan\_AS5ONEBTS-24\_CONFIDENTIAL

Sincerely,

Rudolf J. Pillmeier  
GPCL Technical Manager  
FCC/EMC Compliance Test Group

**Att.**  
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**File Name: 01-731\_TCB\_AS5ONEBTS-24-II**
- 02-Cover Letter File Name: 02-Cover\_Letter\_AS5ONEBTS-24-II**
- 03-Request for Confidentiality: 03-Req\_Confidentiality\_AS5ONEBTS-24-II**
- 04-Exhibit 2: FCC ID Label Sample and Location Information**  
**File Name: 04-Label\_AS5ONEBTS-24-II**
- 05-Exhibit 3: FCC Required Information (Part 2.1033)**  
**File Name: 05-ReqInfo\_AS5ONEBTS-24-II**
- 06-Exhibit 4: External Photographs of the Equipment (Part 2.1033 (c)(12))**  
**File Name: 06-ExtPhoto\_AS5ONEBTS-24-II**
- 07-Exhibit 4B: Internal Photographs of the Equipment (Part 2.1033 (c)(12)) - CONFIDENTIAL*  
*No Change to this Exhibit - Not Re-Submitted*
- 08-Exhibit 5: Test Set Up Photographs**  
**File Name: 08-TSup\_AS5ONEBTS-24-II**
- 09-Exhibit 6: Operational Description (Theory of Operation, Functional Description) - CONFIDENTIAL*  
*No Change to this Exhibit - Not Re-Submitted*
- 10-Exhibit 7: Block Diagrams - System - CONFIDENTIAL*  
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- 11-Exhibit 8: Schematic Diagrams - ALCATEL-LUCENT CONFIDENTIAL*  
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- 12-Exhibit 9: Test Report**  
**File Name: 12-TestRpt\_AS5ONEBTS-24-II**
- 13-Exhibit 10: UMTS – Operation, Administration and Maintenance Documents – CONFIDENTIAL*  
*No Change to this Exhibit - Not Re-Submitted*
- 14-Exhibit 11: Tuning Procedure, if Applicable**  
**File Name: 14-TunPro\_AS5ONEBTS-24-II**
- 15-Exhibit 12: Parts List, if Applicable**  
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