



Subject: **Application for Class II Permissive Change,
under FCC ID: AS5ONEBTS-11, Covering
the UMTS-CDMA Transceiver System (850)
Operating in the Cellular Frequency Spectrum.**

67 Whippany Road
Whippany, NJ 07981

Rudolf J. Pillmeier
Telephone: 973-386-3837

E-Mail: Rudy.Pillmeier@alcatel-lucent.com

April 22, 2010

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

Dear Mr. Sanders:

The original FCC Grant of Equipment Authorization (June 22, 2005) for the Alcatel-Lucent Cellular Frequency **UMTS-CDMA Transceiver System (850)** and subsequent Permissive Changes, under FCC ID: AS5ONEBTS-11, have consistently authorized the **UMTS/W-CDMA Transceiver System** to transmit at 40 Watt per carrier for single amplifier configurations and two 40W per carrier signals for dual/parallel amplifier configurations. This product produces 40 watts for one amplifier and 80 watts for 2 amplifiers in parallel in this system. This Class II Permissive Change requests authorization to operate at the same 80 watts, for a two (2) power amplifiers configuration, to be applied to a single carrier. That is to change the authorization to state the power as 40 watts per amplifier. A single amplifier system will remain 40 watts per amplifier and two amplifier configurations will remain 80 watts as measured at the transmit antenna terminal. As previously certified, the use of Enhanced Digital Predistortion (EDPD) and Closed Loop Gain Control (CLGC) are features that are part of this system. There are no hardware changes to the system from previous filings.

The MCR850 (UMTS-CDMA Multi-Carrier CDMA Radio) transceiver, power amplifier (C2PAM) and Reference Frequency Oscillator are unchanged. The frequency determining and stabilization circuitry are unchanged. The necessary bandwidth (NB) remains at 4M10F9W and the frequency tolerance at ± 0.05 ppm, over the Cellular Radiotelephone Service (Part 22, Subpart H) 25 MHz frequency spectrum 869 - 894 MHz remains unchanged. The host wireless base station equipment frame utilized in this testing was the Node-B UMTS Indoor Macrocell. The parallel C2PAMs are interconnected by appropriate 1:2 power splitters and 2:1 power combiners. The two 40W C2PAM power amplifiers (PA) in parallel provides a single carrier at 80W (+49.03 dBm) at the Tx antenna terminal. The RF power rating is based on the 3-second average, employing the Aggregate Overload Control (AOC) algorithm. Enhanced Digital Predistortion (EDPD) and Closed Loop Gain Control (CLGC) are features that are enabled for each carrier.

The UMTS850 Transceiver System consists of the principle RF components: (1) Crystal Reference Oscillator Module (OMA) 15 MHz, (2) UMTS-CDMA Multi-Carrier CDMA Radio MCR850, Model BNJ65, (3) C2PAM power amplifier, and (4) 25 MHz Dual Duplex (DDpx), low loss, transmit filter covering the PCS spectrum 869 - 894 MHz. These components are considered as a system due to (1) the DDpx filters providing RF feedback to the transceiver in the form of Closed Loop Gain Control (CLGC) to provide constant power over temperature, and (2) Alcatel-Lucent's proprietary Enhanced Digital Pre-Distortion (EDPD-UL) technology. The Wideband CDMA (W-CDMA) transceiver, MCR850, can operate in either CDMA or UMTS mode depending on the modulation software loaded at the installation site. There are no physical, hardware or circuit changes to the transceiver.

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 for brevity.

This system complies both with the Federal Communication Commission (FCC) Rules and Regulations (47 CFR Part 22), and with the European Telecommunications Standards Institute (ETSI) 3rd Generation Partnership Project (3GPP) Technical Specifications TS 25.104 and TS 25.141. UMTS functionality was developed in accordance to the guidelines of the ETSI TS 25.141 V7.4.0 (2006-06) standard: “Universal Mobile Telecommunications System (UMTS); Base Station Conformance Testing (FDD) (3GPP TS 25.141 version 7.4.0 Release 7)”. The measurement exhibits attached to this application demonstrate full compliance with both FCC Part 22 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-11
Rules Part Number	Part 22 Subpart H — Cellular Radiotelephone Service
Frequency Ranges	Transmit 869–894 MHz (Downlink)
Output Power	40 Watts (+46 dBm) per Power Amplifier (PA) Single Carrier at 40W for 1 Power Amplifier (PA) Single Carrier at 80W for 2 Parallel Power Amplifiers (PA)
Number of Carriers	1 Carrier at 40W per PA, for total combined power 80W for 2 PA in parallel
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.

Since there are no changes to the circuitry in the RF path from the initial filing, all exhibits previously requested to be held confidential remain unchanged and continue to remain confidential. For brevity, the initially submitted exhibits that remain unchanged are not repeated in this Class II Permissive Change request.

We request that the text added to the Class II Equipment Authorization Grant state:

This wireless base station equipment is designed to operate at 40 watt RF power per power amplifier (C2PAM) in the RF path of the **UMTS-CDMA Transceiver System (850)**. A single carrier transmitted through a single C2PAM will provide 40 Watt RF power at the antenna terminal . A single carrier transmitted through two parallel C2PAM power amplifiers will combine to provide 80 Watt RF power at the antenna terminal.

Class II Change: This Class II Change incorporates the rated power of 40.0 W per power amplifier for both single and multi-carrier applications of 4M10F9W.

Sincerely,

Rudolf J. Pillmeier
Technical Manager
FCC/EMC Compliance Test Group
Whippany, NJ

Att.
Table of Contents

TABLE OF CONTENTS

	Exhibit Included
<hr/>	
01-Exhibit 1: 731 Form	YES
02-Cover Letter	YES
<i>03-Request for Confidentiality No Change to this Exhibit - Not Re-Submitted</i>	NO
04-Exhibit 2: FCC ID Label Sample and Location Information	YES
05-Exhibit 3: FCC Required Information (Part 2.1033)	YES
06-Exhibit 4: External Photographs of the Equipment (Part 2.1033 (c)(12))	YES
<i>07-Exhibit 4B: Internal Photographs of the Equipment (Part 2.1033 (c)(12)) - CONFIDENTIAL No Change to this Exhibit - Not Re-Submitted</i>	NO
08-Exhibit 5: Test Set Up Photographs	YES
<i>09-Exhibit 6: Operational Description (Theory of Operation, Functional Description) - CONFIDENTIAL No Change to this Exhibit - Not Re-Submitted</i>	NO
<i>10-Exhibit 7: Block Diagrams - System No Change to this Exhibit - Not Re-Submitted</i>	NO
<i>11-Exhibit 8: Schematic Diagrams - ALCATEL-LUCENT CONFIDENTIAL No Change to this Exhibit - Not Re-Submitted</i>	NO
12-Exhibit 9: Test Report	YES
<i>13-Exhibit 10: UMTS – Operation, Administration and Maintenance Documents – CONFIDENTIAL No Change to this Exhibit - Not Re-Submitted</i>	NO
<i>14-Exhibit 11: Tuning Procedure, if Applicable No Change to this Exhibit - Not Re-Submitted</i>	NO
<i>15-Exhibit 12: Parts List, if Applicable No Change to this Exhibit - Not Re-Submitted</i>	NO