



Subject: **Application for an Initial Grant of Equipment
Authorization under FCC ID: AS5ONEBTS-27,
Covering the New RRH2X60-1900 Product.**

600-700 Mountain Avenue
Murray Hill, NJ 07974-0636

Rudolf J. Pillmeier
Telephone: 908-582-2810
E-Mail: Rudy.Pillmeier@alcatel-lucent.com

March 27, 2012

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 new -48V WCDMA **RRH2X60-1900** twin Remote Radio Head product will be deployed in combination with the **9396 d2U** Digital Baseband Unit (BBU). Deployment of this Universal Mobile Telecommunications System (UMTS) will be in the North America Region (NAR). This product consists of two independent 60W power amplifiers (PA) and two independently settable transceivers.

The Frequency Spectrum subject of this application is **Part 24, Subpart E – Broadband PCS 1930-1990 MHz**. The RF power at the downlink (DL) antenna terminal to be authorized is:

- 1) single carrier operation (1C) at 60 Watts (+47.8 dBm) for each of the two (2) transmit paths (Tx1 and Tx2)
- 2) two carrier operation (2C) at 30W/C (+44.8 dBm/C) for total composite power of 60W per transmit path

Enhanced Digital Predistortion (EDPD) and Closed Loop Gain Control (CLGC) are also features that are enabled with each carrier setting.

The footnote on the Grant should read:

The RRH2X60-1900 is rated for 60W single carrier RF power per transmit antenna terminal and 60W total composite power for multiple carriers.

This system complies both with the Federal Communication Commission (FCC) Rules and Regulations (47 CFR Part 24E), 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 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 24—Personal Communications Services, Subpart E— Broadband PCS 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-27
Rules Part Number	Part 24—Personal Communications Services, Subpart E—Broadband PCS
Frequency Ranges	Transmit 1930–1990 MHz
Output Power	60 Watts (+47.8 dBm) at each of the 2 Tx antenna terminals (Tx1 & Tx2)
Frequency Tolerance	± 0.05 ppm
Emission Designator	4M20F9W

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 a Grant of Equipment 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.

Permanent confidentiality is requested for the exhibits listed below, and will be formally requested in a separate written request for confidentiality.

09-OpDes_AS5ONEBTS-26_CONFIDENTIAL
 10-BlkDia_AS5ONEBTS-26_CONFIDENTIAL
 11-Schem_AS5ONEBTS-26_CONFIDENTIAL
 15-PartsLst_AS5ONEBTS-26_CONFIDENTIAL

Sincerely,

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

Att.
 Table of Contents

TABLE OF CONTENTS

01-Form731:	TCB 731 Form
02-Cover Letter	
03-Request for Confidentiality Letter	
04-Exhibit 1:	FCC ID Label Sample and Location Information
05-Exhibit 2:	FCC Required Information (Part 2.1033)
06-Exhibit 3:	External Photographs of the Equipment (Part 2.1033 (c)(12))
07-Exhibit 4:	Internal Photographs of the Equipment (Part 2.1033 (c)(12))
08-Exhibit 5:	Test Set Up Photographs
09-Exhibit 6:	Operational Description (Theory of Operation, Functional Description) - CONFIDENTIAL
10-Exhibit 7:	Block Diagrams - System - CONFIDENTIAL
11-Exhibit 8:	Schematic Diagrams - CONFIDENTIAL
12-Exhibit 9:	Test Report
13-Exhibit 10:	User Manual or Comparable
14-Exhibit 11:	Tuning Procedure, if Applicable
15-Exhibit 12:	Parts List, if Applicable - CONFIDENTIAL