

APPLICANT: Lucent Technologies, Inc.

FCC ID: AS5ONEBTS-11

Lucent Technologies
Bell Labs Innovations



67 Whippany Road
Whippany, NJ 07981

Rudolf J. Pillmeier
Telephone: 973-386-3837
E-Mail: rpillmeier@lucent.com
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**Subject: Application for Certification under FCC ID:
AS5ONEBTS-11, Covering the UMTS/W-CDMA
Transceiver System Operating in the Cellular
Radiotelephone Service, 869-894 MHz, Spectrum.**

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

Dear Mr. Sanders:

Lucent Technologies' UMTS-CDMA Transceiver System (850) is designed to operate in the Lucent UMTS 850 Flexent® OneBTS™ Wireless Base Station, configured for 3S1C operation over the Cellular Frequency Spectrum 869-894 MHz. The objective of this application is to obtain FCC authorization as a new filing, under FCC ID: AS5ONEBTS-11, for operation in the Universal Mobile Telecommunications System (UMTS) with a single 5 MHz emission bandwidth carrier (4M10F9W), set to a maximum power level at the antenna terminal of 40 Watts (3-second) per 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 Cellular 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) Lucent's proprietary Enhanced Digital Pre-Distortion (EDPD-UL) technology which enables software to communicate between the transceiver, power amplifier and the transmit filter to achieve this goal. The MCR850 transceiver can transmit either Voice with 20 active channels or Voice + HSDPA (High Speed Downlink Packet Access) with 24 active channels.

The UMTS feature was developed for the North America Region (NAR) deployment, and is also known as Wideband CDMA (W-CDMA). The transceiver can be converted from Multi-Carrier CDMA to Single Carrier UMTS (or UMTS to CDMA) by software alone, which can be performed at the installation site. There are no physical, hardware or circuit changes to the transceiver.

UMTS functionality for the MCR850 transceiver was developed in accordance to the guidelines of the ETSI TS 25.141 V5.9.0 (2004-09) standard: "Universal Mobile Telecommunications System (UMTS); Base Station Conformance Testing (FDD) (3GPP TS 25.141 version 5.9.0 Release 5)". 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	Lucent Technologies
Equipment Identification	AS5ONEBTS-11
Rules Part Number	Part 22, Subpart H – Cellular Radiotelephone Service
Frequency Ranges	Transmit 869–894 MHz
Output Power	40 Watts (+46 dBm) 3-second average 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 initial equipment authorization of the UMTS-CDMA Transceiver System (850) base station. The technical contact at Lucent Technologies 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.

Confidentiality is requested for the following exhibits:

- Exhibit 5: Internal Photographs
- Exhibit 7: Operational Description (Theory of Operation, Functional Description)
- Exhibit 8: Block Diagrams
- Exhibit 9: Schematic Diagrams
- Exhibit 11: UMTS FLEXENT® UMTS Macrocell Indoor – Operation, Administration and Maintenance Document
- Exhibit 13: Parts List, if Applicable

Sincerely,

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

Att.

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**Exhibit 7: Operational Description (Theory of Operation, Functional Description) -
LUCENT TECHNOLOGIES CONFIDENTIAL**

Exhibit 8: Block Diagrams - LUCENT TECHNOLOGIES CONFIDENTIAL

Exhibit 9: Schematic Diagrams - LUCENT TECHNOLOGIES CONFIDENTIAL

Exhibit 10: Test Report

**Exhibit 11: UMTS FLEXENT® UMTS Macrocell Indoor – Operation, Administration and
Maintenance Document –LUCENT TECHNOLOGIES CONFIDENTIAL**

Exhibit 12: Tuning Procedure, if Applicable

Exhibit 13: Parts List, if Applicable LUCENT TECHNOLOGIES CONFIDENTIAL