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**March 14, 2014**

Timco Engineering Inc.  
Telecommunication Certification Bodies  
849 NW State Road 45  
Newberry, Florida 32669

Subject: Application for Original Equipment Certification under FCC ID: AS5BBTRX-18 for MRO 2x1W Base Station, Operating in the Miscellaneous Wireless Communications Services, 2110-2155MHz, with LTE Technology

**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 the certification of the Alcatel-Lucent 9768 LightRadio™ Metro Radio Outdoor (MRO) V2 2x1W, henceforth MRO AWS, under FCC ID AS5BBTRX-18, for operation in the Advanced Wireless Services (AWS) (Tx: 2110-2155MHz and Rx: 1710-1755MHz), i.e., E-UTRAN Band 4, with Long Term Evolution (LTE) technology.

The MRO is a small Remote Radio Head (referred to as "CubeDock") designed to be deployed as an overlay in an existing macro coverage area to provide increased throughput and coverage in the public open areas. The MRO is a medium area BS according to the 3GPP definition and supports a single cell (sector).

The above distributed wireless base station system is comprised of two separate modules 1) the digital Base Band Unit (BBU) and 2) the MRO. These two modules are interconnected by Common Public Radio Interface (CPRI) through optic fiber. The MRO contains all RF (radio frequency) functionality, including transceiver, power amplifier and transmitting and receiving filters. The BBU provides the digital baseband signals, plus the timing reference signal to the MRO. The BBU can be a unit specially designed for the distributed application or utilize the digital baseband shelf of a non-distributed base station system. The BBU and MRO units can be co-located or remotely located.

The installation is intended to be plug and play with no other site commissioning activities. The MRO AWS 2x1W supports Multiple Input Multiple Output (MIMO) with 2 transmit and 2 receive streams. The MRO AWS has two antenna ports. The MRO supports a single carrier per port. The maximum output power of each port is 30dBm or 1W, i.e., 2W (33dBm) in total. The MRO AWS currently has outdoor version only. It can be powered by DC power supply in the range of -40 VDC to -57VDC or by AC power supply in the range of 95 to 264 VAC and 47 to 63Hz. The AWS MRO supports external antenna only.

The 9768 MRO v1.0 B4 consists of a single dual duplex RF "Cube" with a Digital/Analog (DA) board, a power amplifier (PA) board and RF dual-duplex filter.

The data summarized below is in the form presently used by the Commission's Radio Equipment List.

Manufacturer	Alcatel-Lucent, Inc.
Equipment Identification	AS5BBTRX-18
Rules Part Number	Part 27
Frequency Range	Transmit: 2110-2155MHz, Receive: 1710-1755MHz.
Output Power	0-1W per LTE carrier, 0-1W per Tx Port, 0-2W per Unit
Frequency Tolerance	$\pm 0.05$ ppm
Emission Designator	10M00F9W and 20M00F9W

Enclosed in this application package are the FCC Application Form 731, letter of Request for Confidentiality, Table of Contents, List of Acronyms used in the application and the required exhibits. These exhibits contain the technical data and the required statements and documents for equipment certification. The technical contact at Alcatel-Lucent will comply with any request for additional information should the need arise.

The fees are submitted as required for radio equipment certification filing.

Sincerely,



R.J. Pillmeier  
Technical Manager  
FCC Compliance Test Group