

EXHIBIT 3: FCC REQUIRED INFORMATION (PART 2.1033)

The following information is presented in the content and format requested by the FCC:

Section 2.911 (d) Qualification Of Engineers

Section 2.911 (d): Technical test data shall be signed by the person who performs or supervises the tests. The person signing the test data shall attest to the accuracy of such data. The Commission may require such person to submit a statement showing that he is qualified to make or supervise the required measurements.

Michael P. Farina is a Member of Technical Staff at Alcatel-Lucent, Whippany, NJ, formerly AT&T Bell Laboratories, with 47 years of Professional Experience in Research and Development. He holds a BS in Physics from Upsala College and an MSEE from New Jersey Institute of Technology. During the past 15 years, his expertise was focused on RF Engineering and Regulatory Agency EMC compliance and certification, covering Analog, TDM, CDMA and UMTS technologies. He has submitted numerous Applications for Certification filings to the FCC covering many product variations and evolutions in each of the four technologies. Currently, he is the Lead Engineer for filing UMTS Wireless Base Station products with the FCC.

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

Section 2.911 (e)(g) Certification of Technical Test Data

Section 2.911 (e) The signatures of the applicant and the person certifying the test data shall be made personally by those persons on the original application; copies of such document may be conformed. Signatures and certifications need not be made under oath.

Section 2.911 (g) Signed, as used in this section, means an original handwritten signature; however, the Office of Engineering and Technology may allow signature by any symbol executed or adopted by the applicant with the intent that such symbol be a signature, including symbols formed by computer-generated electronic impulses.

I hereby certify that the technical test data are the results of tests either performed or supervised by me.

Michael P. Farina
Member of Technical Staff
FCC/EMC Compliance Test Group
Whippany, New Jersey

Section 2.1033 (c)(1):

The full name and mailing address of the manufacturer of the device and the applicant for certification.

Manufacturer:**RF Remote Radio Head (RRH):**

Alcatel Lucent Thailand
Ocean Tower 2, 40th Floor, 75/112-115 Sukhumvit 19 Rd.
North, Klongtoey, Wattana, 10110 Bangkok, Thailand

Celestica Thailand Limited

49/18 Leam Chabang Inds. Est., Tungsookhla, Sriracha
Chonburi, Thailand. 20230

Digital Base Band Unit (BBU):

Celestica

6200 E Broad St
Columbus, OH 43213-1569 U S

Applicant:

Alcatel-Lucent

67 Whippany Road, Room 3B-214
Whippany, NJ 07981
Attention: Rudolf J. Pillmeier, Technical Manager

Section 2.1033(c)(2): FCC Identifier **AS5ONEBTS-18**

Section 2.1033(c)(4):
Type or types of emission: **4M10F9W**

Section 2.1033(c)(5): Frequency range **Transmit: 1930–1990 MHz**

Section 2.1033(c)(6):

Range of operating power values or specific operating power levels, and description of any means provided for variation of operating power.

Alcatel-Lucent’s wireless *UMTS 9341 RRH 40W 1900 MHz System* (Transceiver System), operating over the Broadband Personal Communications Services spectrum 1930-1990 MHz, is the subject of this application for authorization by the Federal Communications Commission under the new FCC ID: AS5ONEBTS-18. Alcatel-Lucent’s Universal Mobile Telecommunications System (UMTS) Distributed Base Station System (1900 MHz) is designed to operate in the North America Region (NAR) Broadband Personal Communications Services Spectrum 1930-1990 MHz, with bandwidth of 60 MHz., i.e., frequency blocks A, D, B, E, F and C. The Distributed Base Station (DBS) can be configured for both single carrier (1S1C) operation at 40 Watts (+46 dBm) and for two carrier (1S2C) operation at 20 Watts (+43 dBm) per carrier with a total composite power of 40 Watts. The RF power rating is based the 3-second average, employing the Aggregate Overload Control (AOC) algorithm. Enhanced Digital Pre-Distortion (EDPD) and Closed Loop Gain Control (CLGC) are features that are enabled for each carrier. The carrier power level and frequency are remotely controlled by software. The single UMTS carrier has a 5 MHz bandwidth, with an emission designator at 4M10F9W, based on measurement of the Necessary Bandwidth. UMTS modulation capability demonstrated includes 1) up to 68 active channels, consisting of 64 voice + 4 control, 2) up to 44 active channels, which include 8 High Speed Downlink Packet Access (HSDPA) channels, and 3) a single active channel *Synchronization Channel* (SCH).

The *UMTS 9341 RRH 40W 1900 MHz System*, subject of this certification, is comprised of two separate modules interconnected by fiber optic cable: 1) the digital Base Band Unit (BBU), and 2) the Remote Radio Head (RRH). They have the flexibility of being installed either in close proximity to or remotely located from each other. The BBU has the capability of controlling up to 3 remotely located RRH units, via fiber optic cable, and incorporates the digital channel cards, reference oscillator module, T1/E1,alarm interface, and the RF-to-Optical and Optical-to-RF conversion circuitry. The 1900 MHz RRH incorporates the Future Technology Radio (FTR1900), power amplifier (PA) and passive filter with single transmit (Tx) and diversity receive functionality (Rx0, Rx1). This system complies both with the Federal Communication Commission (FCC) Rules and Regulations (47 CFR Part 24), and with the European Telecommunications Standards Institute (ETSI) 3rd Generation Partnership Project (3GPP) Technical Specifications TS 25.104 and TS 25.141.

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The maximum rated output power at the antenna terminal is 40 Watts (+46 dBm), 3-second average, per 5 MHz carrier emission bandwidth. Power adjustment is software controlled, using baseband digital scaling to set and adjust voltage variable attenuators in the transceiver. A full discussion of the power control and adjustment is contained in the documents requested to be held confidential.

Section 2.1033(c)(7):

Maximum power rating as defined in the applicable part (s) of the rules.

The maximum power rating of Alcatel-Lucent's wireless *UMTS 9341 RRH 40W 1900 MHz System* at the base station transmit antenna terminal, is 40 Watts (+46 dBm), 3-second average, employing the Aggregate Overload Control (AOC) algorithm, total composite for either a single carrier at 40W or for 2 carriers at 20w per carrier.

Section 2.1033 (c)(8):

The dc voltages applied to and the dc currents into the several elements of the final radio frequency amplifying device for normal operation over the power range.

The dc voltage applied to Alcatel-Lucent's wireless *UMTS 9341 RRH 40W 1900 MHz System* is nominally -48 Vdc. When operating at the full rated RF power of 40W, the nominal input DC current is 9.5 ± 0.2 Vdc.

The final radio frequency amplifying device is the power amplifier (PA) incorporated into the RF Remote Radio Head (RRH) module. The maximum rated power at the antenna terminal is 46.0 dBm, which corresponds to the maximum rated 3-second average power at the PA output terminal of 47.9 dBm. At this power level, the PA nominal voltage and current rating is +31.0 Vdc at 7.5 Adc.

Section 2.1033 (c)(9):

Tune-up procedure over the power range, or at specific operating power levels.

Alcatel-Lucent's wireless *UMTS 9341 RRH 40W 1900 MHz System*, subject of this request for certification under FCC ID: AS5ONEBTS-18, can not be "tuned-up" by the user. There are no user tune-up features. All tuning is performed by the manufacturer during, and as part of, the manufacturing process.

Section 2.1033 (c)(10)

A description of all circuitry and devices for determining and stabilizing frequency.

Alcatel-Lucent's wireless *UMTS 9341 RRH 40W 1900 MHz System*, incorporating the Future Technology Radio (FTR 1900), with a 5 MHz carrier emission bandwidth, is designed to operate in the Broadband Personal Communications Service over the spectrum 1930-1990 MHz. The frequency is determined by the up-conversion of digital baseband signals to IF frequencies. Frequency stability of the carrier frequency is achieved with an accuracy better than the rated ± 0.05 ppm by the 15 MHz reference frequency generated by a stable Crystal Oscillator Module (OMA) plus proprietary phase locked loop (PLL) circuitry.

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Section 2.1033 (c)(10): Description of circuitry and devices for suppression of spurious radiation.

Spurious emissions radiated from Alcatel-Lucent’s wireless *UMTS 9341 RRH 40W 1900 MHz System* are suppressed by implementing sound Electromagnetic Compatibility (EMC) design practices extending from the circuit board level to the system level: 1) grounded RF shielding on coaxial cables, 2) grounded RF shielding mounted on the circuit packs, 3) effective grounding throughout, and 4) effective transmit and receive bandpass filters for the Broadband Personal Communications Service spectrum 1930-1990 MHz. The Tx filter, incorporated in the *UMTS 9341 RRH 40W 1900 MHz System*, RF Remote Radio Head (RRH), is a 60 MHz wideband, low loss, Duplex (Dpx) design covering the 1930-1990 MHz spectrum.

Characteristic Plot of the 60 MHz wideband, low loss, Duplex (Dpx) filter showing the transmit passband characteristics is:

60 MHz Dpx Tx Passband Characteristics

Operation Description: Plot Attenuation: J3 to J1 (1920 to 2300 MHz)

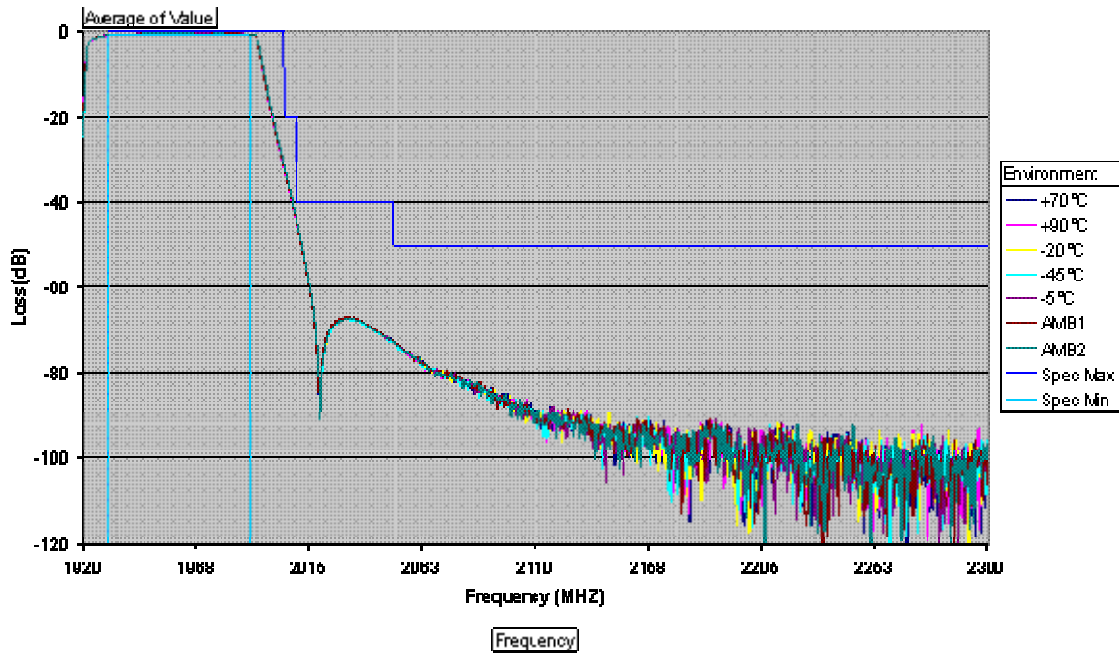


EXHIBIT 3: FCC REQUIRED INFORMATION (PART 2.1033) - continued**Section 2.1033 (c)(10): Description of Circuitry and Devices for Limiting Modulation, and for Limiting Power.**

The Alcatel-Lucent *UMTS 9341 RRH 40W 1900 MHz System* Future Technology Radio (FTR 1990) is a 5 MHz carrier emission bandwidth UMTS (W-CDMA) base station transceiver, designed to operate in the Broadband PCS Frequency Spectrum 1930-1990 MHz. The FTR1900 transceiver is incorporated into the *UMTS 9341 RRH 40W 1900 MHz System*, which is the subject of this application for certification. Modulation limiting is described in the documents that must be held confidential.

Power control of the RF output from the FTR1900 transceiver is accomplished by software which controls a microprocessor that sends digital baseband signals to a voltage variable attenuator, which is used for output power adjustment. The transmitter can be disabled through firmware which sets the RF attenuator to maximum loss and thus disables the final RF amplifier stage. A complete description is provided in the exhibits that are required to be held as confidential.

Section 2.1033 (c)(13): Description of the modulation system.

The Alcatel-Lucent *UMTS 9341 RRH 40W 1900 MHz System* Future Technology Radio (FTR1900) is a 5 MHz carrier emission bandwidth UMTS (W-CDMA) base station transceiver designed to operate in the Broadband PCS Frequency Spectrum 1930-1990 MHz. The FTR1900 transceiver is incorporated into the *UMTS 9341 RRH 40W 1900 MHz System*, which is the subject of this application for certification. The modulation system is described in the documents that must be held confidential.

This FTR1900 base station transceiver is designed for QPSK modulation, with an emission designator 4M10F9W. The modulation process is fully described in the documents that must be held confidential. The FTR1900 transceiver can operate either with up to 64 Voice + 4 Control active channels or with up to 30 Voice + 8 HSDPA + 6 Control active channels. Note: HSDPA = High Speed Downlink Packet Access.