



Federal Communications Commission
7435 Oakland Mills Road
Columbia, MD
21046
USA

Authority to Act as Agent to the Federal Communications Commission

On our behalf, I appoint Nemko USA, Inc. to act as agent in the preparation of this application for equipment authorization to the Federal Communications Commission. I certify that submitted Exhibits properly describe the device or system for which equipment authorization is sought. I also certify that each unit manufactured, imported or marketed, as defined in the Commission's regulations will have affixed to it a label identical to that submitted for approval with this application.

APPLICANT ANTI-DRUG ABUSE CERTIFICATION:

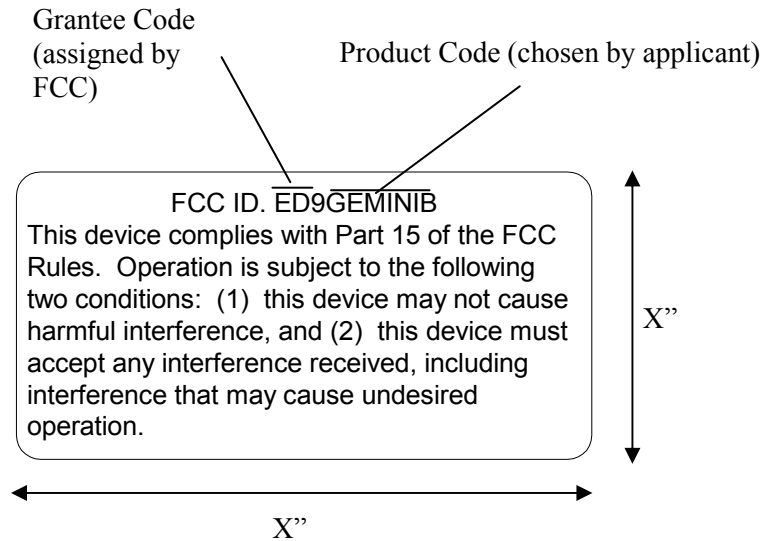
In signing this letter, Applicant certifies that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits, that includes FCC benefits, pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 853(a), or, in the case of a non-individual applicant (e.g. corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits, that includes FCC benefits, pursuant to that section. For the definition of a "party" for these purposes, see 47 CFR 1.2002(b).

Dated this 04 Day of August, 2006

Agency agreement expiration date: 04-August-2007

Company: Alcatel
By: Troy Taylor
Title: Product Line Manager
Telephone: 972-519-4377
Applicant: Alcatel

LABEL FORMAT



The label should show the dimensions or it should be noted that the label format as presented is actual size.

Label must be able to last the expected lifetime of the equipment in the environment in which the equipment will be operated and must not be readily detachable.

The type size for the FCC Identifier is not required to be larger than eight-point.

NOTE: If the above statement beginning "Operation is subject..." would make the label too large for the equipment, one may include the FCC ID. and the compliance statement and then include the rest of the statement in the User's Guide or Operators Manual.

LABEL LOCATION

A photo or drawing of the equipment must be included showing clearly the location of the label on the equipment. If the label is legible in the photo or drawing, the FCC ID. number must be correct and the format must be as described in the label format drawing or photo. The label must be visible from the outside of the equipment enclosure.

User's Guide

Should include any instructions given to user and/or installer that may impact compliance.

If installation instructions are provided, they must clearly specify any installation procedure that may impact compliance. For example, if professional installation is claimed and various antennas can be used requiring the installer to add attenuation or reduce the output power when using particular antennas, the required power level reduction and clear instructions on how to accomplish the reduction must be included.

Warnings in manual

This statement should appear at a prominent location in the user's manual.

"THIS EQUIPMENT COMPLIES WITH PART 15 OF THE FCC RULES. ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE MANUFACTURER COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT."

*In addition to the above labeling requirements, a device operating in the 1910 – 1930 MHz band must bear a prominently located label with the following statement:

INSTALLATION OF THIS EQUIPMENT IS SUBJECT TO NOTIFICATION AND COORDINATION WITH UTAM, INC. ANY RELOCATION OF THIS EQUIPMENT MUST BE COORDINATED THROUGH, AND APPROVED BY UTAM. UTAM MAY BE CONTACTED AT [INSERT UTAM'S TOLL-FREE NUMBER].

Schematics

Schematic diagrams should be in PDF, WORD, or JPEG format and should be legible. PDF format is preferred since it allows for a more easily viewable document.

If the filing is for a Class II Permissive Change, the changes should be highlighted on the schematic in some way.

Parts List (if not included on Schematics)

Parts list should be in PDF, WORD, or JPEG format and should be legible. PDF format is preferred since it allows for a more easily viewable document.

If the filing is for a Class II Permissive Change, the changes should be highlighted on the parts list in some way.

Block Diagram

A simple block diagram of the system should be included. This diagram need only show the major blocks of the system.

Technical Description

A description of all circuitry and devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation, and for limiting power.

REQUEST FOR CONFIDENTIALITY

Your Company Name requests confidentiality per CFR 47, paragraphs 0.457 and 0.459 with regard to the following documents in the filing for equipment approval identified by FCC ID. No. {FCC ID. NUMBER}.

(1) Schematic diagrams contained in electronic file identified as {NAME OF FILE(S)}.

It is the opinion of {*Applicant Company Name*} disclosure of this information would result in significant loss of revenue. This information should be kept confidential for _____ years/months.

Authorized Signature
Company Name
Address

NOTE: Only information that is not accessible to the general public may be held confidential. Generally internal and external photos cannot be held confidentiality. The exception would be if the PC board is potted.

Photographs

Photos must be provided of the exterior of the device showing antenna ports and any other connectors or cables.

Photos of both sides of each PWB must be provided. If shields are installed on the PWB, they must be removed for photos.

Nemko can take all photos. Please keep in mind that this requires the device to be disassembled. It is preferred, therefore to have a separate unit provided for photos. If a special tool is required for disassembly, please provide a means by which we can open the product.

Frequency Hopping Algorithm

For frequency hopping spread spectrum systems operating under 15.247, the hopping algorithm must be detailed. A sample frequency hop table must be presented as well. The following items must be addressed:

- (1) How is pseudorandom hopping derived?
- (2) How is each frequency used equally on the average by each TX in the system?
- (3) What is the RX bandwidth?
- (4) How are receivers synchronized with transmitters?

RF Exposure Statement of Compliance

A statement that the device meets the FCC requirements for rf exposure.

Refer to OET Bulletin 65 for guidelines on applicable to the device tested.

This document can be downloaded from the FCC website or provided by NEMKO upon request.

RF Exposure Warning Statement

If required as indicated by OET Bulletin 65 Guidelines, a statement must appear in the installation manual informing the user of the minimum separation distance required to insure compliance with the FCC rules for rf exposure in uncontrolled environments. An example of such a statement is shown below:

“WARNING: This device must be installed in a location that is not accessible to the general public. Install the device so that the antenna is more than 20 cm from unsuspecting personnel. Failure to install this device as described will result in a failure to comply with FCC rules for rf exposure and is discouraged.”

Statement of Professional Installation

A statement addressing the following must be included if professional installation is claimed in order to allow for a detachable antenna or multiple antenna types.

1. Through what outlets will the device be distributed?
2. How does the manufacturer intend to control the installation to insure that installation is performed properly?
 - special training requirement for installers
 - specific warnings and installation guidelines in the installation manual.
3. Once the installation is in place, how will the manufacturer insure that the user does not change the installation?

Additional Checklist for Frequency Hopping Spread Spectrum Devices

Name of Test	Comments
Channel Spacing	Must be at least 25 kHz or the 20 dB BW
Pseudorandom Hopping	<ol style="list-style-type: none"> 1. How is pseudorandom hopping derived? 2. How is each frequency used equally on the average by each TX in the system? 3. What is the RX bandwidth? 4. How are receivers synchronized with transmitters?
Number of Channels & Time of Occupancy	<ol style="list-style-type: none"> 1. State the number of frequencies used. 2. Measure the Time of Occupancy on one frequency within a 20 second period. See Table 1 for limit.
20 dB Occupied Bandwidth	902 – 928 MHz max. of 500 kHz 2.4 – 2.4835 & 5.725 – 5.85 GHz max. of 1 MHz
Peak Power Output	See Table 2 for limits
Antenna Conducted or Radiated Spurious Emissions	The limit is – 20 dBc RBW=100 kHz
Radiated Emissions in Restricted Bands	Measure each emission with peak detector and with average detector. The limit for peak emissions above 1 GHz is 74 dB μ V/m @ 3 meters. The average limit is 54 dB μ V/m @ 3 meters.
Lower Band Edge	The limit is –20 dBc
Upper Band Edge	The limit is –20 dBc
NOTE: For systems that tune over a bandwidth of 1 MHz – 10 MHz, the above tests must be performed on 2 frequencies: one at the lower edge of the band and one at the upper edge of the band. For systems that tune over a bandwidth greater than 10 MHz, the above tests must be performed with the system tuned to 3 frequencies: one at the lower edge of the band, one in the middle, and one at the upper edge. Processing gain need not be tested on more than one frequency.	

Table 1

Frequency Band (MHz)	20 dB Bandwidth	No. of Hopping Channels	Average Time of Occupancy
902 - 928	<250 kHz	50	=<0.4 sec. in 20 sec.
902 – 928	=>250 kHz	25	=<0.4 sec. in 10 sec.
2400 – 2483.5	-----	75	=<0.4 sec. in 30 sec.
5725 – 5850	-----	75	=<0.4 sec. in 30 sec.

Table 2

Frequency Band(MHz)	No. of Hopping Channels	Maximum Pk. Pwr. at Antenna
902 - 928	at least 50	1 watt
902 – 928	25 - 49	0.25 watts
2400 – 2483.5	75	1 watt
5725 – 5850	75	1 watt

Additional Checklist for Direct Sequence Spread Spectrum Devices

Name of Test	Comments
Occupied Bandwidth (6dB)	Must be at least 500 kHz
Peak Power Output	Limit is 1 watt with max. dBi gain of antenna 6 dB unless the system operates point-to-point only.
Antenna Conducted or Radiated Spurious Emissions	The limit is – 20 dBc RBW=100 kHz
Radiated Emissions in Restricted Bands	Measure each emission with peak detector and with average detector. The limit for peak emissions above 1 GHz is 74 dB μ V/m @ 3 meters. The average limit is 54 dB μ V/m @ 3 meters.
Lower Band Edge	The limit is –20 dBc
Upper Band Edge	The limit is –20 dBc. For 2.4 GHz systems, the restricted band limit must be applied at the upper band edge (2.4835 GHz)
Spectral Power Density	Maximum +8 dBm/3 kHz
Processing Gain	At least 10 dB
<p>NOTE: For systems that tune over a bandwidth of 1 MHz – 10 MHz, the above tests must be performed on 2 frequencies: one at the lower edge of the band and one at the upper edge of the band. For systems that tune over a bandwidth greater than 10 MHz, the above tests must be performed with the system tuned to 3 frequencies: one at the lower edge of the band, one in the middle, and one at the upper edge. Processing gain need not be tested on more than one frequency.</p>	