

# **Application Document for FCC Part 15, Subpart C (Intentional Radiators) Class II Permissive change**

**Product Name: IBM 11a/b/g Wireless LAN Mini PCI Adapter**

**Document Number: FCC 19-0241-0**

**FCC ID: ANO20030400LEG**

**November 05, 2003**

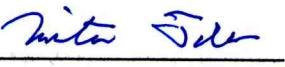
EMC Engineering R&D Staff Engineer  
Shigeru Motoki

Signature:   
IBM Japan, Ltd.  
EMC Engineering  
LAB-S59  
1623-14, Shimotsuruma,  
Yamato-shi Kanagawa-ken 242-8502, Japan  
Phone: +81-46-215-2239  
Fax: +81-46-273-7420  
E-Mail: murota@jp.ibm.com

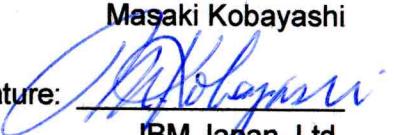
EMC Engineering Manager / NVLAP signatory  
Akihisa Sakurai

Signature:   
IBM Japan, Ltd.  
EMC Engineering  
LAB-S59  
1623-14, Shimotsuruma,  
Yamato-shi Kanagawa-ken 242-8502, Japan  
Phone: +81-46-215-2613  
Fax: +81-46-273-7420  
E-Mail: akihisa@jp.ibm.com

Portable Product Development No.2 Manager  
Mitsuo Tabo

Signature:   
IBM Japan, Ltd.  
Portable Systems  
LAB-R74  
1623-14, Shimotsuruma,  
Yamato-shi Kanagawa-ken 242-8502, Japan  
Phone: +81-46-215-2711

Portable Systems Director

Signature:   
Masaki Kobayashi  
IBM Japan, Ltd.  
Portable Systems  
LAB-R70  
1623-14, Shimotsuruma,  
Yamato-shi Kanagawa-ken 242-8502, Japan  
Phone: +81-46-215-3889

# Outline of Submission

## 1. Objective

This is a Certification Compliance Report for FCC Part 15 subpart C (Intentional Radiators).

- The applying equipment : **IBM 11a/b/g Wireless LAN Mini PCI Adapter**
- FCC ID : **ANO20030400LEG**
- Grant Date : July/03/2003 (Original grant)  
: Augst/12/2003 (Class II change)  
: September/29/2003 (Class II change)

The following new antenna system (host PC device) is added by this **Class II change** application.

- IBM ThinkPad X40 Series

## 2. Product Description

The applying modular transmitter device is an OEM mini-PCI wireless LAN card supplied by PHILIPS Components. The modular device complies with the following transmission modes.

- IEEE802.11a (5.2GHz band OFDM)
- IEEE802.11a (5.8GHz band OFDM)
- IEEE802.11b (2.4GHz band Direct Sequence Spread Spectrum)
- IEEE802.11g (2.4GHz band OFDM)

The 5.2GHz band OFDM mode is subjected to the FCC 15 subpart E (U-NII device), and is to be certified with the separate application as **composite** device.

## 3. Installation of the applying transmitter

The applying LMA transmitter is an **user installable** wireless card. An unique electrical connector (so called "**Electronic Handshake**" BIOS Lock) is employed for the host devices to satisfy the FCC Part 15.203 or RSS-210 §5.5, and the FCC Part 15.407(d) or RSS 6.2.2 q1(i). **This mechanism enables users to install the applying LMA transmitter to the specified hosts (ThinkPad X40 Series).**

The detail explanation of the unique coupling between the LMA transmitter and antenna systems is shown in the separate exhibit "Confidential\_E-Handshake.pdf", however IBM would like to hold it in confidence to maintain the secure "unique operability" with the applying card and IBM antenna systems.

The Electronic Handshake BIOS Lock function is also effective for the user's maintenance in replacing a broken card with a spare part.

## 4. Collocation with other transmitter

The applying LMA transmitter collocates with the following Bluetooth transmitter and transmits simultaneously.

- FCC ID: ANO20020100MTN

As for the RF safety evaluation, refer to the separate "RF Exposure" exhibit.

## 5. Submittal documents

● LAM Qualification	omitted ( identical with the original filing )
● Product Labeling	omitted ( ditto )
● Internal Photos	omitted ( ditto )
● External Photos	omitted ( ditto )
● Block Diagrams	omitted ( ditto )
● Schematic Diagrams	omitted ( ditto )
● Parts List	omitted ( ditto )
● Circuitry Descriptions of LMA transmitter	omitted ( ditto )
● Electronic Handshake BIOS Lock logic	Yes
● The new antenna system Info.	Yes
● Test Report with the new antenna system	Yes
● Test Setup Photos	Yes
● RF Exposure evaluation for the new antenna	Yes
● IBM Web site concerning the grant condition	Yes
● Users Manual	Yes