Application Document for

FCC Part 15, Subpart E (Intentional Radiator)

Document Number: FCC 19-0205-0

Product Name: ThinkPad R40 Series

(Machine type: 2681, 2682, 2683, 2722, 2723, 2724)

FCC ID: ANO20020300D3L

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Outline of Submission

1. Objective

This is a Certification Compliance Report for FCC Part 15 subpart E, U-NII device.

- The applying equipment : ThinkPad R40 Series
- FCC ID : **ANO20020300D3L**

The device is **a composite equipment** with the same FCC ID of Part 15 subpart C, DTS device.

2. Installation of the applying transmitter

The built-in wireless LAN module is **preinstalled by IBM.** According the FCC Part 15.407(d), a **tamperproof structure** is employed so that the applying wireless module is not able to be removed nor plugged in by users.
Since users can not access to the card, IBM or a responsible party will replace a broken card with a spare part. Refer to "Circuitry Description" document, and page 6 of User's Manual.

3. Product Description

The applying equipment is a standard size laptop computer integrating IEEE 802.11a & b combo Wireless LAN function inside. The wireless module consists of an OEM card (Philips Components, **Model No: PH11107-E** IEEE802.11 a/b Combo Wireless LAN Mini-PCI card) and built_in antennas (Inverted F-figure Dual bands antennas × 2).
The specifications of the applying wireless LAN card and the built_in antennas are as follows.

Table 1 : Specification of PC main body

Model Identification		ThinkPad R40 Series	
Machine Type number		**2681, 2682, 2683** *1	**2722, 2723, 2724** *1
PC Functions	CPU	Intel® Mobile Pentium IV® 1.8~2.2GHz or Mobile Celeron® 1.6~1.8GHz	Intel® Mobile Banias® 1.3~1.6GHz
	LCD	13.3", 14.1", 15" TFT XGA (or SXGA+)	
	Max. size	329mm(13.0")(W) : 268mm(10.5")(D) : 40.5mm(1.59")(H)	
	Max.Weight	6.8 lbs	
	Hard disk	2.5" (20 ~ 60GB)	
	Memory	128 / 256MB	
	Bay Device	DVD, CD-ROM, or none	
	Power	AC adapter, Battery (Li-Ion)	
	Ports & Slots	External CRT, Headphone, Microphone, RJ11, RJ45, Video out(S-V), USB, 4Mb/s IR, Port Replicator, IEEE1394, Parallel, PCMCIA slot	

*****1: service class; 1 year warranty (left), 3 years warranty(middle), 3 years & onsite maintenance(right)

Table 2 : Specification of Wireless-LAN feature

IBM product name of wireless Card	IBM Dual-Band 11a/b Wi-Fi® Wireless Mini PCI Adapter	
Carrier Frequencies	5180MHz ~ 5320MHz	
Antenna gain	Maximum peak 2.98 dBi (in the above band)	
Conducted transmission power	Maximum 17 dBm	
Antenna type	Inverted F-figure type dual band antenna	
		13"/14" LCD model / 15" LCD model
	Main antenna : P/N:	3301BZ9076A / 3301BZ9078A
	Auxiliary antenna : P/N:	3301BZ9077A / 3301BZ9079A
Antenna cable type And length	Main antenna : coax 640 mm	
	Auxiliary antenna : coax 530 mm	

4. Mounting structure of Wireless LAN card and Antenna

The two inverted F-figure type antennas are built in the left and right side of LCD. Those diversity antennas are not used simultaneously. One of the antennas is selected automatically or manually to have a good quality of radio communication. The selected antenna performs transmission or receiving in half duplex alternatively.