

Application Document for FCC Part 15, Subpart C (Intentional Radiator)

Document Number: FCC 19-0206-0

Product Name: ThinkPad R40 Series
(Machine type: 2681, 2682, 2683, 2722, 2723, 2724)

FCC ID: ANO20020300D3L

November 18, 2002

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Outline of Submission

1. Objective

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

2. Installation of the applying transmitter

The built-in wireless LAN module is **preinstalled by IBM**. 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		2412MHz ~ 2462MHz	5745MHz ~ 5825MHz
Antenna gain		peak 0.83 dBi	peak 0.85 dBi
Conducted transmission power		Max. 17 dBm	Max. 16 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.

