

# Host Unit Antenna Information

## for

# ThinkPad R50 Series

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## 1. Host PC Information

The main antenna, inverted F-figure type, is built in the top side of LCD and the auxiliary antenna, inverted F-figure type, is built in the right side of LCD.

The main antenna is used for both RF transmission and receiving with half duplex switching mode. The auxiliary antenna is used for RF receiver only.

When the Wireless LAN card is in RF receiving state, one of the antennas is selected automatically to have a good quality of radio communication.

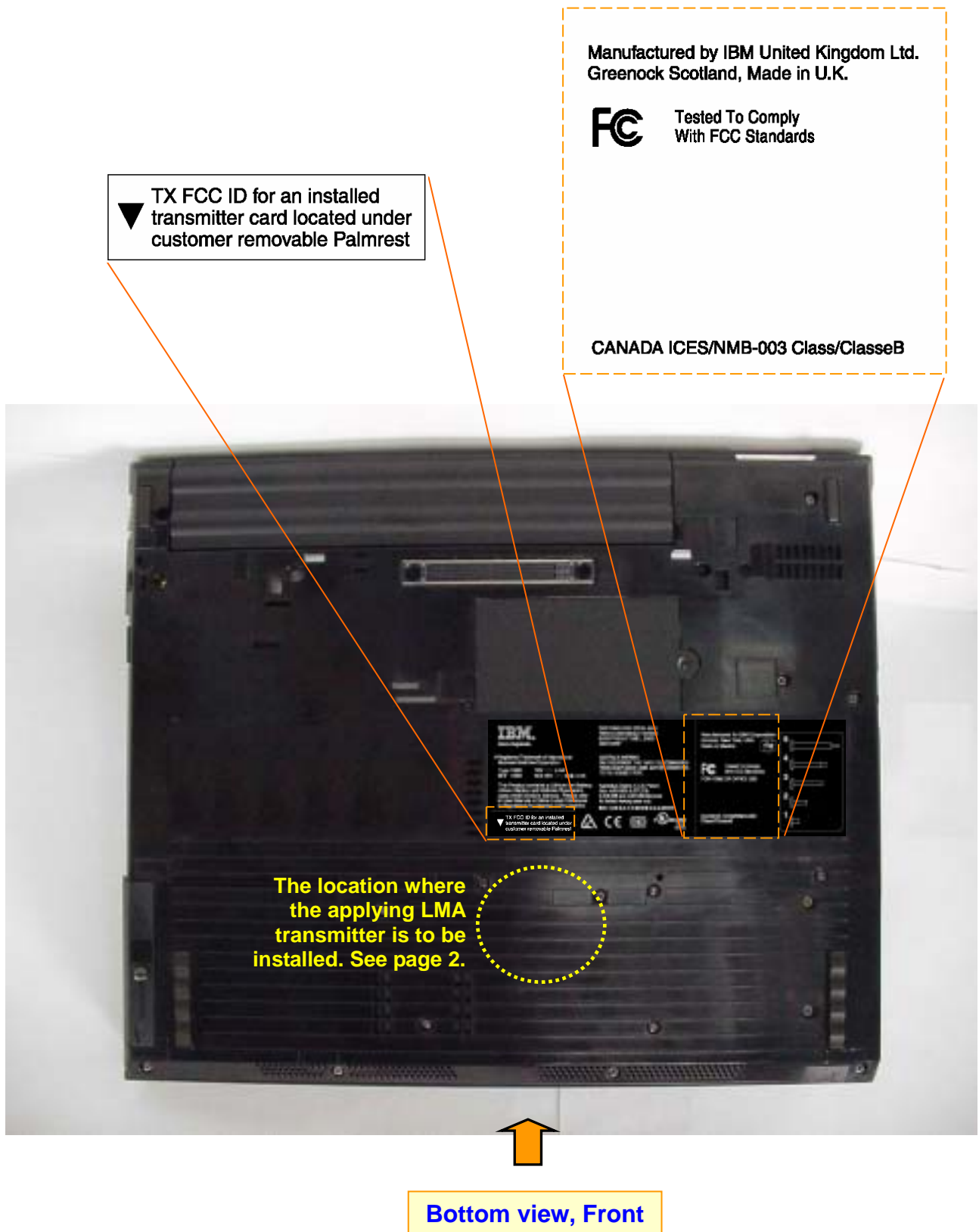


**IBM ThinkPad R50 Series, LCD 15 inch Model**



**IBM ThinkPad R50 Series, LCD 14 inch Model**





**Label for a different model of the host PC (ThinkPad R50 Series)**

The model (R50) supports the applying transmitter and a built-in type Bluetooth LMA which is to be certified separately as the FCC ID: ANO20020100MTN.



**TX FCC ID for an installed CDC  
transmitter card located under  
customer removable Keyboard**

**The location where the collocated  
user installable Bluetooth LMA  
transmitter is to be installed.**

**TX FCC ID for an installed CDC  
transmitter card located under  
customer removable Keyboard**



**Bottom view, Front side**

### 3. Antenna Specifications

#### 3.1 Transmission Antenna assembly overview

Designator	Manufacture	Antenna type	Cable type and length	Gain (dBi) Note 1)
<b>91P6812</b>  15 inch LCD model Main antenna	Hitachi Cable Ltd. (Japan)	Dual Band Inverted F type Antenna	coax 775mm	2.4GHz Band 1.18 dBi (peak)
<b>91P6813</b>  15 inch LCD model Auxiliary antenna  (receiving only)	Hitachi Cable Ltd. (Japan)	Dual Band Inverted F type Antenna	coax 670mm	2.4GHz Band 1.71 dBi (peak)
<b>91P6810</b>  14 inch LCD model Main antenna	Hitachi Cable Ltd. (Japan)	Dual Band Inverted F type Antenna	coax 750mm	2.4GHz Band 1.52 dBi (peak)
<b>91P6811</b>  14 inch LCD model Auxiliary antenna  (receiving only)	Hitachi Cable Ltd. (Japan)	Dual Band Inverted F type Antenna	coax 635mm	2.4GHz Band 1.84 dBi (peak)

*Notes:*

1a. Includes all cable losses.

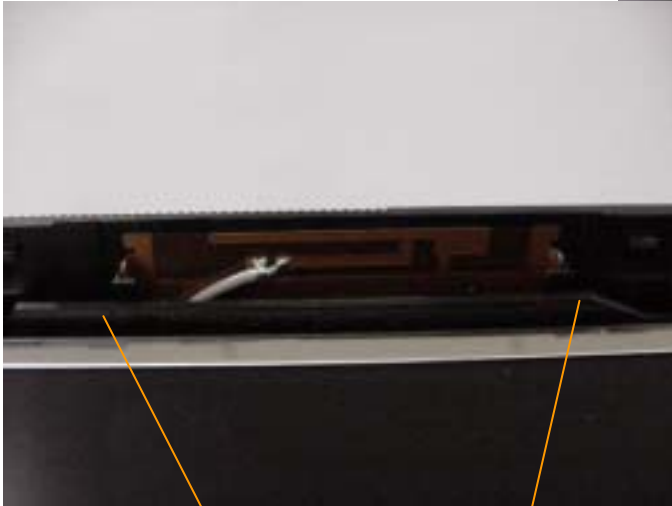
1b. Antenna type should be Omni Directional and have gain of 2.0 dBi or less for IEEE802.11b (2.4GHz band), regarding the IBM internal specification.

## 3.2 Antenna Photos

### Antenna Locations

**Main antenna**  
Dual Band Inverted-F type

**Auxiliary antenna**  
Dual Band Inverted-F type





## Exterior Photos of Antennas

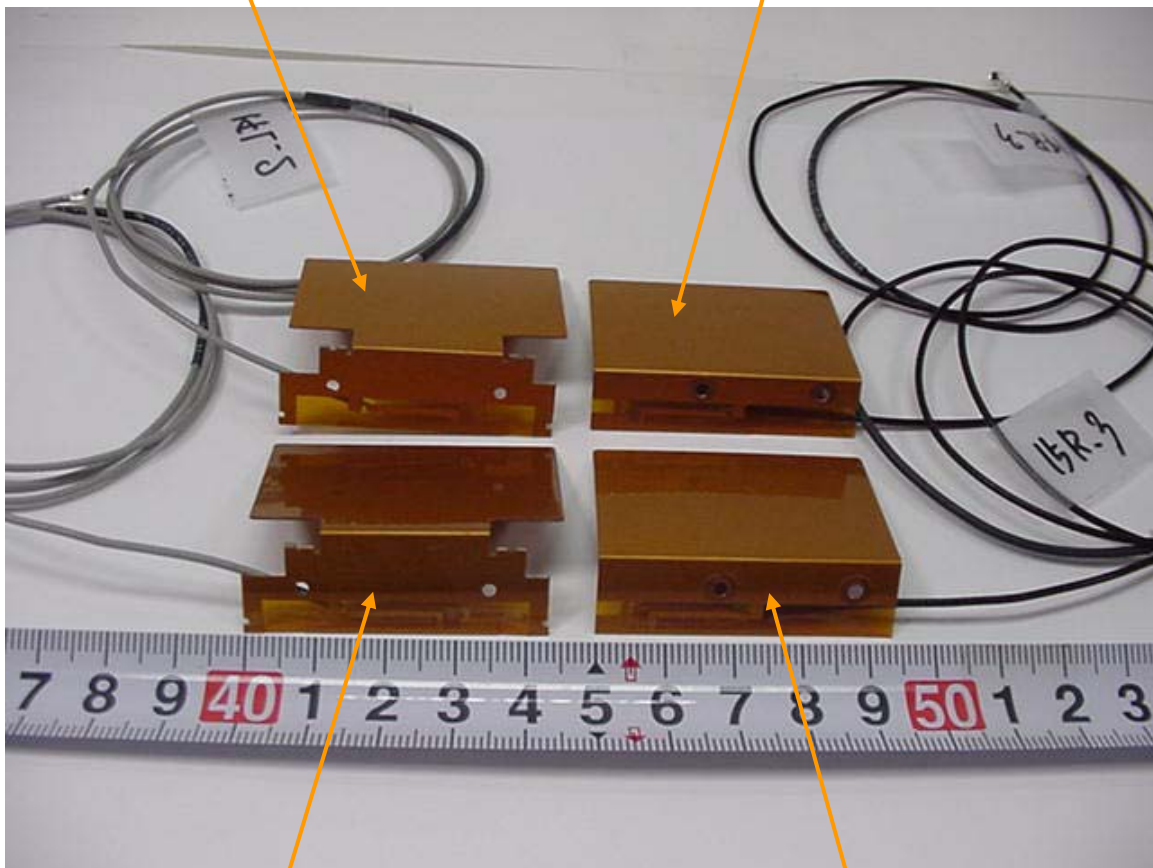
### Over view of Antennas for ThinkPad R50 series

#### Main antenna for 14 inch model

Manufacturer: Hitachi Cable Ltd.  
Parts Number: 91P6810  
Dual Band Inverted-F type antenna  
Cable : coax 750 mm

#### Auxiliary antenna for LCD 14 inch model

Manufacturer: Hitachi Cable Ltd.  
Parts Number: 91P6811  
Dual Band Inverted-F type antenna  
Cable : coax 635 mm



#### Main antenna for LCD 15 inch model

Manufacturer: Hitachi Cable Ltd.  
Parts Number: 91P6812  
Dual Band Inverted-F type antenna  
Cable : coax 775 mm

#### Auxiliary antenna for LCD 15 inch model

Manufacturer: Hitachi Cable Ltd.  
Parts Number: 91P6813  
Dual Band Inverted-F type antenna  
Cable : coax 670 mm



**Antennas for ThinkPad R50 series LCD 15 inch Model**

**Main Antenna**

**Manufacturer: Hitachi Cable Ltd.**

**Parts Number: 91P6812**

**Dual Band Inverted-F type antenna**

**Cable : coax 775 mm**



**Auxiliary Antenna**

**Manufacturer: Hitachi Cable Ltd.**

**Parts Number: 91P6813**

**Dual Band Inverted-F type antenna**

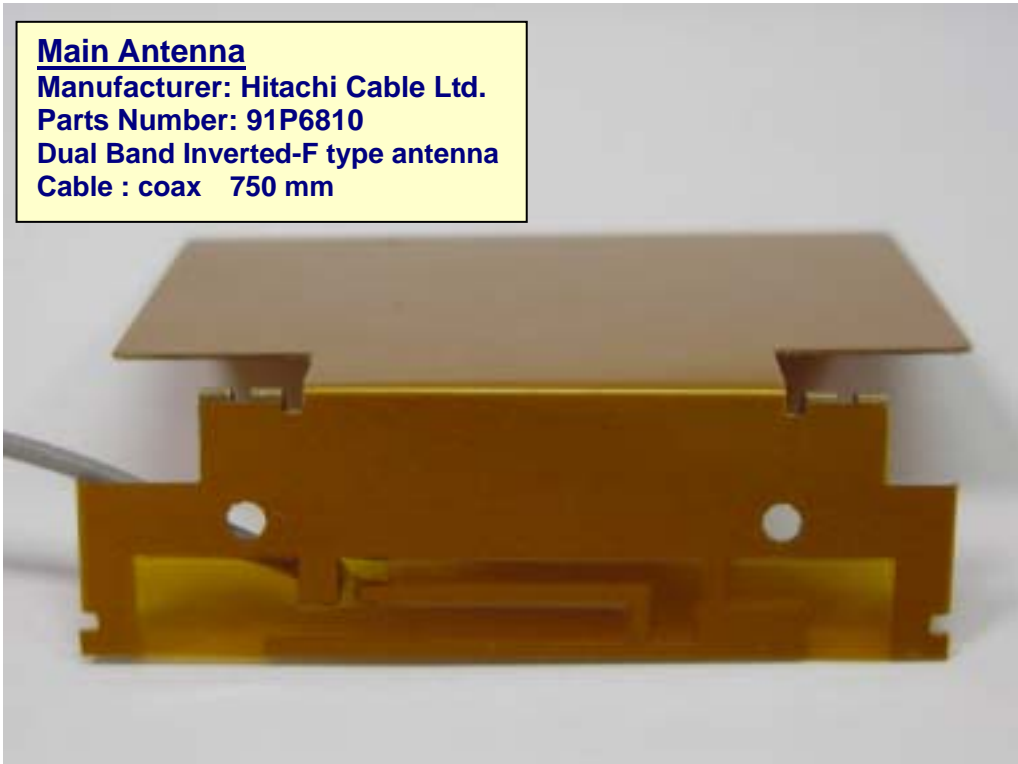
**Cable : coax 670 mm**



**Antennas for ThinkPad R50 series LCD 14 inch Model**

**Main Antenna**

**Manufacturer: Hitachi Cable Ltd.  
Parts Number: 91P6810  
Dual Band Inverted-F type antenna  
Cable : coax 750 mm**



**Auxiliary Antenna**

**Manufacturer: Hitachi Cable Ltd.  
Parts Number: 91P6811  
Dual Band Inverted-F type antenna  
Cable : coax 635 mm**

