

Re: FCC ID NPD-R240-V01  
Applicant: Nokia Networks Inc  
Correspondence Reference Number: 18410  
731 Confirmation Number: EA99856

In response to the questions raised by the FCC regarding the above application, each of the points are addressed below:

1) Verify that the center frequency of the lowest channel to the center frequency of the highest channel is 2402-2480 MHz.

The actual frequency range for the US market is 2401 MHz – 2479 MHz. The channel at 2480MHz is used for the Canadian version of the system. Measurements were made using the highest channel at 2480 MHz rather than 2479 to ensure compliance with Industry Canada requirements and FCC requirements using the argument that the higher frequency would give the highest emissions at the 2483.5 MHz band-edge.

2) The FCC identifier listed for the card is invalid. What is the correct identifier?

The identifier for the PCMCIA card used is H9PLA3021-100. This is the 100mW version of Symbol's card.

3) The professional and end user instructions cannot be held confidential submit a corrected confidential letter.

The confidentiality request is for the LETTER explaining the justification for professional installation. It is understood that the FCC will withdraw this letter from the application based on the response provided to the FCC on 5/7 justifying the need for professional installation under certain circumstances. Provided the letter is withdrawn from the application there is no need to keep this confidential. Please advise if you need an updated confidentiality request.

4) Photo's of the antenna.

These have been uploaded to the FCC server as detailed photographs under the filename "*Antenna Pictures.pdf*".

5) Provide a list of the antennas, indicate the antenna gain, the output power and the EIRP.

Antenna	Gain	Output Power	EIRP
MaxRad Z902 Omni-Directional Antenna	8dBi	27.5 dBm	35.5 dBm (3.56 Watts)
Sira System Radio 24W 10-90 Sector Antenna	10dBi	26 dBm (See note below)	36 dBm (4 Watts)

Note – the output power for the Sector antenna is reduced to give a maximum EIRP of 4 Watts. It is anticipated that the system will always be used for point-to-multipoint use.

6) What is the type of antenna connector for end users?

The antenna connector on the radio for all uses is a non-standard connector designed for Nokia. Professional installers (and ONLY professional installers) have access to an adapter that will convert the non-standard connector to an N-type connector for installations where the sector antenna may be used.

Mechanical drawings of the connector and adapter plus a photograph of the adapter have been uploaded to the FCC website as schematic diagrams under filename *Antenna Connector.pdf*.

7) Professional installation cannot be justified if on one hand professional installation is not required and on the other hand it is required for the same equipment ?? Professional installation may be difficult to justify and a unique connector may be required for all installations.

As stated in (6), the radio connector is a non-standard connector. Professional installation is required for instances where the sector antenna, that utilizes the adapter that will allow connection of a standard rf connector (N-type) to the radio. Further information regarding professional installation was provided on 5/7/01 to satisfy the FCC with regard to professional installation.

8) The RF separation distances and number of antennas did not agree throughout the filing. Correct the RF safety information by providing separate RF safety exhibits for the professional installation, the user installation and end-user manual. Ensure that each of the three exhibits contains the RF safety calculation, and appropriate warning and/or installation instructions. Ensure that the distances agree and antenna types agree.

Three separate documents have been uploaded. Each document contains the MPE calculation for the relevant antennas (Omni, or Omni / Sector or multiple Sector antennas).

9) How will the 10 dBi antenna meet the EIRP requirement? If you are claiming point-to-point, provide the point-to-point installation language(15.247b3iii) for the installer. How is the output power adjusted? Can the user adjust the output power?

As referenced in (5) the EIRP for the sector antenna remains at 36dBm or less (4 Watts). Output power can only be adjusted using the network management software (RMS). This software is only made available to the professional installer and the network manager. Within the software, the country and the antenna type are selected and, based on stored knowledge of EIRP/output power limits per country, the RMS determines the maximum amplifier setting. The amplifier setting can only be decreased from that setting, not increased.