NEBRASKA CENTER FOR EXCELLENCE IN ELECTRONICS

February 17, 2004

To: Federal Communications Commission
7435 Oakland Mills Road
Columbia, Maryland 21046

Subject: Limited Modular Approval of FCC ID: Q7O-0003

On behalf of KarlNet, Inc., I request a limited modular approval for KarlNet part number PRA-0005 with FCC ID: Q7O-0003. The limited modular approval is based on the requirements set out in Public Notice DA 00-1407.

1) RF Shielding – The RF chipset on the PRA-0005 is covered by two metal shields as shown in the test report submitted with this application. One of the two shields is electrically tied to the metal PCMCIA housing using copper fingers.
2) Buffered modulation/data inputs – The PRA-0005 card uses the Agere chipset for buffering the input. The chipset includes the WL60010 MAC, N4080 Baseband Controller, and W4050 RF Transceiver.
3) Power supply regulation – The PRA-0005 card uses the interface boards for the power supply regulation. The LM2592-5 chip in the schematic on KarlNet part numbers KN-100 (WPRG+) and KN-50 (Blackbird) provide for the regulation. The limited modular approval will limit the PRA-0005 card to the KarlNet interface boards with voltage regulation provided.
4) Antenna requirements of Parts 15.203 and 15.204(c) – Photos of the connector and how the PRA-0005 resides inside the antenna are shown in the test report.
5) Stand alone testing – The limited modular approval will limit the PRA-0005 card and interface boards to use the enclosures of the list of antennas in Table 1.
6) FCC ID Labeling – A photo of proper labeling has been submitted with this application.
7) Specific FCC rules – The EUT complies with FCC Parts 15.209 and 15.247 as shown in the test report submitted with this application.
8) RF exposure – The EUT complies with FCC Part 247(b)(4). The calculations have been submitted in a separate document with this application.

Table 1 outlines combinations utilized with KarlNet, Inc. Radio card P/N: **PRA-0005** for which KarlNet, Inc. is applying for a grant of certification (FCC ID: Q7O-0003) with modular approval with said radio and a minimum pigtail length of 4”.

FCC ID: Q7O-0003

KarlNet, Inc. P/N: **PRA-0005** is:

- USI P/N : 8601-114111-20
  - Cardbus 802.11b 35mW Agere HermesII radio with Thin built-in-antenna
  - Previously FCC certified with FCC ID: **IXMPCBAG**
- Proprietary pigtail provided by KarlNet, Inc. (All Pigtail lengths are required to be 4 inches or greater.)

Table 1, below, lists the combinations of antenna and interface boards approved by KarlNet, Inc for use. Any additional combinations, not presently listed below, must be approved by KarlNet, Inc.
KN-100 WPRG+ represents a FCC-Class B verified PCB consisting of P/N BA200-0107 and upgrades. KN-50 Blackbird represents a FCC-Class B verified PCB consisting of P/N BA201-0201 and upgrades. TurboCell (Base, Client), Xavier, and Nova represent various software loads developed by KarlNet, Inc.

Key: "T" = Tested
"A" = Approved by similarity or lower gain
"-" = Configuration does not exist

			KN-100 WPRG+ [TurboCell]	KN-100 WPRG+ [Access Point]	KN-50 Blackbird [Xavier]	KN-50 Blackbird [Nova]
Antenna	**Type**	**Gain**				
Arc Wireless FWA-SL-19-2.4-001-INT	Flat panel	19dbi	**T**	A	A	A
Telex 2474KN	Flat panel	18dbi	A	A	A	A
Arc Wireless FWA-VR-13-2.45-INT	Flat panel	13dbi	A	A	A	A
KarlNet Inc. ANT-0005	Flat panel	6dbi	-	-	A	A

Table 1 Product Matrix

If there are any questions please feel free to contact me: dkramer@nceelabs.com or (402) 472-5880.

Sincerely,

Doug Kramer
Lab Manager
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