Lucent Technologies
Bell Labs Innovations
NEDERLAND B.V.

Aug2000

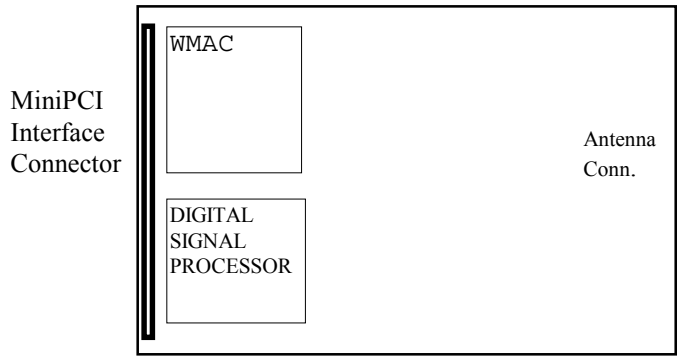
DESCRIPTION ORINOCO MiniPCI Radio 2.4 GHz (World)

This ORINOCO MiniPCI radio provides a (WaveLAN compatible) wireless connection for portable and mobile computers in accordance with IEEE standard 802.11 DSSS.
It can work at 11, 5.5, 2 or 1 Mbps. The operation is in accordance with IEEE 802.11.

The product, one piece of hardware, contains the following blocks:
- MiniPCI interface
- Wireless Medium Access Control (WMAC); this chip is used for handshaking with the PCI bus and for handling the IEEE protocol; it also does frequency management and interfaces to FlashROM for parameters on frequencies and Call codes. Here also selection for 11, 5.5, 2 or 1 Mbps is handled.
- Digital signal processor takes care of all modulation/demodulation for DSSS for all above rates and can do selection out of 2 receiving antennae
- Antenna function, provides a connection to the antennas.

Optionally it can be equipped with a factory installable data encryption feature (WEP).

Block Diagram



The technical specification is as follows on the next page.

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TECHNICAL SPECIFICATION
ORINOCO MiniPCI Radio 2.4 GHz (World)

Data Signalling Rate:	11, 5.5, 2 or 1 Mbit/s
Media Access Protocol:	According to IEEE 802.11 DSSS, CSMA/CA (Collision Avoidance)
Bit Error Rate:	Better than 10-8
Base-Band Modulation: (before spreading)	- 2 Mbps: Differential Quadrature Phase Shift Keying (DQPSK) 2 bits/symbol - 11 and 5.5 Mbps: Complementary Code Keying Differential Quadrature Phase Shift Keying (DQPSK CCK)
Spread Spectrum:	Direct Sequence with 11 chips/symbol interval. Pseudo random Barker code sequence: { 1 -1 1 1 -1 1 1 1 -1 -1 -1 } Chipping Rate: 11 Mchips/s
Carrier Frequency:	Selectable from factory pre-programmed set according to IEEE 802.11: 2412, 2417, 2422, 2427, 2432, 2437, 2442, 2447, 2452, 2457 and 2462 MHz
Peak Output Power:	< 32 mW rms power (15 dBm)