



## DESCRIPTION WVELAN IEEE PC Card Extended High Speed (FCC)

This WVELAN IEEE PC Card product 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.

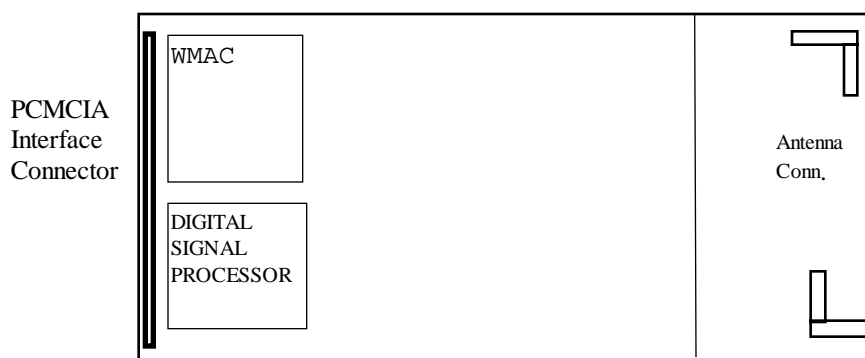
The product, one piece of hardware, contains the following blocks:

- PCMCIA interface
- Wireless Medium Access Control (WMAC); this chip is used for handshaking with the PCMCIA 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 diversity antenna and connection to optional external antenna. It provides two antenna elements, one for transmitting while one of the two can be selected for reception.

Optionally it can be equipped with:

- a factory installable data encryption feature (WEP), and
- a BootROM for diskless workstation.

### Block Diagram



The technical specification is as follows on the next page.



TECHNICAL SPECIFICATION  
WAVELAN IEEE PC Card Extended High Speed (FCC) 2.4 GHz

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)	<ul style="list-style-type: none"><li>- 2 Mbps: Differential Quadrature Phase Shift Keying (DQPSK) 2 bits/symbol</li><li>- 11 and 5.5 Mbps: Complementary Code Keying Differential Quadrature Phase Shift Keying (DQPSK CCK)</li></ul>
Spread Spectrum:	<p>Direct Sequence with 11 chips/symbol interval. Pseudo random Barker code sequence: { 1 -1 1 1 -1 1 1 1 -1 -1 -1 }</p> <p>Chipping Rate: 11 Mc/s</p>
Carrier Frequency:	<p>Selectable from factory pre-programmed set according to IEEE 802.11:</p> <p>2412, 2417, 2422, 2427, 2432, 2437, 2442, 2447, 2452, 2457 and 2462 MHz</p>
Peak Output Power:	< 32 mW rms power (15 dBm)
RF Power Density:	< 8 dBm/3kHz
Antenna (indoor):	<p>Omni-Directional (integrated):</p> <ul style="list-style-type: none"><li>- Gain 0 dBi</li><li>- Polarization diversity Hor/Vert</li></ul> <p>External, e.g. Range Extender AIN24-OD-0202:</p> <ul style="list-style-type: none"><li>- Gain 0 dBi</li><li>- Polarization diversity Hor/Vert.</li></ul>
Spurious Emissions etc:	Satisfies the USA Federal Comm. Commission (FCC) rules Part 15.247