agere systems

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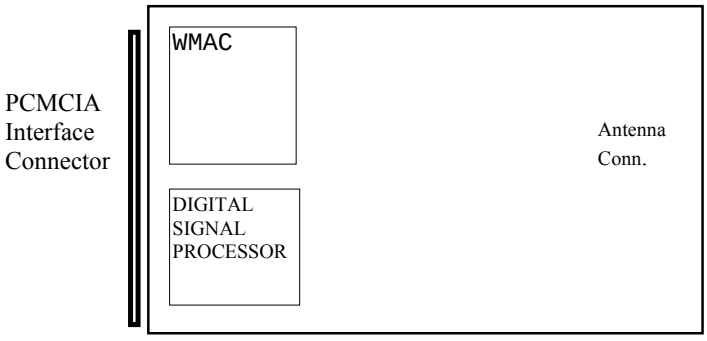
# DESCRIPTION IEEE PC Card Ext (B)

This IEEE PC Card product provides a 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

Optionally it can be equipped with:
- a factory installable data encryption feature

## Block Diagram




The technical specification is as follows on the next page.

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# TECHNICAL SPECIFICATION IEEE PC Card Ext 2.4 GHz (B)

| | |
|---|---|
| Data Signaling 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<br>- 11 and 5.5 Mbps: Complementary Code Keying Differential Quadrature Phase Shift Keying (DQPSK CCK) |
| Spread Spectrum: | Direct Sequence with 11 chips/symbol interval.<br>Pseudo random Barker code sequence:<br>{ 1 -1 1 1 -1 1 1 1 -1 -1 -1 }<br><br>Chipping Rate: 11 Mchips/s |
| Carrier Frequency: | Selectable from factory pre-programmed sets per country according to IEEE 802.11. Examples:<br>- for USA/ Canada: 2412, 2417, 2422, 2427, 2432, 2437, 2442, 2447, 2452, 2457 and 2462 MHz<br>- for EU: 2412, 2417, 2422, 2427, 2432, 2437, 2442, 2447, 2452, 2457, 2462, 2467 and 2472 MHz<br>- for Japan: 2412, 2417, 2422, 2427, 2432, 2437, 2442, 2447, 2452, 2457, 2462, 2467, 2472 and 2484 MHz |
| Peak Output Power: | < 32 mW rms power (15 dBm) |
| RF Power Density: | < 8 dBm/3kHz |
| Antenna (indoor): | e.g. External, e.g. Range Extender AIN24-OD-0202:<br>- Gain 0 dBi<br>- Polarization diversity Hor/Vert. |
| Spurious Emissions etc: | Satisfies e.g. the USA Federal Comm. Commission (FCC) rules Part 15.247 and requirements of ETS EN 300 328 |