SPECIFICATIONS

Of PCMCIA Type II 802.11b Card:

802CI2

Ver. 2A
Date: 8/09/01

Contents:

Device Overall Description

Device Overall Description

The 802CI2 is designed to provide wireless LAN function on a PCMCIA Type II Extended form factor. The wireless LAN function is based on Intersil Prism 2.5 chipset, which implements the full IEEE802.11b standard date rates up to 11Mbps.

802.11 Wireless LAN

Features

- Intersil Prism II.V chipset
- IEEE802.11 Direct Sequence Spread Spetrum (DSSS)
- IEEE802.11 Standard Data Rates: 1, 2, 5.5 and 11Mbps
- Full Implementation of the MAC Protocol Specified in IEEE Standards 802.11-1999 and 802.11b
- Internal Encryption Engine Executes IEEE802.11 WEP
- 128-bit WEP encryption, backward compatible with 64-bit solutions.
- Support BSS (Infrastruture mode) and IBSS (Ad hoc mode).
- Support BSS and IBSS operation under Distributed Coordination Function (DCF) and Ponit Coordination Function (PCF)
- Support Psuedo IBSS mode which allows two computers to communicate in Ad Hoc configuration and allows backward compatibility with previous generation of Intersil products.
- Onboard Diversity Antenna Switch
- Onboard Microstrip Antenna

Specification Compliance

- IEEE 802.11b
- PCMCIA spec. 5.1

Form factor

- PCMCIA Type II Extended with 3.3V Keyed
- Weight 1.4 oz
- Dimension: 114mm x 54mm x 5mm (LxWxH)

802.11 Wireless LAN Block Diagram

ICW3873B:	Intersil, Wireless LAN integrated Medium Access Controller with Baseband Processor
ICW3783:	Intersil, I/Q Modulator/Demodulator and Synthesizer
ICW3183:	Intersil, 748MHz Voltage Controlled Oscillator
ICW3685:	Intersil, 2.4GHz RF/IF Converter and Synthesizer
ICW3984:	Intersil, 2.4GHz Power Amp and Detector
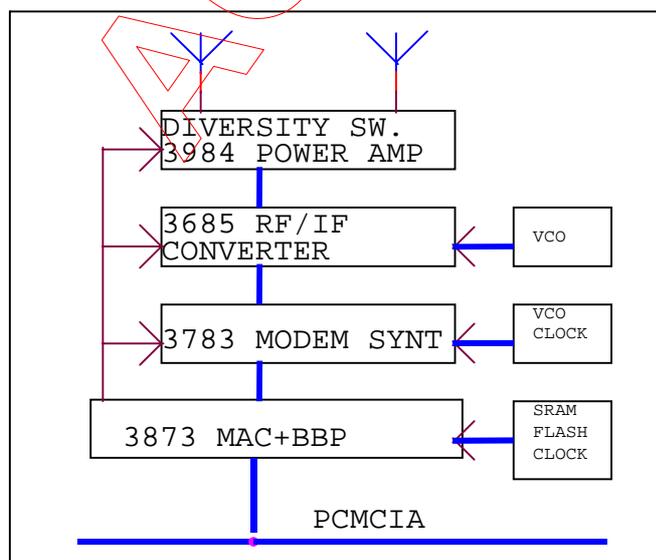
Modulation Methods

	Modulation	spec.
1 Mbps	DBPSK	802.11
2 Mbps	DQPSK	802.11
5.5 Mbps	CCK	802.11b
11 Mbps	CCK	802.11b

Channel Assignment

Channel	Frequency	FCC	IC	ETSI	France	Japan	
1	2412MHz	X	X	X		X	
2	2417MHz	X	X	X		X	
3	2422MHz	X	X	X		X	
4	2427MHz	X	X	X		X	
5	2432MHz	X	X	X		X	
6	2437MHz	X	X	X		X	
7	2442MHz	X	X	X		X	
8	2447MHz	X	X	X		X	
9	2452MHz	X	X	X		X	
10	2457MHz	X	X	X	X	X	
11	2462MHz	X	X	X	X	X	
12	2467MHz			X	X	X	
13	2472MHz			X	X	X	
14	2484MHz					X	

Many countries and region are currently revising the channel assignment.

Security (WEP Key)

Support the IEEE 802.11b compatible 64 bit WEP in all data rate modes.
Support 128 bit 128RC4 algorithm in all data rate modes.

RF Characteristics

RF Characteristics	Minimum	Typical	Maximum	Units
Form Factor		PCMCIA II Extended		
PC Interface		16-bit PCMCIA		
Plug and Play Compatible		Yes		
Access Point Capable		Yes		
Internal Antenna Impedance		50		ohms
Ambient Operating Temperature Range	0		70	C
Storage Temperature Range	-20		+85	C
Supply Voltage (3.3 V only)	3.0	3.3	3.6	V
RX Supply Current (at 3.3 V)		235		mA
TX Supply Current (at 3.3 V)		280		mA
802.11 Sleep Supply Current		10	20	mA
Initialization Supply Current			70	mA
RX Adjacent Channel Rejection	35			dB
RX Sensitivity, 1 Mbps		-90	-87	dBm
RX Sensitivity, 2 Mbps		-85	-83	dBm
RX Sensitivity, 5 Mbps		-84	-82	dBm
RX Sensitivity, 11 Mbps		-82	-80	dBm
Diversity Isolation	15	20		dB
TX Output Power	+13.5	15		dBm
TX Carrier Suppression	15			dB
TX Spectral Mask, 1st side-lobe			-30	dBc
TX Spectral Mask, 2nd side-lobe			-50	dBc
1 Mbps Multipath Tolerance	500 nsec			802.11
2 Mbps Multipath Tolerance	500 nsec			802.11
5.5 Mbps Multipath Tolerance	200 nsec	225 nsec		802.11
11 Mbps Multipath Tolerance	100 nsec	120 nsec		802.11
Maximum input Level		4dbm		
Over-voltage protection		+17dbm		
Dual Antenna Diversity, Short Preamble		BBP HW		
Dual Antenna Diversity, Long Preamble		BBP HW		
Preamble Length		Short/Long		
SRAM		128K X 16		
Serial Flash		128KX8		
802.11 Compliance		Compliant		

Note: Sensitivity based upon 1 kbyte packet length, 8% PER, single antenna driven, diversity enabled.
Note: Adjacent channel rejection based upon 1 kbyte packet length, 8% PER, 25 MHz jammer offset.
Note: Multipath tolerance based upon 1 kbyte packet length, 8% PER, signal level > -60 dBm, single antenna driven, diversity enabled, broadcast packets.
Note: All measurements at the end of 6" of cable through Murata Connector with local diversity option.

Software & OS support

OS	Driver
Win95, OSR2	NDIS4
NT4	NDIS4
Win98	NDIS5
Windows Millennium	NDIS5
Win2000	NDIS5
WinCE	Available
User Configuration Utility	Available

Regulation

US   FCC 15.247
Canada RSS
Europe ETSI 300 826 11:1997
        ETSI 300 328 11:1996, 2nd Edition
        ETSI 300 328 A1 07:1997, 2nd Edition
        ERC/DEC/(96) 17, ERC Decision of 1 November 1996
        CE Mark
Japan   Telec
Others upon requested

Interoperability

Actiontec is an active member of Wireless Ethernet Compatibility Alliance (WECA).
All Actiontec 802.11b Wireless product will be certified by WECA Wi-fi test to assure interoperability between vendor's of 802.11b.

Operating Conditions

Voltage Range	3.3V +-0.3V
Operating Temperature Range	0°C - 60°C
Storage Temperature Range	-20°C - 85°C
Relative Humidity during Operating	95%
Relative Humidity during Storage	95%