ActionTec

Expanding Your World of Data Communications

SPECIFICATIONS

Of PCMCIA Type II 802.11b Card:

802CI3

Ver. 0.2
Date: 2/01/04

Contents:

Device Overall Description

The 802CI3 is designed to provide wireless LAN function on a PCMCIA Type II Extended form factor.
The wireless LAN function is based on Intersil Prism3 chipset, which implements the full IEEE802.11b standard date rates up to 11Mbps.

802.11 Wireless LAN

Features

- Intersil Prism3 chipset
- IEEE802.11 Direct Sequence Spread Spectrum (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 (Infrastructure mode) and IBSS (Ad hoc mode).
- Support BSS and IBSS operation under Distributed Coordination Function (DCF) and Point Coordination Function (PCF)
- Support Pseudo 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
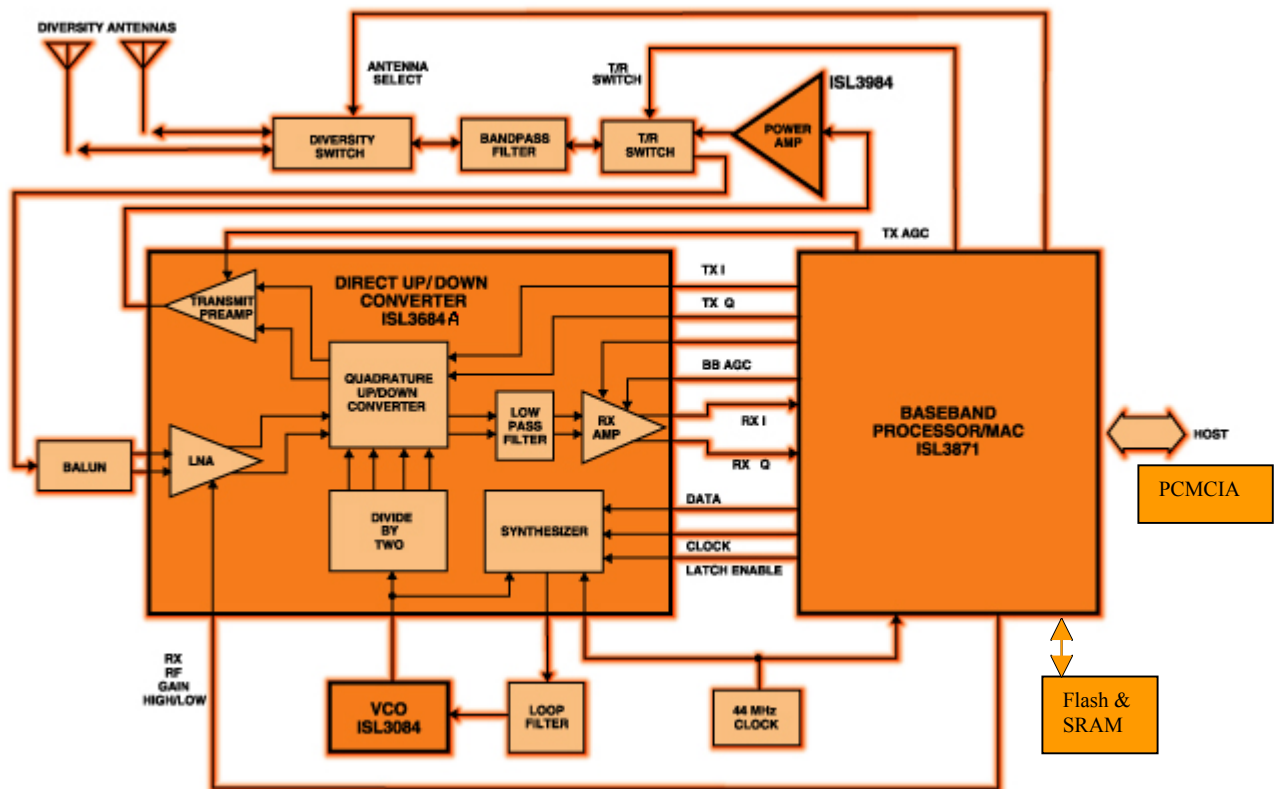- Weight 1.4 oz
- Dimension: 119mm x 54mm x 5mm (LxWxH)

802.11 Wireless LAN Block Diagram

ISL3871IK18:　　Intersil, Wireless LAN integrated Medium Access Controller with Baseband Processor
ISL3084:　　　　Intersil, 2.4GHz Voltage Controlled Oscillator
ISL3684A:　　　Intersil, 2.4GHz Direct Up/Down Converter Single chip PHY
ISL3984:　　　　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	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	
11	2462MHz	X	X	X	X	
12	2467MHz	X	X	X	X	
13	2472MHz	X	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		65	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)		260		mA
TX Supply Current (at 3.3 V)		290		mA
802.11 Sleep Supply Current		50		mA
Initialization Supply Current		140		mA
RX Adjacent Channel Rejection	43.0	42.6	42.0	dB
RX Sensitivity, 1 Mbps		-90	-89	dBm
RX Sensitivity, 2 Mbps		-87	-85	dBm
RX Sensitivity, 5 Mbps		-85	-83	dBm
RX Sensitivity, 11 Mbps		-83	-81	dBm
Diversity Isolation	23.0	25.2	27.0	dB
TX Output Power (including antenna gain)		13		dBm
TX Carrier Suppression	27.06	33.34	34.95	dB
TX Spectral Mask, 1st side-lobe			-30	dBc
TX Spectral Mask, 2nd side-lobe			-50	dBc
1 Mbps Multipath Tolerance	290.0	290.0	290.0	802.11
2 Mbps Multipath Tolerance	290.0	290.0	290.0	802.11
5.5 Mbps Multipath Tolerance	164.0	164.0	164.0	802.11
11 Mbps Multipath Tolerance	75.0	81.0	85.0	802.11
Maximum input Level		4dbm		
Over-voltage protection		+17dbm		
Dual Antenna Diversity, Short Preamble		BBP SW		
Dual Antenna Diversity, Long Preamble		BBP SW		
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
WinXP	NDIS5.1
User Configuration Utility	Available

Regulation

US   FCC 15.247
Canada RSS 210
Europe EN 300 328-2: 2001
        EN 301 489-17: 2002
        EN 60950: 2002
Japan   ARIB STD-T66
Others Upon request

Interoperability

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

Operating Conditions

Voltage Range	3.3V +-0.3V
Operating Temperature Range	0°C - 65°C
Storage Temperature Range	-20°C - 85°C
Relative Humidity during Operating	95%
Relative Humidity during Storage	95%