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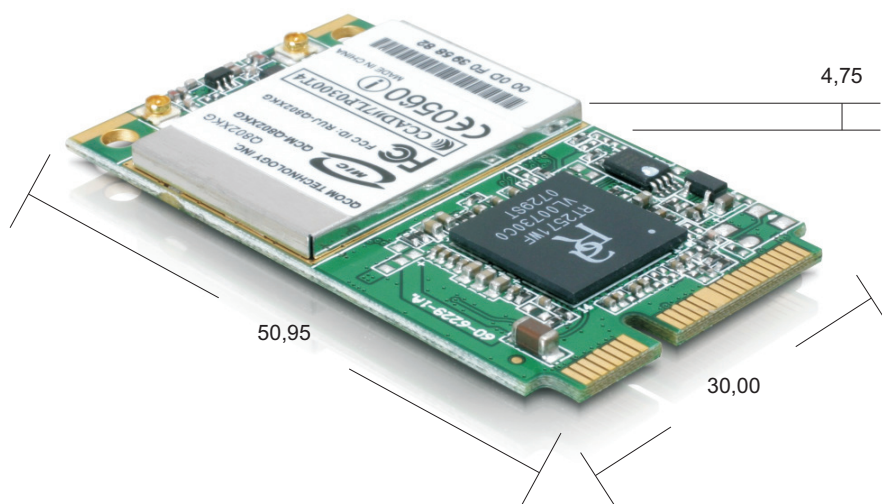industry

Specification

95801

Delock industry WLAN PCI Express 54 Mbs module

4,75

50,95

30,00

date: 24.03.2009

Specification

95801

Delock industry WLAN PCI Express 54 Mbs module

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Specification

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Device Overall Description

The 95801 is designed to provide wireless LAN function on a small form factor with USB interface. The wireless LAN function is based on Ralink RT2571W MAC/BBP, RT2528 transceiver and high gain power amplifier, which implements the full IEEE802.11b/g standard date rates up to 54Mbps.

802.11 Wireless LAN Features

- Ralink RT2571W MAC/BBP with RT2528 Transceiver
- Support IEEE 802.11b compliant DBPSK, DQPSK, CCK modulation
- IEEE802.11b Standard Data Rates: 1, 2, 5.5 and 11Mbps.
- Support IEEE 802.11g compliant DSSS, CCK, OFDM modulation
- IEEE802.11g Standard Data Rates: 6, 9, 12, 18, 24, 36, 48, 54Mbps
- Embedded WEP (64 or 128 bit) engine for enciphering/deciphering of wireless data
- Support TKIP and AES
- Host Interface supports USB 2.0

Specification Compliance
- IEEE 802.11b/g
- USB spec. 2.0

Form factor
- Weight 0.25 oz (7g)
- 50.95mm Length X 30mm Width X 4.75mm Height
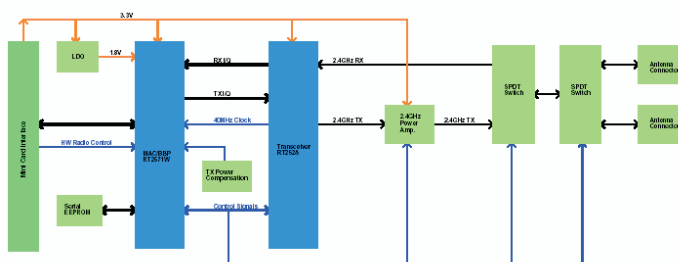
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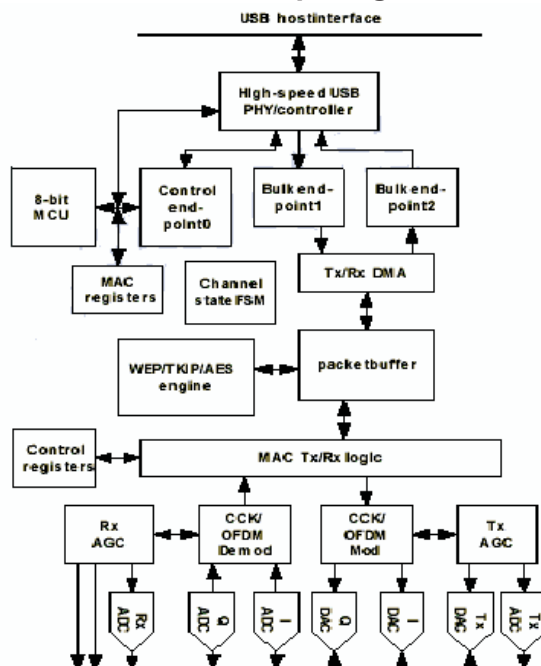Delock industry WLAN PCI Express 54 Mbs module

802.11 wireless LAN block diagram

RT2571W: Ralink, wireless LAN integrated medium access controller with baseband processor
RT2528 : Ralink, 2.4GHz single chip transceiver

Ralink RT2571W chip diagram

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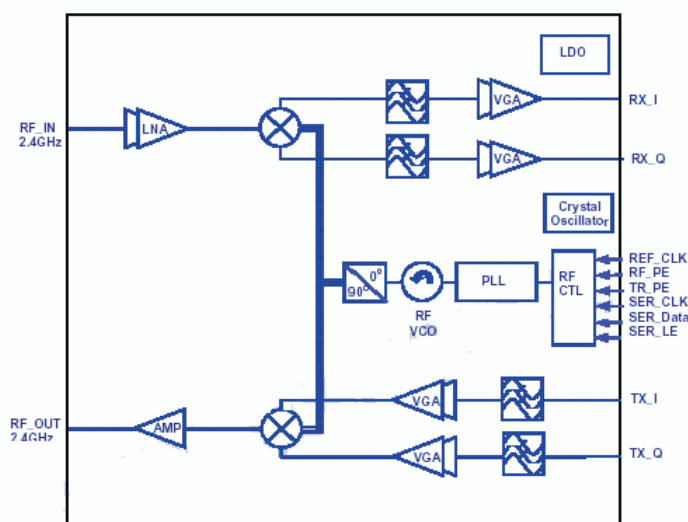Delock industry WLAN PCI Express 54 Mbs module

Ralink RT2528 chip diagram

Modulation methods

Data Bit rate	modulation and encoding rate
802.11b CCK modes	
1Mbs	BPSK
2Mbs	QPSK
5,5Mbs	QPSK
11Mbs	QPSK
802.11g modes	
6Mbs	BPSK
9Mbs	BPSK
12Mbs	QPSK
18Mbs	QPSK
24Mbs	16QAM
36Mbs	16QAM
48Mbs	64QAM
54Mbs	64QAM

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Channel assignment

Channel	Channel frequency	FCC (US)	IC (CA)	ETSI (EU)	Japan JP)
1	2412 Mhz	x	x	x	x
2	2417 Mhz	x	x	x	x
3	2422 Mhz	x	x	x	x
4	2427 Mhz	x	x	x	x
5	2432 Mhz	x	x	x	x
6	2437 Mhz	x	x	x	x
7	2442 Mhz	x	x	x	x
8	2447 Mhz	x	x	x	x
9	2452 Mhz	x	x	x	x
10	2457 Mhz	x	x	x	x
11	2462 Mhz	x	x	x	x
12	2467 Mhz			x	x
13	2472 Mhz			x	x
14	2484 Mhz				x

KEY:
US = United States, CA = Canada, EU = European Countries (except France and Spain)
JP = Japan
Many countries and region are currently revising the channel assignment.

Security
- Support 64 bit WEP in all data rate modes.
- Support 128 bit 128RC4 algorithm in all data rate modes.
- Support TKIP, WPA, WPA2, 802.11i

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RF Characteristics

RF characteristics	minimum	typical	maximum	units
PC interface		mini PCIe		
Plug and Play compatible		no		
internal antenna impedance		50		ohms
environment temperature range	0		65	°C
storage temperature range	-10		85	°C
supply voltage	3,00	3,30	3,60	V
RX supply current (CCK)		294		mA
RX supply current (OFDM)		299		mA
TX supply current (CCK)		381		mA
TX supply current (OFDM)		330		mA
WMM power save mode		124		mA
RX sensitivity, 11 Mbps(CCK)		-84		dBm
RX sensitivity, 48/54Mbps(OFDM)		-70		dBm
TX sutput power(CCK)		18		dBm
TX output power(OFDM)		14		dBm
TX carrier suppression				dB
TX spectral mask (CCK)		PASS		
TX spectral mask (OFDM)		PASS		
preamble length		long/short		

Note: Sensitivity based upon 1 kbyte packet length, 8% PER(CCK), single antenna driven, diversity disabled.
Note: Sensitivity based upon 1 kbyte packet length, 10% PER(OFDM), single antenna driven, diversity disabled.
Note: All measurements at the end of 6" of cable through Murata Connector with local diversity option.

OS	driver
Win2000	available
WinXP	available
WinME	available
Win98	available
Win Vista	available
Win7	available
Linux	available
MAC OS 10.3	available
WinCE 5.0+6.0	available

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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	max. 95% (non-condensing)
relative humidity during storage	max. 95% (non-condensing)

Antenna Connector

Connector	Vendor	Part#
Antenna *1	Hirose	CL331-0471-0-10 (U FL-R-SMT), or compliance

LED status

LED status	WLAN card activity
LED on	Associated, and authenticated but not transmitting or receiving
LED Slow Blink	Scanning for AP
LED Intermittent Blink	Activity proportional to transmitting/receiving speed
LED off	Radio off

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Host Interface Pin Definition And Mechanical Drawing

Pin #	Name	Pin #	Name
51	Reserved*	52	+3.3V
49	Reserved*	50	GND
47	Reserved*	48	+1.5V
45	Reserved*	46	LED_WPAN#
43	Reserved*	44	LED_WLAN#
41	Reserved*	42	LED_WWAN#
39	Reserved*	40	GND
37	Reserved*	38	USB_D+
35	GND	36	USB_D-
33	PETp0	34	GND
31	PETn0	32	SMB_DATA
29	GND	30	SMB_CLK
27	GND	28	+1.5V
25	PERp0	26	GND
23	PERn0	24	+3.3Vaux
21	GND	22	PERST#
19	Reserved*** (UIM_C4)	20	W_DISABLE#
17	Reserved*** (UIM_C8)	18	GND
Mechanical Key			
15	GND	16	UIM_VPP
13	REFCLK+	14	UIM_RESET
11	REFCLK-	12	UIM_CLK
9	GND	10	UIM_DATA
7	CLKREQ#	8	UIM_PWR
5	Reserved**	6	1.5V
3	Reserved**	4	GND
1	WAKE#	2	3.3V

Note:
Pin 44 is low active (connect to LED CATHODE pin; max input voltage 3.3V)
Pin 20 is high voltage to enable radio operation, low to disable radio operation.

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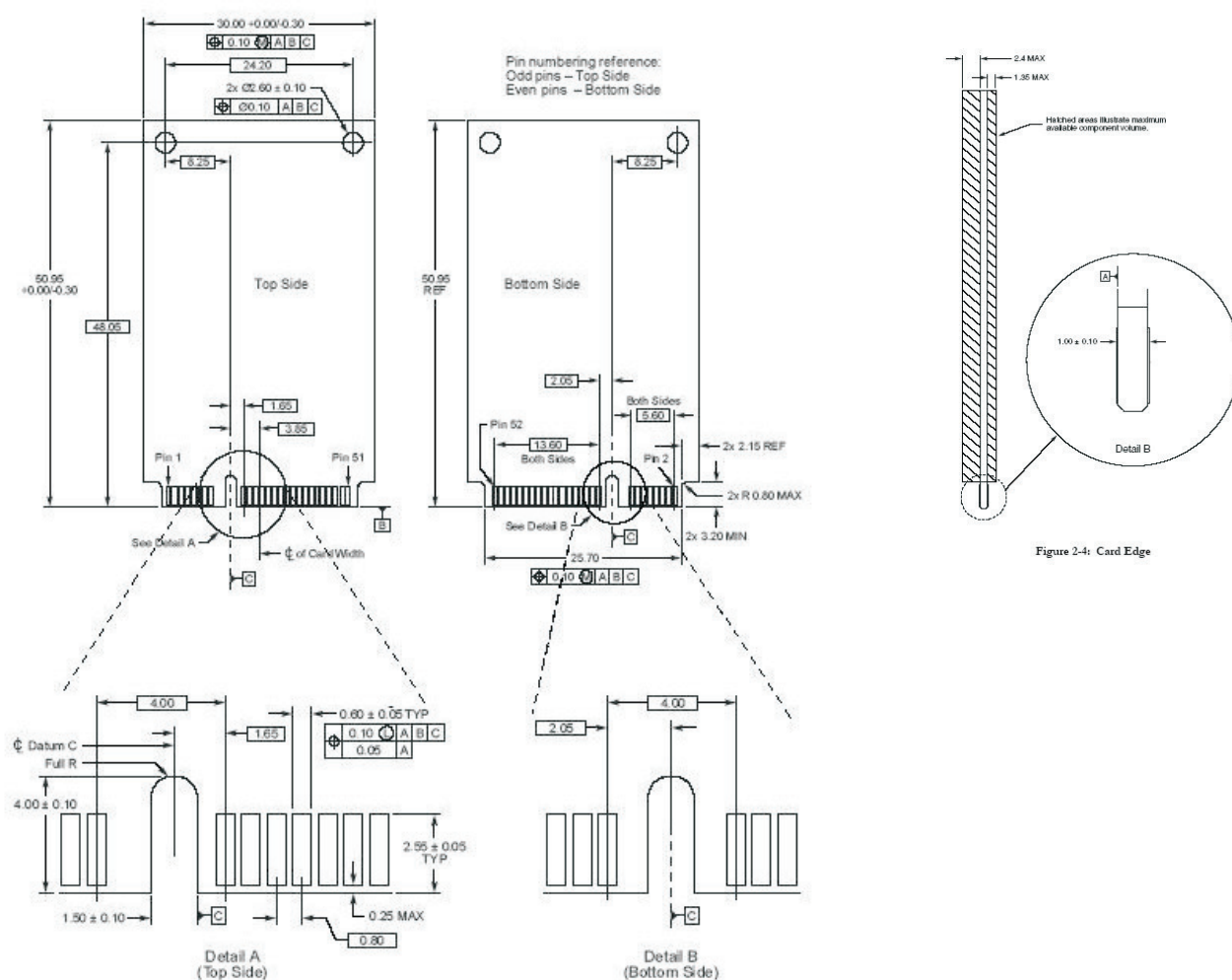Delock industry WLAN PCI Express 54 Mbs module

Mechanical Drawing

Card Top and Bottom Details A and B