



SPECIFICATIONS

802.11 b/g/n Wireless PCI Express Mini Card

Q802XKN2
(802.11n Draft 2.0)

Ver. 1A
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Approved by :

Contents:

Device Overall Description

802.11 Wireless LAN

- Features
- Block Diagram
- Modulation Methods
- Channel Assignment
- Security (WEP Key)
- Software & OS support
- Operating Conditions
- Antenna Connector

Host Interface Pin Definition And Mechanic Drawing

Device Overall Description

The Q802XKN2 is designed to provide wireless LAN function on a small form factor with PCI Express interface. The wireless LAN function is based on Ralink RT2790 MAC/BBP, RT2720 transceiver and high gain power amplifier, fully comply with current draft IEEE 802.11n and IEEE 802.11 b/g standards.

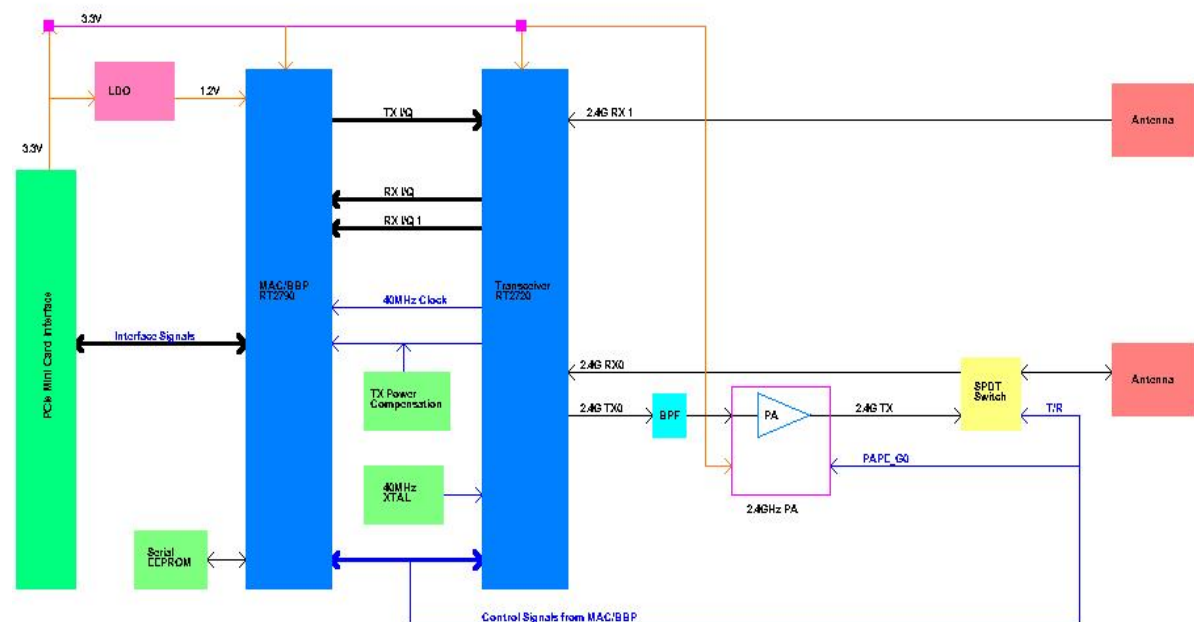
Features

- Ralink RT2790 MAC/BBP with RT2720 Transceiver
- 1T2R Modes
- 11b: 1,2,5.5,11Mbps
- 11g: 6,9,12,24,36,48,54Mbps
- 11n: Legacy, Mixed and Green Field modes, support 20MHz/40MHz Bandwidth,MCS0-7(up to 150Mbps PHY data)
- RTS/CTS
- MSDU/PSDU aggregation
- Block Ack
- Reverse Direction Data Flow
- Link Adaptation
- Hardware WEP, TKIP, AES Engines
- EAP – TLS, TTLS, LEAP, PEAP
- WPA1/2 – PSK (WPA Home)
- WPA1/2 – 802.1x (WPA Enterprise)
- Roaming

802.11 Wireless LAN Block Diagram

RT2790: Ralink, Wireless LAN Integrated Medium Access Controller with Baseband Processor

RT2720: Ralink, 2.4GHz Single chip Transceiver



Channel Assignment

Channel	Frequency	FCC (US)	IC (CA)	ETSI (EU)	Japan (JP)
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
13	2472MHz			X	X
14	2484MHz				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.

X = Supported

Security

- **Complete Security Features - WEP 64/128, WPA, WPA2, 802.1x, and 802.11i**
- **Cisco CCS Compliant**

Certification

- **WHQL**
- **Cisco CCX**
- **Wi-Fi Certification: 802.11 b/g, 802.11n, WPA, WPA2, WMM, WMM-PS**

Software & OS support

Operating System	Driver
Windows 98SE	Available
Windows Me	Available
Windows 2000 / XP	Available
Windows Vista	Available
Linux 2.6.x	Available
MAC OS 10.3 & 10.4	Available
Wince 5.0 & 6.0	Available

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 *2	Hirose	CL331-0471-0-10 (U.FL-R-SMT), or compliance

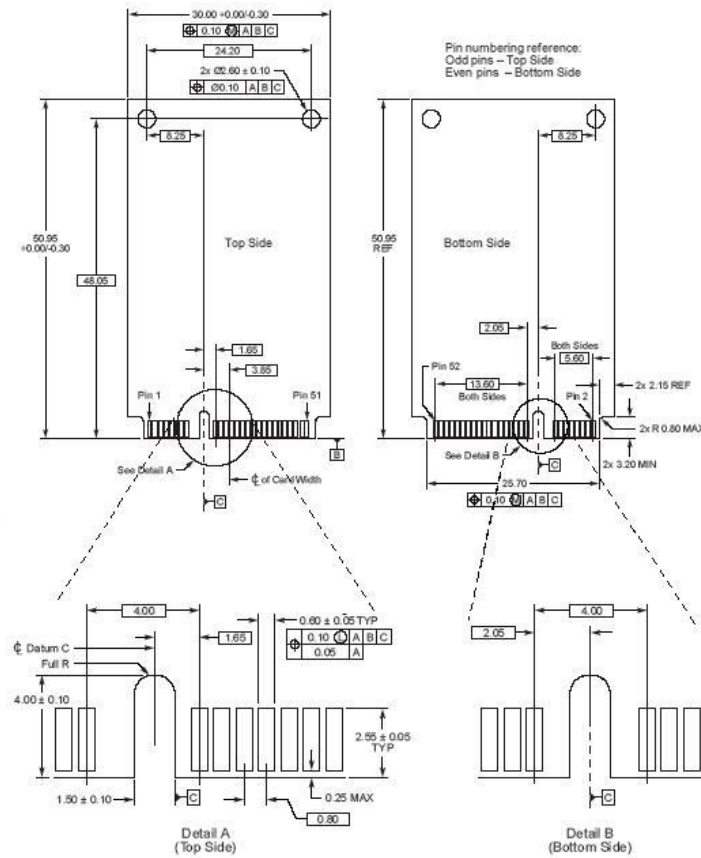
Pin Definition

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

Mechanical Drawing

Dimension: 50.95 (L) x 30.00(W) mm



Card Top and Bottom Details A and B

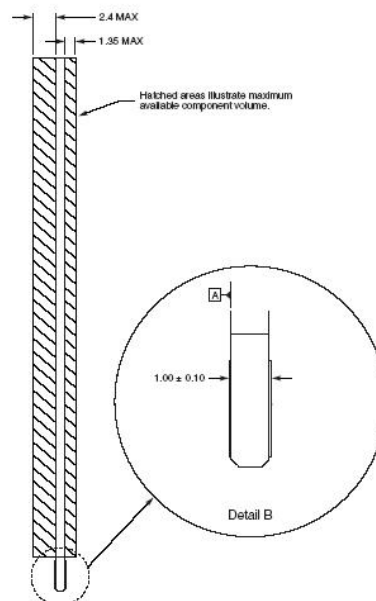


Figure 2-4: Card Edge

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