

PRODUCT SPECIFICATION

802.11n, 2.4G 2T2R Wireless LAN PCI Express Half Size Mini Card

WN6608LH-E2

Version 1.1

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Change History

Revision	Date	Author	Change List
Version1.0	2010/11/17	Ben J. Chen	Preliminary
Version1.1	2011/05/27	Ben J. Chen	1. Update Block Diagram 2. Update Label Drawing 3. Update Module Photo 4. Update EEPROM Information

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Half Size Mini Card**

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Version 1.1

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(Please Sign Back by FAX. For Confirming the Spec Only, not an Official Agreement for OEM/ODM Business)

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PRODUCT FEATURES

WI-FI FEATURE

- Operate at ISM frequency Band (2.4GHz)
- IEEE Standards Support, 802.11b, 802.11g and 802.11n
- The WN6608LH-E2 is developed using single-chip designed by Realtek Semiconductor Corp.
- Mini PCIe Express interface
- Enterprise level security supporting: WPA, WPA2
- Support 2 transmission and 2 receiving, transmission rate can up to 300Mbps (Physical Rate) in downstream and upstream
- Full feature software utility for easy configuration and management
- RoHS compliance
- Low Halogen compliance

PRODUCT SPECIFICATIONS

MAIN CHIPSET

Realtek RTL8192CE

FUNCTIONAL SPECIFICATIONS

Wi-Fi Function	
Standard	IEEE802.11b; IEEE 802.11g; IEEE 802.11n
Bus Interface	PCI Express
Data Rate	802.11b: 11, 5.5, 2, 1 Mbps 802.11g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps 802.11n: MCS 0 to 15 for HT20MHz MCS 0 to 15 for HT40MHz
Media Access Control	CSMA/CA with ACK
Modulation Techniques	802.11b: CCK, DQPSK, DBPSK 802.11g: 64QAM, 16QAM, QPSK, BPSK 802.11n: BPSK, QPSK, 16QAM, 64QAM
Network Architecture	Ad-hoc mode (Peer-to-Peer) Infrastructure mode
Operation Channel	2.4GHz 11: (Ch. 1-11) – United States 13: (Ch. 1-13) – Europe 14: (Ch. 1-14) – Japan
Frequency Range	802.11bg 2.412 ~ 2.4835 GHz 802.11b: 16 dBm@11Mbps 802.11g: 16 dBm@ 6Mbps 14 dBm@54Mbps 802.11n: 20MHz: 16 dBm@MCS0 13.5 dBm@MCS7 13.5 dBm@MCS15 40MHz: 13.5 dBm@MCS0 13.5 dBm@MCS7 13.5 dBm@MCS15
Transmit Output Power – 2x2 (Tolerance: +1,-1.5dBm)	
Receive Sensitivity	802.11b: -82 dBm@11 Mbps 802.11g: -74 dBm@54Mbps 802.11n:

	20MHz -71 dBm@MCS7 -67 dBm@MCS15 40MHz -69 dBm@MCS7 -64 dBm@MCS15
Security	WPA, WPA2, WPS, IEEE 802.11x, IEEE 802.11i
Operating Voltage	3.3 V \pm 9% I/O supply voltage
OS supported	Microsoft Windows XP/Vista/Win7
Power Consumption	<i>TX Mode:</i> 250 mA <i>RX Mode:</i> 220 mA <i>Associate Idle Mode::</i> 30 mA <i>Un-associate Idle Mode:</i> 3 mA <i>Radio Off:</i> 3 mA
Antenna Type	Dual Antenna Connectors

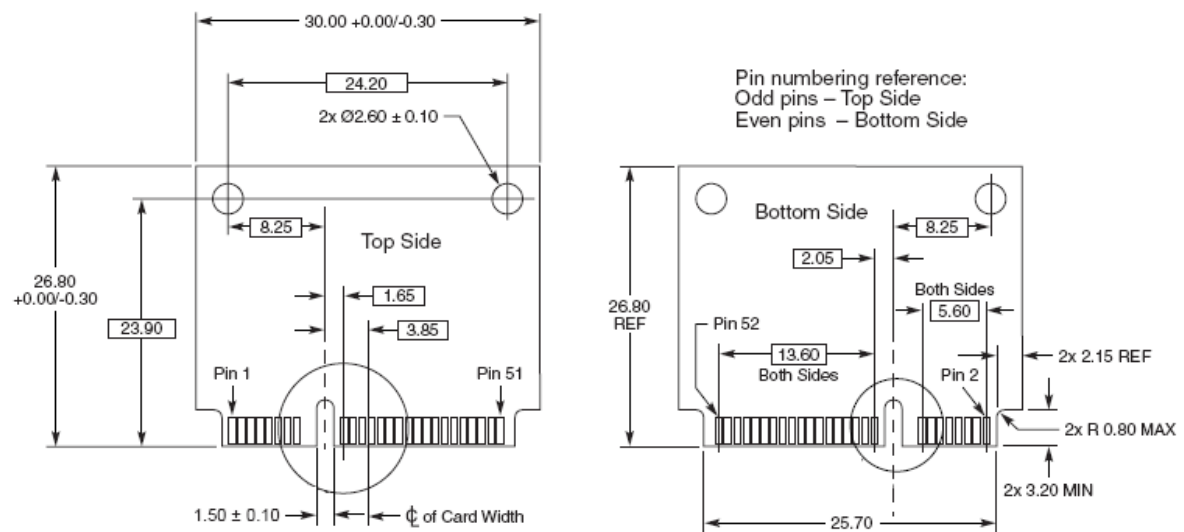
PIN ASSIGNMENT

Pin.	Pin Define	Status	Pin.	Pin Define	Status
1	WAKE#	YES	2	+3.3Vaux	YES
3	COEX1	YES (*1)	4	GND	YES
5	COEX1	YES (*2)	6	+1.5V	NC
7	CLK_REQ#	YES	8	UIM_PWR	NC
9	GND	YES	10	UIM_DATA	NC
11	REFCLK-	YES	12	UIM_CLK	NC
13	REFCLK+	YES	14	UIM_RESET	NC
15	GND	YES	16	UIM_VPP	NC
17	RESERVED	NC	18	GND	YES
19	RESERVED	NC	20	W_DISABLE#	YES
21	GND	YES	22	PERST#	YES
23	PERn0	YES	24	+3.3Vaux	NC
25	PERp0	YES	26	GND	YES
27	GND	YES	28	+1.5V	NC
29	GND	YES	30	SMB_CLK	NC
31	PETn0	YES	32	SMB_DATA	NC
33	PETp0	YES	34	GND	YES
35	GND	YES	36	USB_D-	NC
37	GND	YES	38	USB_D+	NC
39	3.3Vaux	NC	40	NC	NC
41	3.3Vaux	NC	42	LED_WWAN#	NC
43	GND	YES	44	LED_WLAN#	YES
45	RESERVED	NC	46	LED_WPAN#	NC
47	RESERVED	NC	48	+1.5V	NC
49	RESERVED	NC	50	GND	YES
51	RESERVED	NC	52	+3.3Vaux	YES

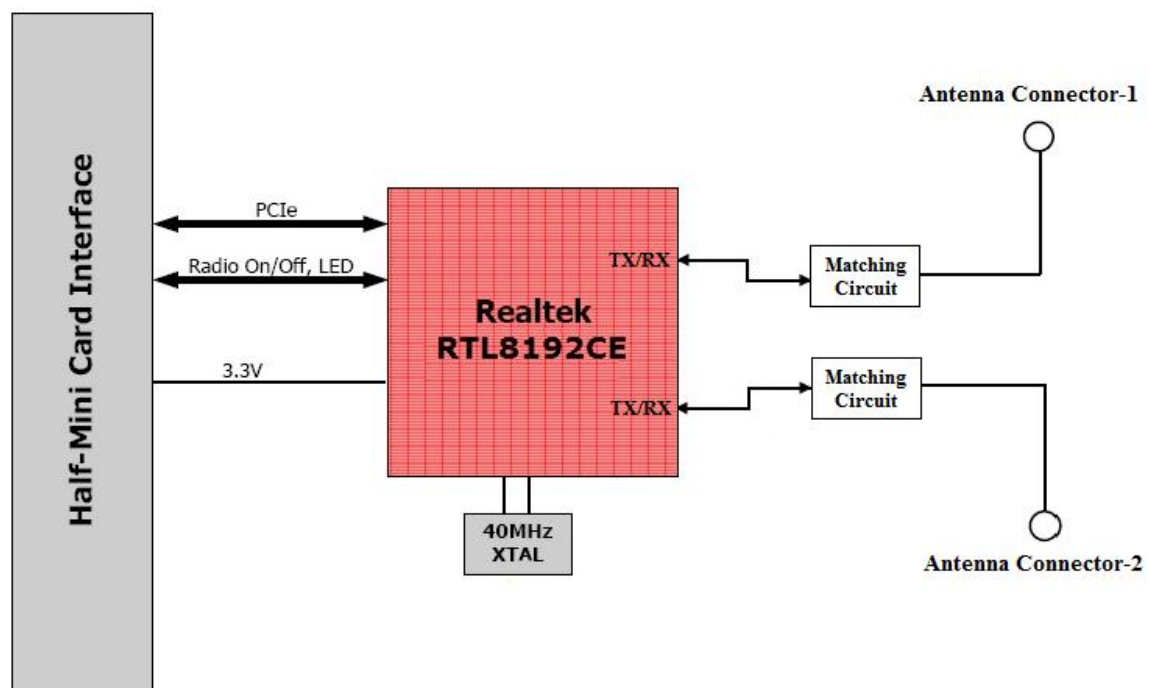
*1: WL_ACT

*2: BT_PRI

MECHANICAL



BLOCK DIAGRAM



LABEL DRAWING



MODULE PHOTO

Top Side



Bottom Side



EEPROM INFORMATION

Reg Domain	World Wide 13 Channels 1-11 with active scan, Channels 12,13 with passive scan Channel 14 with no scan
	0x0A
Customer ID	0x00
Vendor ID	0x10EC
Device ID	0x8178
SubSystem ID	0x8183
SubVendor ID	0x10EC

ENVIRONMENTAL

OPERATING

Operating Temperature: 0 to 70 °C (32 to 158 °F)

Relative Humidity: 5-90% (non-condensing)

STORAGE

Temperature: -40 to 80 °C (-40 to 176 °F)

Relevant Humidity: 5-95% (non-condensing)