WPER-172GN

802.11bgn Single-Band 1T2R

Half Mini PCIe Module



Cost-Effective WiFi Module for Embedded Solution

The WPER-172GN is powered by Ralink radio chip and features 1x2 11bgn technology for higher throughput performance, reliability and range. It is designed to meet the demanding performance requirements of critical embedded applications.

Embedded Application :

Applications include medical devices, security systems, industrial PC, PoS, digital signs, automation, handheld devices, thin client devices, Gaming machine, etc.

Key Feature :

- Ralink RT5390U
- Antenna: U.FL * 2 for 1T2R
- Data Rates: allows link speeds up to 150Mbps.
- Support Windows XP, Vista, Win7, Linux driver

Specification :

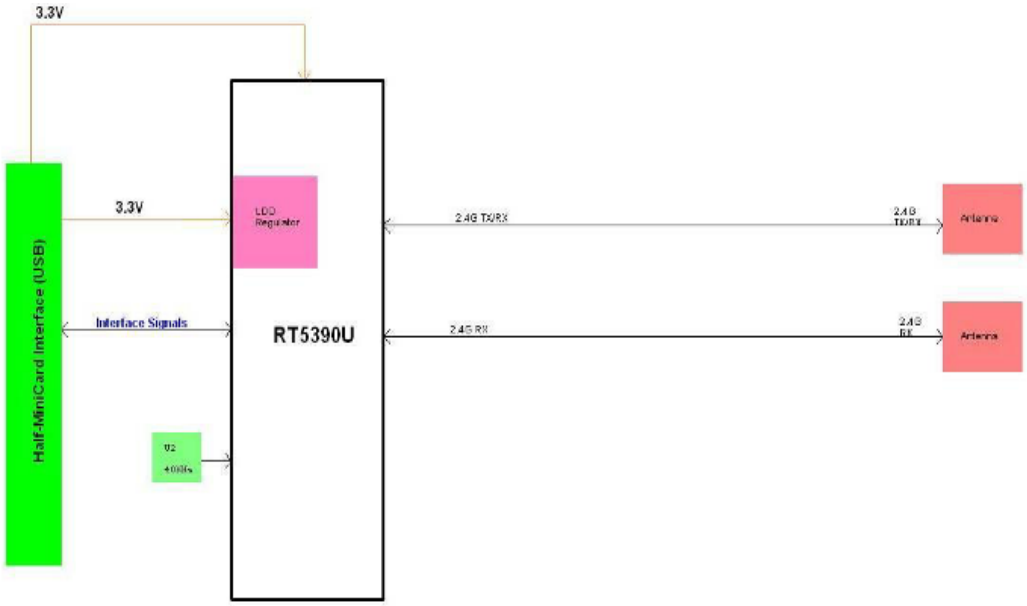
Standards:	IEEE 802.11bgn (1T2R)
Chipset:	Ralink RT5390U
Data Rate:	802.11b: 11Mbps / 802.11g: 54Mbps / 802.11n: 150Mbps
Operating Frequency:	IEEE 802.11 bgn ISM Band, 2.400GHz ~ 2.4835GHz *Subject to local regulations
Interface:	USB interface
Form Factor:	Half Mini PCI-e
Antenna:	2 x UFL connector for 1T2R
Modulation:	802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11g: OFDM (BPSK, QPSK, 16-QAM, 64-QAM) 802.11n: OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
Operating Voltage:	3.3V ± 9% I/O supply voltage
Power Consumption:	TX: 385mA / RX: 263mA
Temperature Range:	0°C to +70°C (Operating) / -40°C to +85°C (Storage)
Humidity (Non-Condensing)	5% ~ 90% (Operating) / 5% ~ 95% (Storage)
Dimension (in mm):	29.85 x 26.65 x 3.05mm
Weight (g):	≦ 3.8g
Driver Support:	Windows XP, Vista, Win7, Linux
Security	64/128-bits WEP, WPA, WPA2

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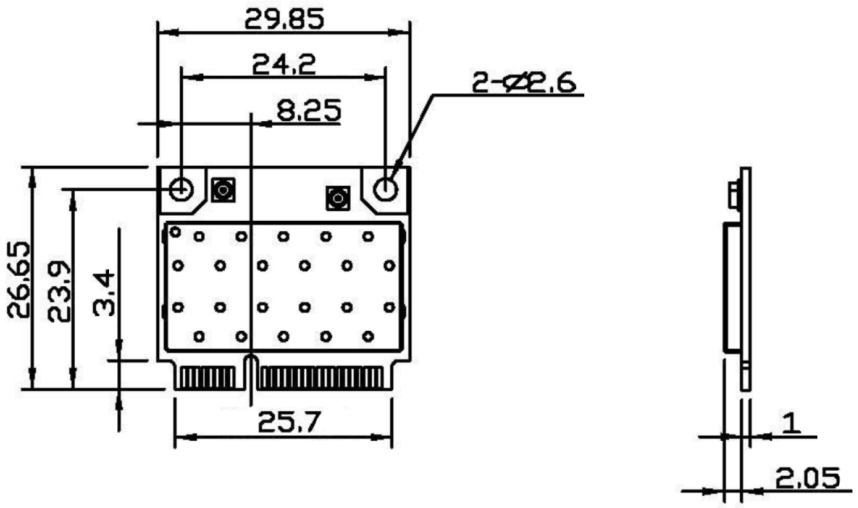
OUTPUT POWER & SENSITIVITY		
802.11g		
Data Rate	Tx ± 2dBm	Rx Sensitivity
54Mbps	15dBm	≦-70dBm

	Data Rate	Tx ± 2dBm (1TX)	Rx Sensitivity
HT20	MCS7	14dBm	≦-64dBm
HT40	MCS7	14dBm	≦-61dBm

Block Diagram



Mechanical Dimension (mm)



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Pin Assignment

Pin#	Pin Name	Description	Pin#	Pin Name	Description
1	No Connection	-	2	+3.3V	+3.3V
3	No Connection	-	4	GND	GND
5	No Connection	-	6	No Connection	-
7	No Connection	-	8	No Connection	-
9	GND	GND	10	No Connection	-
11	No Connection	-	12	No Connection	-
13	No Connection	-	14	No Connection	-
15	GND	GND	16	No Connection	-
17	No Connection	-	18	GND	GND
19	No Connection	-	20	W_DISABLE_L(OPT)	Input and active low signal. This signal is used by the system to disable radio operation on add-in cards that implement radio frequency applications. When implemented, this signal requires a pull-up resistor on the card.
21	GND	GND	22	No Connection	-
23	No Connection	-	24	No Connection	-
25	No Connection	-	26	GND	GND
27	GND	GND	28	No Connection	-
29	GND	GND	30	No Connection	-
31	No Connection	-	32	No Connection	-
33	No Connection	-	34	GND	GND
35	GND	GND	36	USB_D-	USB serial data
37	GND	GND	38	USB_D+	USB serial data
39	3.3V	+3.3V	40	GND	GND
41	3.3V	+3.3V	42	No Connection	-
43	GND	GND	44	LED_WLAN_L(OPT)	Output and open drain active low signal. This signal is used to allow the PCI Express Mini Card add-in card to provide status indicators via LED devices that will be provided by the system.
45	No Connection	-	46	No Connection	-
47	No Connection	-	48	No Connection	-
49	No Connection	-	50	GND	GND
51	No Connection	-	52	+3.3V	+3.3V

***NA→No active, OPT →Optional**

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