

Specification

Standards	IEEE 802.11ac/a/b/g/n (2T2R) Bluetooth V4.1,V4.0 LE, V3.0+HS, V2.1+EDR
Chipset	Broadcom
Data Rate	802.11b: 11Mbps / 802.11a/g: 54Mbps / 802.11n: MCS0~15/ 802.11ac: MCS0~9 Bluetooth: 1 Mbps, 2Mbps and Up to 3Mbps
Operating Frequency	IEEE 802.11 ac/a/b/g/n ISM Band, 2.400GHz~2.497GHz, 4.900GHz~5.845GHz *Subject to local regulations
Interface	PCIe: WLAN / USB: Bluetooth
Form Factor	Half Mini PCIe
Antenna	2xIPEX MHF4 connectors (Main for WIFI+BT, AUX for WIFI)
Modulation	802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11a/g: OFDM (BPSK, QPSK, 16-QAM, 64-QAM) 802.11n: OFDM (BPSK, QPSK, 16-QAM, 64-QAM) 802.11ac: OFDM (256-QAM)
Power Consumption	TX: 660mA / RX: 260mA
Operating Voltage	DC 3.3V
Operating Temperature Range	-40°C~+85°C
Storage Temperature Range	-40°C~+85°C
Humidity (Non-Condensing)	10%~95% (Operating) 5%~95% (Storing)
Dimension (in mm)	29.85mm (± 0.15mm) x 26.65mm (± 0.15mm) x 2.64mm (± 0.2mm)
Weight (g)	≤ 6g
Driver Support	Windows 10, Linux, Android
Security	64/128-bits WEP, WPA, WPA2, 802.1x

OUTPUT POWER & SENSITIVITY		
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802.11b		
Data Rate	Tx \pm 1.5dBm	Rx Sensitivity
11Mbps	14dBm	\leq -86dBm

802.11g		
Data Rate	Tx \pm 1.5dBm	Rx Sensitivity
54Mbps	15dBm	\leq -75dBm

802.11n / 2.4GHz				
HT20	Data Rate	Tx \pm 1.5dBm (1TX)	Tx \pm 1.5dBm (2TX)	Rx Sensitivity
	MCS7	13dBm	16dBm	\leq -71dBm

802.11a		
Data Rate	Tx \pm 1.5dBm (1TX)	Rx Sensitivity
54Mbps	13dBm	\leq -72dBm

802.11n / 5GHz				
HT20	Data Rate	Tx \pm 1.5dBm (1TX)	Tx \pm 1.5dBm (2TX)	Rx Sensitivity
	MCS7	12dBm	15dBm	\leq -72dBm
HT40	MCS7	12dBm	15dBm	\leq -70dBm

802.11ac				
VHT80	Data Rate	Tx \pm 1.5dBm (1TX)	Tx \pm 1.5dBm (2TX)	Rx Sensitivity
	MCS9	10dBm	13dBm	\leq -60dBm

Bluetooth		
Data Rate	Tx \pm 1.5dBm (Class 1 Device)	Rx Sensitivity
1Mbps	+0 \leq Output Power \leq +7dBm	<0.1% BR, BER at -80dBm
3Mbps	+0 \leq Output Power \leq +7dBm	<0.1% BER at -78dBm

Pin Assignment

TOP		BOT	
1	PCIE_WAKEn	VDD3V3	2
3	NC	GND	4
5	NC	NC	6
7	CLKREQ#	NC	8
9	GND	NC	10
11	REFCLK-	NC	12
13	REFCLK+	NC	14
15	GND	NC	16
17	NC	GND	18
19	NC	WL_REG_ON	20
21	GND	PCIE_PERST_L	22
23	PCIE_RDN	VDD3V3	24
25	PCIE_RDP	GND	26
27	GND	NC	28
29	GND	NC	30
31	PCIE_TDN	NC	32
33	PCIE_TDP	GND	34
35	GND	USB_D-	36
37	GND	USB_D+	38
39	VDD3V3	GND	40
41	VDD3V3	NC	42
43	GND	LED_WLAN#	44
45	NC	LED_WPAN#	46
47	NC	NC	48
49	NC#	GND	50
51	BT_REG_ON	VDD3V3	52

Pin Assignment

TOP			
Pin#	Pin Name	Type	Description
1	PCIE_WAKEn	O	PCIE wake signal
3	NC	-	No connect
5	NC	-	No connect
7	PCIE_CLKREQ#	I/O	PCIE clock request
9	GND	-	Ground connections
11	REFCLK-	I	PCIE differential clock input-Negative
13	REFCLK+	I	PCIE differential clock input-Positive
15	GND	-	Ground connections
17	NC	-	No connect

Pin Assignment

TOP			
Pin#	Pin Name	Type	Description
19	NC	-	No connect
21	GND	-	Ground connections
23	PCIE_RDN	O	PCIE receive data-Negative
25	PCIE_RDP	O	PCIE receive data-Positive
27	GND	-	Ground connections
29	GND	-	Ground connections
31	PCIE_TDN	O	PCIE transmit data-Negative
33	PCIE_TDP	O	PCIE transmit data-Positive
35	GND	-	Ground connections
37	GND	-	Ground connections
39	VDD_3V3	I	VDD system power supply input
41	VDD_3V3	I	VDD system power supply input
43	GND	-	Ground connections
45	NC	-	No connect
47	NC	-	No connect
49	NC#	O	Option WL Host wake
51	BT_REG_ON ONONON	I	Low asserting reset for Bluetooth core

Pin Assignment

BOTTOM			
Pin#	Pin Name	Type	Description
2	VDD_3V3	I	VDD system power supply input
4	GND	-	Ground connections
6	NC	-	No connect
8	NC	-	No connect
10	NC	-	No connect
12	NC	-	No connect
14	NC	-	No connect
16	NC	-	No connect
18	GND	-	Ground connections
20	WL_REG_ON	I	Low asserting reset for WiFi core
22	PCIE_PERST_L	I	PCIE host indication to reset the device
24	VDD_3V3	I	VDD system power supply input
26	GND	-	Ground connections
28	NC	-	No connect
30	NC	-	No connect
32	NC	-	No connect
34	GND	-	Ground connections
36	USB_D-	I/O	USB serial differential data Negative
38	USB_D+	I/O	USB serial differential data Positive
40	GND	-	Ground connections
42	NC	-	No connect
44	LED_WLAN#	-	WiFi LED

Pin Assignment

BOTTOM			
Pin#	Pin Name	Type	Description
46	LED_WPAN#	-	BT LED
48	NC	-	No connect
50	GND	-	Ground connections
52	VDD_3V3	I	VDD system power supply input

Certification

Dipole Ant.

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|---|--|
| <input checked="" type="checkbox"/> FCC | <input checked="" type="checkbox"/> CE (RED EN 300 328 V2.1.1 / EN 301 893 V2.1.1) |
| <input checked="" type="checkbox"/> IC | <input type="checkbox"/> MIC |
| <input type="checkbox"/> NCC | <input type="checkbox"/> ASNZS |

Ordering Information

Product Name	Part Number	Description
WPEB-263ACNI(BT)	R9701890016	11ac/a/b/g/n Industrial Grade 2T2R WiFi / BT Half Mini PCIe

Optional Accessory

Product Name	Part Number	Description
AD-103AG	R3410110203	Dipole Antenna, 2dBi 2.4GHz/5GHz, RP-SMA(M) connector
AD-302N	R3410110221	Dipole Antenna, 3dBi/2dBi 2.4G/5GHz, RP-SMA(M) connector
AD-303N	R3410110222	Dipole Antenna, 3dBi/3dBi 2.4G/5GHz, RP-SMA(M) connector
AD-305N	R3410110223	Dipole Antenna, 5dBi/5dBi 2.4G/5GHz, RP-SMA(M) connector
CBIRF-NE150	R3470300025	RF Cable, I-PEX/MHF4 to RP-SMA(F); L:150mm; Coaxial 0.81 Black
CBIRF-NE250	R3470300026	RF Cable, I-PEX/MHF4 to RP-SMA(F); L:250mm; Coaxial 0.81 Black