Wireless Module

WPEA-128N

802.11 abgn Dual-Band

3T3R Half Mini PCIe Module



High Performance PCIe Module

The WPEA-128N is powered by Qualcomm Atheros radio chip and features 3x3 11abgn for higher throughput performance, reliability and range. It is designed to meet the demanding performance requirements of critical embedded applications.

Embedded Application :

Applications include High-End Notebook and PC, Networking Equipment(Access Point, Router, Set-Top Box, and Gateway), security systems, Digital Multimedia devices, Gaming Machine, and many more.

Key Feature :

- Qualcomm Atheros QCA9380
- Antenna: U.FL * 3 for 3T3R
- Data Rates: allows link speeds up to 450Mbps.
- Support Windows XP/Vista/Win7/Linux driver

Specification :

Standards:	IEEE 802.11abgn (3T3R)
Chipset:	Qualcomm Atheros QCA9380-AL1A
Data Rate:	802.11b: 11Mbps / 802.11a/g: 54Mbps / 802.11n: 300Mbps
Operating Frequency:	IEEE 802.11 abgn ISM Band, 2.400GHz ~ 2.4835GHz, 5.180MHz ~ 5.825MHz *Subject to local regulations
Interface:	Mini PCI Express
Form Factor:	Half Mini PCI-e
Antenna:	3 x UFL connector for 3T3R
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)
Operating Voltage:	3.3V
Temperature Range:	0°C to +60°C (Operating) / -20°C to +70°C (Storage)
Humidity (Non-Condensing):	Operating Humidity (non-condensing): 10% ~ 90% Storage Humidity (non-condensing): 5% ~ 90%
Power Consumption:	Continue TX: Max 760mA / Continue RX: Max 220mA
Dimension (in mm):	26.8 x 29.8 x 4.25 mm
Weight (g):	≦9g
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	16dBm	≦-82dBm

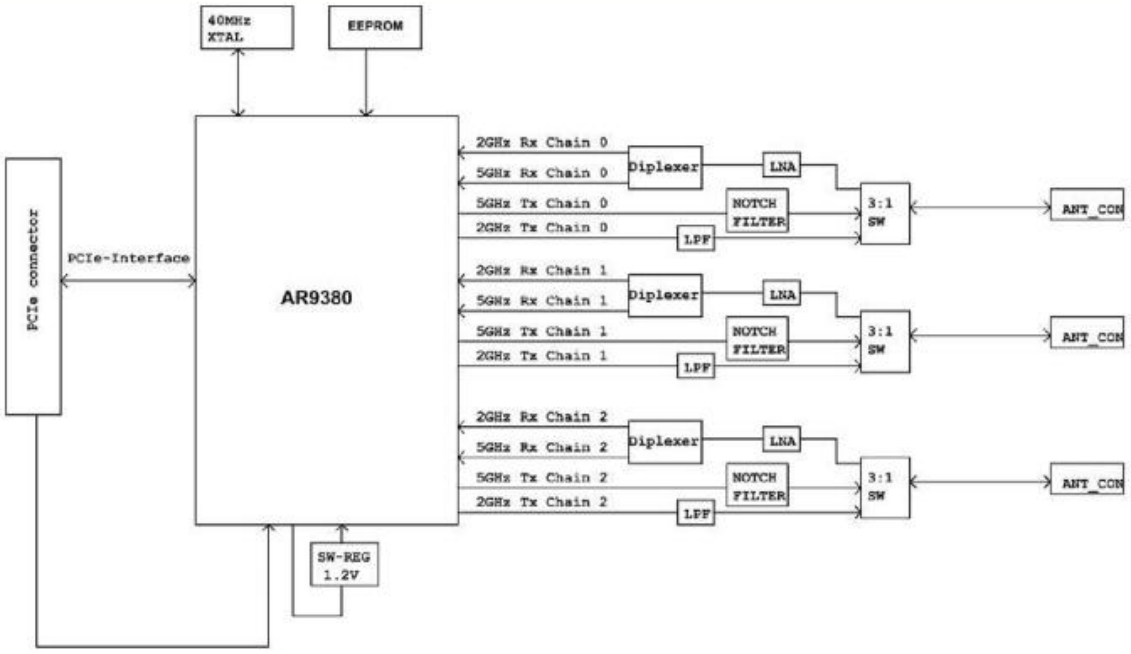
802.11n / 2.4GHz				
HT20	**Data Rate**	**Tx ± 2dBm (1TX)**	**Tx ± 2dBm (3TX)**	**Rx Sensitivity**
	MCS7	15dBm	20dBm	≦- 79dBm
HT40	MCS7	14dBm	19dBm	≦- 76dBm

802.11a		
Data Rate	**Tx ± 2dBm**	**Rx Sensitivity**
54Mbps	12dBm	≦-81dBm

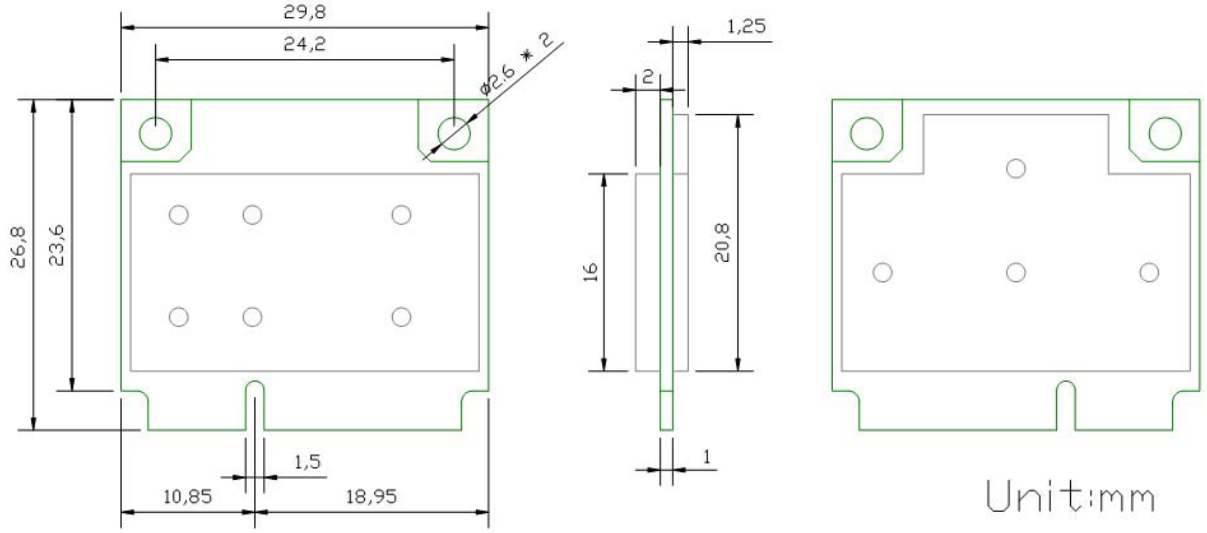
802.11n / 5GHz				
HT20	**Data Rate**	**Tx ± 2dBm (1TX)**	**Tx ± 2dBm (3TX)**	**Rx Sensitivity**
	MCS7	12dBm	17dBm	≦- 78dBm
HT40	MCS7	11dBm	16dBm	≦- 74dBm

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Block Diagram



Mechanical Dimension (mm)



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Pin Assignment

Pin#	Pin Name	Description	Pin#	Pin Name	Description
1	WAKE_L	YES	2	+3.3Vaux	YES
3	Reserved	YES(GPIO4)	4	GND	YES
5	Reserved	YES(GPIO5)	6	+1.5V	NC
7	CLKREQ_L	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	UIM_C8	NC	18	GND	YES
19	UIM_C4	NC	20	W_DISABLE_L	YES
21	GND	YES	22	PERST_L	YES
23	PERn0	YES	24	+3.3V	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	RESERVED	NC	38	USB_D+	NC
39	RESERVED	YES(+3.3V)	40	GND	NC
41	RESERVED	YES(+3.3V)	42	LED_WWAN_L	NC
43	RESERVED	YES(GND)	44	LED_WLAN_L	YES
45	RESERVED	NC	46	LED_WPAN_L	NC
47	RESERVED	NC	48	+1.5V	NC
49	RESERVED	NC	50	GND	YES
51	RESERVED	NC	52	+3.3V	YES

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