

Features:

- **Qualcomm Atheros QCA9382**
- **Antenna: U.FL * 2 for 2T2R**
- **Data Rates: allows link speeds up to 300Mbps**
- **Support Windows XP/7/8.1/10 , Linux driver**

WPEA-121N

802.11 abgn Dual-Band 2T2R Half Mini PCIe Module



System	
Standards:	IEEE 802.11abgn (2T2R)
Chipset:	Qualcomm Atheros QCA9382
Data Rate:	802.11b: 11Mbps / 802.11a/g: 54Mbps / 802.11n: 300Mbps
Operating Frequency:	IEEE 802.11 abgn ISM Band, 2.412GHz ~ 2.4835GHz, 5.15MHz ~ 5.85MHz *Subject to local regulations
Interface:	Mini PCI Express
Form Factor:	Half Mini PCI-e
Antenna:	2 x UFL connector for 2T2R
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 ± 9% I/O supply voltage
Temperature Range:	0°C to +75°C (Operating) / -40°C to +85°C (Storage)
Humidity (Non-Condensing):	Operating Humidity (non-condensing): 5% ~ 90% Storage Humidity (non-condensing): 5% ~ 95%
Power Consumption:	Continue Tx: Max 600mA / Continue RX: Max237mA
Dimension (in mm):	30 x 26.8 x 4.5 mm
Weight (g):	≤ 9g
Driver Support:	Windows XP/7/8.1/10 , Linux
Security	64/128-bits WEP, WPA, WPA2, 802.1x

The diagram illustrates the AR9382 SoC and its external connections. The central component is the AR9382 SoC. It is connected to a 40MHz XTAL oscillator at the top. A PCIe connector on the left is connected to the SoC via a PCIe-Interface block. A SW-REG 1.2V power supply is connected to the bottom of the SoC. Two antenna chains are shown, labeled 0 and 1. Each chain consists of a Diplexer, LNA, NOTCH FILTER, LFF, and a 3:1 SW switch, all connected to an ANT_CON output.

The image contains two mechanical drawings of a PCB, labeled 'Top Side' and 'Bottom Side'.

Top Side View:

- Overall width: $30.00 +0.00/-0.30$
- Overall height: $26.80 +0.00/-0.30$
- Distance from top edge to center of Pin 1: 23.90
- Distance between Pin 1 and Pin 51: 24.20
- Pin diameter: $2 \times \varnothing 2.60 \pm 0.10$
- Distance from left edge to Pin 1: 8.25
- Distance from Pin 1 to center of card: 1.65
- Distance from center of card to Pin 51: 3.85
- Pin 1 and Pin 51 are labeled.
- Dimension $\varnothing$ of Card Width is indicated at the bottom.
- Reference markers B and C are shown.

Bottom Side View:

- Overall height: 26.80 REF
- Distance from top edge to center of Pin 2: 23.90
- Distance between Pin 52 and Pin 2: 24.20
- Pin diameter: $2 \times \varnothing 2.60 \pm 0.10$
- Distance from left edge to Pin 52: 8.25
- Distance from Pin 52 to center of card: 1.65
- Distance from center of card to Pin 2: 3.85
- Pin 52 and Pin 2 are labeled.
- Dimension $\varnothing$ of Card Width is indicated at the bottom.
- Reference markers B and C are shown.
- Additional dimensions: 2.05 , 13.60 (Both Sides), 5.60 (Both Sides), 2×2.15 REF, $2 \times R 0.80$ MAX, 2×3.20 MIN.

Pin numbering reference:
 Odd pins – Top Side
 Even pins – Bottom Side

Pin Assignment

Pin#	Pin Name	Status	Pin#	Pin Name	Status
1	WAKE_L	NC	2	+3.3V	YES
3	GPIO4	NC	4	GND	YES
5	GPIO5	NC	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	+3.3V	YES	40	GND	NC
41	+3.3V	YES	42	LED_WWAN_L	NC
43	GND	NC	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