

# JWX6051

802.11a/b/g/n 3T3R Half Mini-PCI-E Module

## Technical Specifications

Standards

Data Rate

Output Power & Sensitivity

Operating Frequency

Interface

Operating Voltage / Temperature

### STANDARDS

Wireless: IEEE 802.11a/b/g/n (3T3R) / Chipset: Qualcomm Atheros AR9380

### DATA RATE

802.11b: 11Mbps / 802.11a/g: 54Mbps / 802.11n: 450Mbps

### OPERATING FREQUENCY

IEEE 802.11 a/b/g/n ISM Band, 2.412GHz ~ 2.472GHz, 5150MHz ~ 5825MHz

### INTERFACE

Mini PCI-e, Antenna Ports : U.FL \* 3 for 3T3R

### MODULATION

802.11a/g: OFDM (BPSK, QPSK, 16-QAM, 64-QAM)

802.11n: OFDM (BPSK, QPSK, 16-QAM, 64-QAM)

### RECOMMENDED OPERATING CONDITIONS

Operating Voltage: DC 3.3V  $\pm$  5%

Operating Temperature Range: -20°C to 70°C

Storage Temperature Range: -20°C to +80°C

Operating Humidity (non-condensing): 10% ~ 90%

Storage Humidity (non-condensing): 5% to 90%

Current consumption: 2.5W (Max.)

Dimension (in mm): 30.02 x 26.89 x 4.3 mm

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**OUTPUT POWER & SENSITIVITY**

<b>802.11bg</b>		
<b>Data Rate</b>	<b>Tx +/- 2dB</b>	<b>Rx Sensitivity +/- 2dB</b>
1Mbps	17dBm	-102dBm
11Mbps	17dBm	-92dBm
6Mbps	17dBm	-96dBm
54Mbps	16dBm	-82dBm

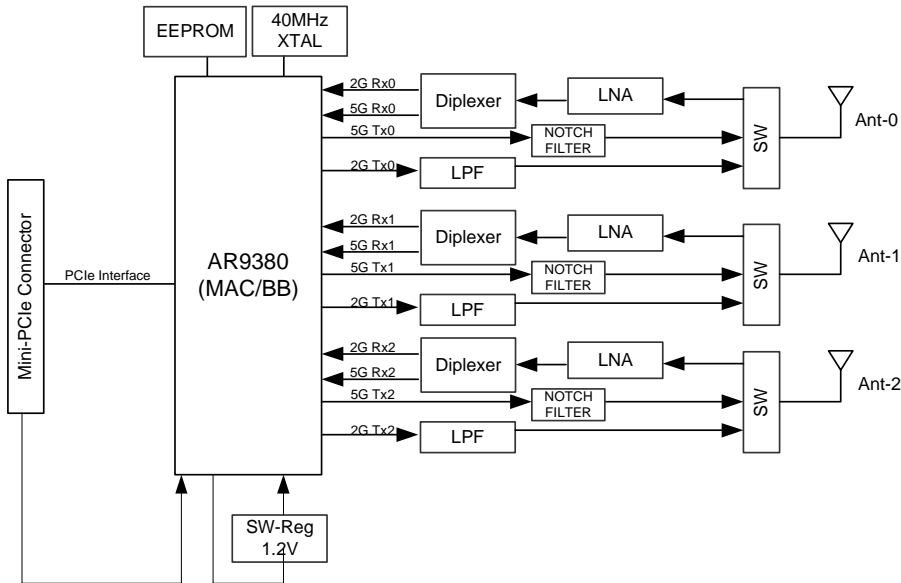
<b>802.11gn</b>				
<b>HT20</b>	<b>Data Rate</b>	<b>Tx +/- 2dB (1TX)</b>	<b>Tx +/- 2dB (3TX)</b>	<b>Rx Sensitivity +/- 2dB</b>
	MCS 0	16dBm	21dBm	-95dBm
	MCS 7	15dBm	20dBm	-79dBm
<b>HT40</b>	<b>Data Rate</b>	<b>Tx +/- 2dB (1TX)</b>	<b>Tx +/- 2dB (3TX)</b>	<b>Rx Sensitivity +/- 2dB</b>
	MCS 0	15dBm	20dBm	-94dBm
	MCS 7	14dBm	19dBm	-76dBm

<b>802.11a</b>		
<b>Data Rate</b>	<b>Tx +/- 2dB</b>	<b>Rx Sensitivity +/- 2dB</b>
6Mbps	15dBm	-96dBm
54Mbps	10~12dBm	-81dBm

<b>802.11an</b>				
<b>HT20</b>	<b>Data Rate</b>	<b>Tx +/- 2dB (1TX)</b>	<b>Tx +/- 2dB (3TX)</b>	<b>Rx Sensitivity +/- 2dB</b>
	MCS 0	15dBm	20dBm	-96dBm
	MCS 7	9~12dBm	14~17dBm	-78dBm
<b>HT40</b>	<b>Data Rate</b>	<b>Tx +/- 2dB (1TX)</b>	<b>Tx +/- 2dB (3TX)</b>	<b>Rx Sensitivity +/- 2dB</b>
	MCS 0	14dBm	19dBm	-93dBm
	MCS 7	8~11dBm	13~16dBm	-74dBm

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■ Block Diagram



■ Pin Definition- mini-PCle

PIN#	Pin Name	Design Status	PIN#	Pin Name	Design Status
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	PERu0	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