

JWAP232

802.11 b/g/n 3T3R High Power PCBA

Technical Specifications

System Information
Radio Information
Software Information
Output Power & Sensitivity
Pin Definition



SYSTEM INFORMATION

Chipset	Qualcomm Atheros QCA9558 Qualcomm Atheros AR8337
Memory	128MB
Flash	16MB
Mini-PCle Slot	Mini-PCle Slot * 2 (Mini-PCle Protocol * 1, USB default protocol * 1) Both supports 3.3V (default) or 5V power input, adjustable by jumper
Ethernet	WAN: 10/100/1000BaseTx * 1 LAN: 10/100/1000BaseTx * 2
USB	USB 2.0 type-A * 1
RF Connector	MMCX * 3
Push Button	Reset Button * 1
Console	UART 3-pin Header * 1, JTAG * 1
Input Power	DC: 36V~57V, 21Ø PoE: 802.3at (default) or 48V Passive PoE
Surge Protection (w/t ground)	WAN port: Line to Line: 1.5kV Line to Ground: 6kV
ESD (w/t ground)	Contact Discharge: 4kV Air Discharge: 8kV
Humidity	Operating: 10% to 90% non-condensing Storage: 5% to 90% non-condensing
Temperature Range	Operating Temperature: -20°C to +70°C Storage Temperature: -40°C to +80°C
Dimension (in mm)	127 x 117(mm)

RADIO INFORMATION

Standards	IEEE 802.11b/g, 802.11n
Data Rate	11b: 1/2/5.5/11Mbps 11g: 6/9/12/24/36/48/54Mbps 11n (40MHz): MCS0-23, up to 450Mbps
Modulation	OFDM, 16QAM, 64QAM
Frequency Range	2.412 ~ 2.472GHz

SOFTWARE INFORMATION

Firmware	JJ+ LSDK Image by default, OpenWRT LSDK (optional)
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OUTPUT POWER & SENSITIVITY

802.11g		
Data Rate	Tx +/- 2dB	Rx Sensitivity +/- 2dB
6Mbps	23dBm	-92dBm
9Mbps	23dBm	-92dBm
12Mbps	23dBm	-92dBm
18Mbps	23dBm	-91dBm
24Mbps	23dBm	-88dBm
36Mbps	21dBm	-85dBm
48Mbps	20dBm	-82dBm
54Mbps	19dBm	-80dBm

802.11n/2.4GHz				
	Data Rate	Tx +/- 2dB (1TX)	Tx +/- 2dB (3TX)	Rx Sensitivity +/- 2dB
HT20	MCS 0	23dBm	28dBm	-92dBm
	MCS 1	22dBm	27dBm	-92dBm
	MCS 2	22dBm	27dBm	-91dBm
	MCS 3	22dBm	27dBm	-87dBm
	MCS 4	21dBm	26dBm	-84dBm
	MCS 5	21dBm	26dBm	-80dBm
	MCS 6	20dBm	25dBm	-79dBm
	MCS 7	18dBm	23dBm	-77dBm
HT40	MCS 0	22dBm	27dBm	-89dBm
	MCS 1	22dBm	27dBm	-89dBm
	MCS 2	22dBm	27dBm	-88dBm
	MCS 3	22dBm	27dBm	-84dBm
	MCS 4	21dBm	26dBm	-82dBm
	MCS 5	21dBm	26dBm	-78dBm
	MCS 6	20dBm	25dBm	-76dBm
	MCS 7	18dBm	23dBm	-74dBm

■ Pin Definition

PIN#	Pin Name	Design Status	PIN#	Pin Name	Design Status
1	WAKE_L	Yes (PCIE_WAKE_L)	2	+3.3Vaux	3.3V
3	RESERVED	ANT_A	4	GND	GND
5	RESERVED	GPIO4	6	+1.5V	NC
7	CLKREQ_L	YES (PCIE_CLKREQ_L)	8	UIM_PWR	NC
9	GND	GND	10	UIM_DATA	NC
11	REFCLK-	YES (PCIE_REFCLK_N)	12	UIM_CLK	NC
13	REFCLK+	YES (PCIE_REFCLK_P)	14	UIM_RESET	NC
15	GND	GND	16	UIM_VPP	NC
17	UIM_C8	NC	18	GND	GND
19	UIM_C4	NC	20	W_DISABLE_L	GPIO0
21	GND	GND	22	PERST_L	YES (PCIE_RST_L)
23	PERn0	YES (PCIE_TX_N)	24	+3.3Vaux	3.3V
25	PERp0	YES (PCIE_TX_P)	26	GND	GND
27	GND	GND	28	+1.5V	NC
29	GND	GND	30	SMB_CLK	NC
31	PETn0	YES (PCIE_RX_P)	32	SMB_DATA	NC
33	PETp0	YES (PCIE_RX_N)	34	GND	GND
35	GND	GND	36	USB_D-	USB_D-
37	RESERVED	NC	38	USB_D+	USB_D+
39	RESERVED	3.3V	40	GND	GND
41	RESERVED	3.3V	42	LED_WWAN_L	NC
43	RESERVED	GND	44	LED_WLAN_L	YES (GPIO1_WLAN_LED)
45	RESERVED	GPIO3	46	LED_WPAN_L	YES (GPIO17_BT_LED)
47	RESERVED	GPIO2	48	+1.5V	NC
49	RESERVED	Can be using external 5V Vin	50	GND	GND
51	RESERVED	Can be using external 5V Vin	52	+3.3Vaux	3.3V