

Key Benefits

- ✓ Industrial standard Mini-PCIE form factor design
- ✓ Advanced 4G capabilities (release 9 compliant)
- ✓ MIMO antenna technology for superior 4G performance
- ✓ USB Interface support
- ✓ Built-in router software & host less USB operation support
- ✓ Support for TR069 module management

JM310 is an advanced multi-band (B31) LTE PCIE mini card product developed by JATONTEC for embedded LTE module market. It supports standard PCIE USB interface and can be easily integrated into laptop, set-top box and real time industry devices to provide instant 4G communication capability.

High Speed Mobile Data

JM310 USB module supports FDD modes of LTE operation and can provide up to LTE category 4 data throughput. This far exceeds the existing wired broadband data service and thus can easily satisfy the need of high quality video applications.

Superior Performance

JM310 adopts standard MINI PCI-E form factor design and support a variety of advanced 4G technologies such as AMC, HARQ, MIMO and etc. The host-less SoC design further help to reduce the product cost and power consumption.

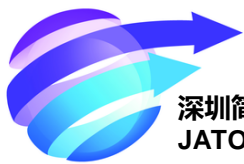
Advanced MIMO Technology

JM310 supports advanced MIMO technology (2Rx and 1Tx). It allows the module to achieve up to LTE category 4 performance. The MIMO technology also helps to extend the coverage and greatly improve spectrum efficiency.

Specifications

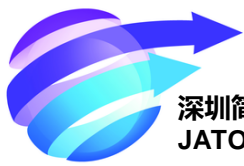
SIZE	51mm * 30mm * 5.2mm
Antenna connector	IPEX-1 Connectors (2)
Power	DC 3.8~5V (PCI-E)
Weight	<15g
Power consumption	Average: 2.2W, Peak: 3.6W
Temperature	Operating temperature -30~55 °C, Storage temperature -40~85 °C
Standard	3GPP LTE Release9, Cat 4
Frequency	BAND 31
Bandwidth	1.4MHz, 3MHz, 5MHz
Duplex mode	FDD
Tx Power	23dBm ±1dB
MIMO	Uplink TXD Downlink MIMO
Hardware Interface	52-Pin Mini PCI-E card interface
Management	Plug and Play, WEB GUI, TR069
Operating system	Windows XP、Vista、7、8、10/Linux/Android





Pin Assignment - 1

PIN No	Standard PIN Name	PIN Name	Signal Description	In/Out	Voltage Level
1	WAKE#	GPD2	GPIO2	In/Out	3.3V
2	3.3Vaux	VCC_IN	Power supply	Input	VBAT(3.8~5.0V)
3	COEX1	LED_ACT	PHY Activity LED	Output	3.3V
4	GND	GND	Ground	GND	GND
5	COEX2	PHY_TXP	10/100M PHY_TXP	In/Out	
6	1.5V	GPD4	GPIO4	In/Out	3.3V
7	CLKREQ#	PHY_TXM	10/100M PHY_TXM	In/Out	
8	UIM_PWR	SIM_PWR	SIM PWR	Output	1.8/3.0V
9	GND	GND	Ground	GND	GND
10	UIM_DATA	SIM_DAT	SIM DATA	Output	
11	REFCLK-	PHY_RXP	10/100M PHY_RXP	In/Out	
12	UIM_CLK	SIM_CLK	SIM CLK	Output	
13	REFCLK+	PHY_RXM	10/100M PHY_RXM	In/Out	
14	UIM_RESET	SIM_RST#	SIM Reset	Output	
15	GND	GND	Ground	GND	GND
16	UIM_VPP	GPD5	GPIO5	In/Out	3.3V
17	Reserved(UIM_C8)	NC	Not Connected		
18	GND	GND	Ground	GND	GND
19	Reserved(UIM_C4)	NC	Not Connected		
20	W_DISABLE#	RF_DIS(GPD3)	RF Disable	Input	3.3V
21	GND	GND	Ground	GND	GND
22	PERST#	PE_RST#	PE Reset	Input	3.3V
23	PERn0	GPD15	GPIO15	In/Out	3.3V
24	3.3Vaux	VCC_IN	Power supply	Input	VBAT(3.8~5.0V)
25	PERp0	GPD16	GPIO16	In/Out	3.3V
26	GND	GND	Ground	GND	GND



Pin Assignment - 2

PIN No	Standard PIN Name	PIN Name	Signal Description	In/Out	Voltage Level
27	GND	GND	Ground	GND	GND
28	1.5V	GPD12	GPIO12	In/Out	3.3V
29	GND	GND	Ground	GND	GND
30	SMB_CLK	UART0_TX	UART0 TX	Output	1.8V
31	PETn0	SDH_CLK	SDIO Host CLK	Output	1.8V
32	SMB_DATA	UART0_RX	UART0 RX	Input	1.8V
33	PETp0	SDH_CMD	SDIO Host CMD	Output	1.8V
34	GND	GND	Ground	GND	GND
35	GND	GND	Ground	GND	GND
36	USB_D-	USB_D-	USB DM	In/Out	
37	GND	GND	Ground	GND	GND
38	USB_D+	USB_D+	USB_DP	In/Out	
39	3.3Vaux	VCC_IN	Power supply	Input	VBAT(3.8~5.0V)
40	GND	GND	Ground	GND	GND
41	3.3Vaux	VCC_IN	Power supply	Input	VBAT(3.8~5.0V)
42	LED_WWAN#	GPD7	GPIO7	In/Out	3.3V
43	GND	GND	Ground	GND	GND
44	LED_WLAN#	GPD8	GPIO8	In/Out	3.3V
45	Reserved	SDH_D0	SDIO Host D0	In/Out	1.8V
46	LED_WPAN#	GPD9	GPIO9	In/Out	3.3V
47	Reserved	SDH_D1	SDIO Host D1	In/Out	1.8V
48	1.5V	GPD10	GPIO10	In/Out	3.3V
49	Reserved	SDH_D2	SDIO Host D2	In/Out	1.8V
50	GND	GND	Ground	GND	GND
51	Reserved	SDH_D3	SDIO Host D3	In/Out	1.8V
52	3.3Vaux	VCC_IN	Power supply	Input	VBAT(3.8~5.0V)