MANUAL.

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Contents

Thank you for purchasing HUAWEI MC509 LTE mini PCIE Module (hereinafter referred to as the MC509)

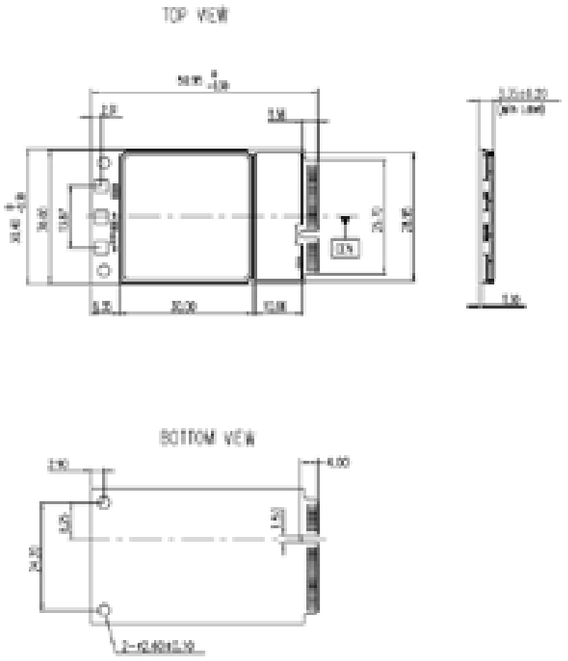
Note:

- This manual briefly describes the dimension, the position of RF connectors and Pin definitions.
- You are recommended to read the manual before using the MC509.

Getting to Know the MC509

Dimension

- The package of the mini PCIE module is 52 pin PCIE with a dimension of 51 mm × 30.4 mm × 3.4 mm. It is applied to the user interface board, and can be used as a wireless terminal in a network environment.

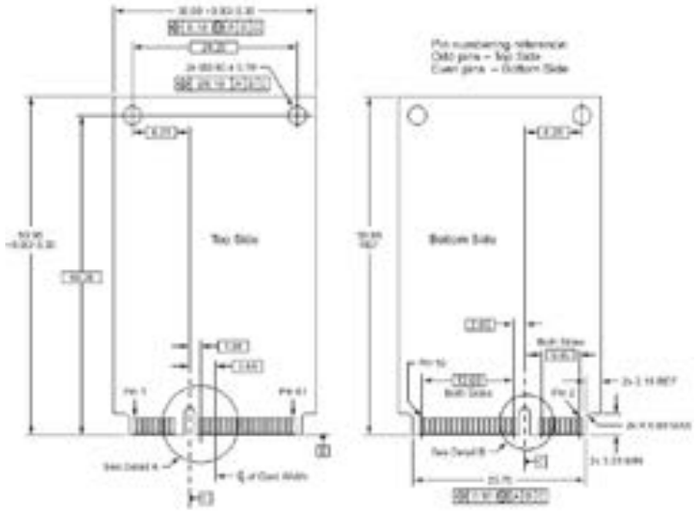


Position of RF Connectors

The PCIE module provided three antenna connectors (MAIN_ANT, GPS_ANT and AUX_ANT) for connecting the external antennas.

Pin Definitions

- The sequence of mini-PCIE interface is shown below.



- The Pin definitions of the Mini PCIE interface is shown below.

PIN No.	Pin Name		I/O	Description	DC Characteristics (V)		
	Mini PCI Express Standard Description	HUAWEI Pin Description			Min.	Typ.	Max.
1	WAKE#	WAKE#	O	Open collector active low signal. This signal is used to wake up the host.	–0.3	-	-
2	3.3Vaux	VCC_3V3	P	3.3 V DC supply rails from the PC side	3.0	3.3	3.6
3	COEX1	NC	-	Not connected	-	-	-
4	GND	GND	-	Ground	-	-	-
5	COEX2	NC	-	Not connected	-	-	-
6	1.5 V	NC	-	Not connected	-	-	-
7	CLKREQ#	NC	-	Not connected	-	-	-

PIN No.	Pin Name		I/O	Description	DC Characteristics (V)		
	Mini PCI Express Standard Description	HUAWEI Pin Description			Min.	Typ.	Max.
8	UIM_PWR	RUIM_PWR	P	Power source for the external RUIM card	-	1.8/2.85	-
9	GND	GND	-	Ground	-	-	-
10	UIM_DATA	RUIM_DATA	I/O	External RUIM data signal	-	1.8/2.85	-
11	REFCLK-	NC	-	Not connected	-	-	-
12	UIM_CLK	RUIM_CLK	O	External RUIM clock signal	-	1.8/2.85	-
13	REFCLK+	NC	-	Not connected	-	-	-
14	UIM_RESET	RUIM_RESET	O	External RUIM reset signal	-	1.8/2.85	-
15	GND	GND	-	Ground	-	-	-
16	UIM_Vpp	NC	-	Not connected	-	-	-
17	Reserved	Reserved	-	Reserved	-	-	-

PIN No.	Pin Name		I/O	Description	DC Characteristics (V)		
	Mini PCI Express Standard Description	HUAWEI Pin Description			Min.	Typ.	Max.
18	GND	GND	-	Ground	-	-	-
19	Reserved	Reserved	-	Reserved	-	-	-
20	W_DISABLE#	W_DISABLE#	I	The W_DISABLE# signal is an active low signal that when asserted (driven low) by the system shall disable radio operation.	-	-	-
21	GND	GND	-	Ground	-	-	-
22	PERST#	RESIN_N	I	Reset module Active-low	-	-	-
23	PERn0	NC	-	Not connected	-	-	-
24	3.3Vaux	VCC_3V3	P	3.3 V DC supply rails from the PC side	3.0	3.3	3.6

PIN No.	Pin Name		I/O	Description	DC Characteristics (V)		
	Mini PCI Express Standard Description	HUAWEI Pin Description			Min.	Typ.	Max.
25	PERp0	NC	-	Not connected	-	-	-
26	GND	GND	-	Ground	-	-	-
27	GND	GND	-	Ground	-	-	-
28	1.5 V	NC	-	Not connected	-	-	-
29	GND	GND	-	Ground	-	-	-
30	SMB_CLK	NC	-	Not connected	-	-	-
31	PETn0	NC	-	Not connected	-	-	-
32	SMB_DATA	NC	-	Not connected	-	-	-
33	PETp0	NC	-	Not connected	-	-	-
34	GND	GND	-	Ground	-	-	-
35	GND	GND	-	Ground	-	-	-
36	USB_D-	USB_DM	I/O	USB signal D-	-	-	-
37	GND	GND	-	Ground	-	-	-

PIN No.	Pin Name		I/O	Description	DC Characteristics (V)		
	Mini PCI Express Standard Description	HUAWEI Pin Description			Min.	Typ.	Max.
38	USB_D+	USB_DP	I/O	USB signal D+	-	-	-
39	3.3Vaux	VCC_3V3	P	3.3 V DC supply rails from the PC side	3.0	3.3	3.6
40	GND	GND	-	Ground	-	-	-
41	3.3Vaux	VCC_3V3	P	3.3 V DC supply rails from the PC side	3.0	3.3	3.6
42	LED_WWAN#	LED_WWAN#	O	Active-low LED signal indicating the state of the card SINK current source Drive strength: 10 mA	-	-	-
43	GND	GND	-	Ground	-	-	-
44	LED_WLAN#	NC	-	Not connected	-	-	-

PIN No.	Pin Name		I/O	Description	DC Characteristics (V)		
	Mini PCI Express Standard Description	HUAWEI Pin Description			Min.	Typ.	Max.
45	Reserved	PCM_CLK	O	PCM interface clock	–0.3	2.6	2.9
46	LED_WPAN#	NC	-	Not connected	-	-	-
47	Reserved	PCM_DOUT	O	PCM I/F data out	–0.3	2.6	2.9
48	1.5 V	NC	-	Not connected	-	-	-
49	Reserved	PCM_DIN	I	PCM I/F data in	–0.3	2.6	2.9
50	GND	GND	-	Ground	-	-	-
51	Reserved	PCM_SYNC	O	PCM interface sync	–0.3	2.6	2.9
52	3.3Vaux	VCC_3V3	P	3.3 V DC supply rail from the PC side	3.0	3.3	3.6