

Power Requirements

Power Over Ethernet	1x 802.3af/at PoE, IEEE 802.3af/at (48-56v) for Daughter Board
DC Jack Connector	12V for main board
Power Consumption	12W (Max)

JTAG Interface

JTAG Interface			
Pin	Signal	Pin	Signal
1	3.3V	2	3.3V
3	JTAG_TRST_N	4	NC
5	JTAG_TDI	6	GND
7	JTAG_TMS	8	GND
9	JTAG_TCK	10	GND
11	NC	12	NC
13	JTAG_TDO	14	GND
15	JTAG_RST_N	16	NC
17	GND	18	GND
19	GND	20	GND

SIM Slot Pin Assignment

SIM Slot Pin		SIM Signal
1	VCC	VCC
2	RST	SIM_RST
3	CLK	SIM_CLK
4	CD	SIM_CARD_IN
5	GND	GND
6	VPP	VPP
7	I/O	SIM_DATA

SD Card Socket Pin Assignment

SD card socket	
1	SD_DAT2
2	SD_CD/DAT3
3	SD_CMD
4	SD_VDD
5	SD_CLK
6	SD_VSS/GND
7	SD_DAT0
8	SD_DAT1
9	SD_CD
10/11	Cover_GND/SD_GND

Serial 4-Pin Connector Pin Assignment

Pin	Signal
1	VCC – 3.3V
2	UART Transmit Data
3	UART Receive Data
4	GND

Serial 6-Pin Connector Pin Assignment

Pin	Signal
1	VCC – 3.3V
2	UART1_RTS
3	UART1_TXD
4	UART1_RXD
5	UART1_CTS
6	GND

LED Indicators

LED Indicators	
DS5	POWER
DS11	Ethernet1
DS10	Ethernet0

USB 2.0 Port Pin Assignment

Pin	Signal
1	VDD
2	USB2_D_M
3	USB2_D_P
4	GND
5	GND
6	GND

LTE Module Slot (2mm LTE Module Slot)

Top side		Bottom side	
1	NC	2	+3.3V
3	NC	4	GND
5	NC	6	NC
7	NC	8	UIM_PWR
9	GND	10	UIM_DATA
11	NC	12	UIM_CLK
13	NC	14	UIM_RST
15	GND	16	UIM_VPP
Mechanical key			
17	NC	18	GND
19	NC	20	NC
21	GND	22	NC
23	USB3.0_RX-	24	+3.3V
25	USB3.0_RX+	26	GND
27	GND	28	NC
29	GND	30	NC
31	USB3.0_TX-	32	NC
33	USB3.0_TX+	34	GND
35	GND	36	USB_D-
37	GND	38	USB_D+
39	+3.3V	40	GND
41	+3.3V	42	NC
43	GND	44	UIM_DET
45	NC	46	NC
47	NC	48	NC
49	NC	50	GND
51	NC	52	+3.3V

GPIO Pin Mapping

GPIO Pin	Function	GPIO Pin	Function
GPIO_0	JTAG_TDI	GPIO_35	NC
GPIO_1	JTAG_TCK	GPIO_36	PULL_DOWN
GPIO_2	JTAG_TMS	GPIO_37	PULL_DOWN
GPIO_3	JTAG_TDO	GPIO_38	PULL_DOWN
GPIO_4	JTAG_RST_N	GPIO_39	PCIE_CLK_REQ_N
GPIO_5	JTAG_TRST_N	GPIO_40	NC
GPIO_6	MDIO	GPIO_41	PCIE_W_DISABLE_L
GPIO_7	MDC	GPIO_42	NC
GPIO_8	BISP_UART1_TXD	GPIO_43	NC
GPIO_9	BISP_UART1_RXD	GPIO_44	NC
GPIO_10	BISP_UART1_CTS	GPIO_45	NC
GPIO_11	BISP_UART1_RTS	GPIO_46	NC
GPIO_12	BISP_SPI0_SS0_N	GPIO_47	MALIBU_RESET_N
GPIO_13	BISP_SPI0_MISO	GPIO_48	PWRDN_WIFI
GPIO_14	PULL_DOWN	GPIO_49	NC
GPIO_15	PULL_UP	GPIO_50	PCIE_WAKE_UP_N
GPIO_16	BISP_UART0_RXD	GPIO_51	PULL_DOWN
GPIO_17	BISP_UART0_TXD	GPIO_52	NC
GPIO_18	CHIP_IRQ_IN	GPIO_53	NC
GPIO_19	CHIP_RST_OUT	GPIO_54	NC
GPIO_20	NC	GPIO_55	PULL_DOWN
GPIO_21	NC	GPIO_56	PULL_DOWN
GPIO_22	SDIO_CD	GPIO_57	NC
GPIO_23	SDIO_DAT_0	GPIO_58	NC
GPIO_24	SDIO_DAT_1	GPIO_59	NC
GPIO_25	SDIO_DAT_2	GPIO_60	NC
GPIO_26	SDIO_DAT_3	GPIO_61	NC
GPIO_27	SDIO_CLK	GPIO_62	PULL_UP
GPIO_28	SDIO_CMD	GPIO_63	NC
GPIO_29	NC	GPIO_64	NC
GPIO_30	NC	GPIO_65	NC
GPIO_31	NC	GPIO_66	NC
GPIO_32	NC	GPIO_67	NC
GPIO_33	PULL_UP	GPIO_68	NC
GPIO_34	NC	GPIO_69	PULL_DOWN

miniPCIe Slot Pin Assignment

MiniPCIe slot (9.9mm height mini-PCIe slot)			
Top side		Bottom side	
1	PCIE_WAKE_UP_N	2	+3.3V
3	PWRDN_WIFI	4	GND
5	NC	6	NC
7	PCIE_CLK_REQ_N	8	NC
9	GND	10	NC
11	PCIE_CLK-	12	NC
13	PCIE_CLK+	14	NC
15	GND	16	NC
Mechanical Key			
17	NC	18	GND
19	NC	20	NC
21	GND	22	PCIE_RST
23	PCIE_RX-	24	+3.3V
25	PCIE_RX+	26	GND
27	GND	28	NC
29	GND	30	NC
31	PCIE_TX-	32	NC
33	PCIE_TX+	34	GND
35	GND	36	NC
37	NC	38	NC
39	+3.3V	40	GND
41	+3.3V	42	NC
43	NC	44	NC
45	+5V	46	NC
47	+5V	48	NC
49	+5V	50	GND
51	+5V	52	+3.3V

Ethernet 0 Pin Assignment

Pin	Signal
1	TX+/POE+
2	TX-/POE+
3	RX+/POE-
4	TX+/POE+
5	TX-/POE+
6	RX-/POE-
7	RX+/POE-
8	RX-/POE-