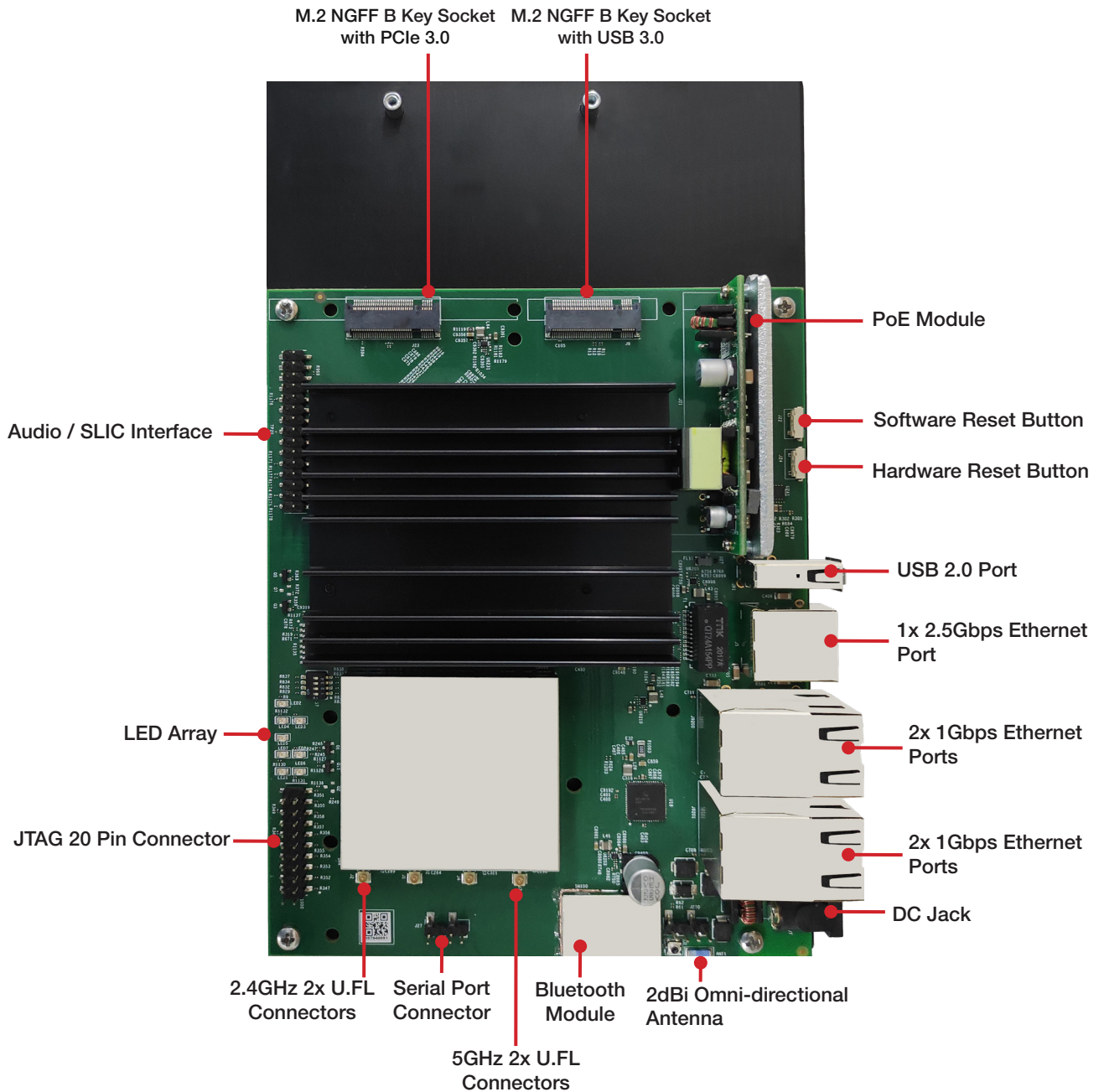


## Component Map



## Power Requirements

DC Power	1x DC 12V for Main Board
Power Consumption	17.5W (Max) (Including Bluetooth)

## Serial Interface Pin Assignment

Serial Interface	
Pin	Signal
1	DVDD_3V3
2	UART_TXD_CONN
3	UART_RXD_CONN
4	GND

## JTAG Interface Pin Assignment

JTAG Interface			
Pin	Signal	Pin	Signal
1	VDD_1V8	2	VDD_1V8
3	JTAG_TRSTN	4	NC
5	JTAG_TDI	6	GND
7	JTAG_TMS	8	GND
9	JTAG_TCK	10	GND
11	PULL_UP_1V8	12	GND
13	JTAG_TDO	14	GND
15	JTAG_SRSTN	16	GND
17	GND	18	GND
19	GND	20	GND

## USB 2.0 Port Pin Assignment

USB 2.0 Port	
Pin	Signal
1	VDD_5V_USB
2	CONN_USB1_DM
3	CONN_USB1_DP
4	GND

## Audio/ SLIC Interface Pin Assignment

Audio/ SLIC Interface			
Pin	Signal	Pin	Signal
1	BLSP4_SCL	2	CYP_AUDIO_BCLK
3	BLSP4_SDA	4	NC
5	ADC_RST	6	GND
7	PWM_LED_RST	8	PDM_CLK1
9	MUTE_ON	10	PDM_DATA1
11	KYPD_HOME_N	12	GND
13	MIC_VOL_P	14	EXT_MCLK2_ADC
15	MIC_KPD_PWR_N	16	NC
17	MIC_VOL_M	18	GND
19	AUDIO_MUTE_BUT	20	PDM_CLK0
21	VDD_3V3	22	PDM_DATA0
23	GND	24	GND
25	VDD_1V8	26	VDD_5V
27	VDD_1V8	28	VDD_5V
29	GND	30	GND

## SIM Slot Pin Assignment

SIM Slot	
Pin	Signal
1	VCC
2	RST
3	CLK
4	CD
5	GND
6	NC
7	I/O

## LED Assignment

LED Array	
Location	Signal
LED1	P1_1000_LED
LED2	POWER_LED
LED3	2G_LED
LED4	5GM_LED
LED5	NAPA_LED
LED6	P3_1000_LED
LED7	P4_1000_LED
LED8	P2_1000_LED

## NGFF Slot 1 Pin Assignment

NGFF Slot with USB 3.0			
Top Side		Bottom Side	
1	NC	2	VDD_3V7
3	GND	4	VDD_3V7
5	GND	6	FULL_Card_off
7	USB0_DP	8	WAN_DISABLE
9	USB0_DM	10	NC
11	GND		
Mechanical Key B			
21	NC	20	NC
23	NC	22	NC
25	NC	24	NC
27	GND	26	NC
29	USB0_SS_RXN	28	NC
31	USB0_SS_RXP	30	SIM1_RST
33	GND	32	SIM1_CLK
35	USB0_SS_TXN	34	SIM1_I/O
37	USB0_SS_TXP	36	SIM1_VCC
39	GND	38	NC
41	NC	40	SIM2_CD
43	NC	42	SIM2_I/O
45	GND	44	SIM2_CLK
47	NC	46	SIM2_RST
49	NC	48	SIM2_VCC
51	GND	50	NC
53	NC	52	NC
55	NC	54	NC
57	GND	56	NC
59	NC	58	NC
61	NC	60	NC
63	NC	62	NC
65	NC	64	NC
67	NC	66	SIM1_CD
69	NC	68	NC
71	GND	70	VDD_3V7
73	GND	72	VDD_3V7
75	NC	74	VDD_3V7

## NGFF Slot 2 Pin Assignment

NGFF Slot with PCIE3.0			
Top Side		Bottom Side	
1	NC	2	VDD_3V7
3	GND	4	VDD_3V7
5	GND	6	FULL_Card_off
7	NC	8	WAN_DISABLE
9	NC		NC
11	GND		
Mechanical Key B			
21	NC	20	NC
23	NC	22	NC
25	NC	24	NC
27	GND	26	NC
29	NC	28	NC
31	NC	30	SIM5_RST
33	GND	32	SIM5_CLK
35	NC	34	SIM5_I/O
37	NC	36	SIM5_VCC
39	GND	38	NC
41	PCIE_RX_N	40	SIM4_CD
43	PCIE_RX_P	42	SIM4_I/O
45	GND	44	SIM4_CLK
47	PCIE_TX_N	46	SIM4_RST
49	PCIE_TX_P	48	SIM4_VCC
51	GND	50	PCIE_RST
53	PCIE_REFCLKN	52	PCIE_WAKE
55	PCIE_REFCLKP	54	NC
57	GND	56	NC
59	NC	58	NC
61	NC	60	NC
63	NC	62	NC
65	NC	64	NC
67	NC	66	SIM5_CD
69	NC	68	NC
71	GND	70	VDD_3V7
73	GND	72	VDD_3V7
75	NC	74	VDD_3V7

## SD Card Socket Pin Assignment

SD Card Socket	
Pin	Signal
1	SDC1_DATA_2
2	SDC1_DATA_3
3	SDC1_CMD
4	VDD_3V3
5	SDC1_CLK
6	GND
7	SDC1_DATA_0
8	SDC1_DATA_1
9	SDC1_DETECT
10	GND

## GPIO Pin Mapping

GPIO Pin Mapping			
Pin	Signal	Pin	Signal
GPIO_0	AUDIO_MUTE_BUT	GPIO_1	QPIC_BUSY_N
GPIO_2	MIC_VOL_M	GPIO_3	QPIC_WE_N
GPIO_4	QPIC_RE_N	GPIO_5	QPIC_DAT4
GPIO_6	QPIC_DAT5	GPIO_7	QPIC_DAT6
GPIO_8	QPIC_DAT7	GPIO_9	WPS
GPIO_10	QPIC_CLE_N	GPIO_11	QPIC_NAND_CE_N
GPIO_12	QPIC_DAT1	GPIO_13	QPIC_DAT2
GPIO_14	QPIC_DAT3	GPIO_15	QPIC_DAT0
GPIO_16	MIC_KPD_PWR_N	GPIO_17	QPIC_ALE
GPIO_18	KYPD_HOME_N	GPIO_19	Boot_Config(PULL_DOWN)
GPIO_20	Boot_Config(PULL_DOWN)	GPIO_21	MUTE_ON
GPIO_22	ADC_RST	GPIO_23	WSA_SWR_CLK
GPIO_24	WSA_SWR_DATA	GPIO_25	PWM_LED_RST
GPIO_26	Boot_Config(PULL_DOWN)	GPIO_27	WSA_EN_R
GPIO_28	WSA_EN_L	GPIO_29	PDM_CLK0
GPIO_30	PDM_DATA0	GPIO_31	PDM_CLK1
GPIO_32	PDM_DATA1	GPIO_33	EXT_MCLK2_ADC
GPIO_34	MIC_VOL_P	GPIO_35	LED_5G
GPIO_36	PCIE_WAKE	GPIO_37	LED_2GS
GPIO_38	SPI0_CLK	GPIO_39	SPI0_CS_NI
GPIO_40	SPI0_MISO	GPIO_41	SPI0_MOSI
GPIO_42	BLSP4_SCL	GPIO_43	BLSP4_SDA
GPIO_44	BLSP2_UART_RX	GPIO_45	BLSP2_UART_TX
GPIO_46	BLSP5_SCL	GPIO_47	BLSP5_SDA
GPIO_48	NC	GPIO_49	Boot_Config(PULL_DOWN)
GPIO_50	LED_USB0	GPIO_51	BT_PRIORITY_PTA11
GPIO_52	WLA_ACTI_PTA12	GPIO_53	BT_ACT_PTA10
GPIO_54	Boot_Config(PULL_DOWN)	GPIO_55	WAN_DISABLE
GPIO_56	FULL_Card_off	GPIO_57	NC
GPIO_58	NC	GPIO_59	PCIE_CLK_REQ
GPIO_60	PCIE_RSTn	GPIO_61	NC
GPIO_62	SD_DET	GPIO_63	SD_WP
GPIO_64	MDC	GPIO_65	MDIO
GPIO_66	SD_LDO_EN	GPIO_67	NC
GPIO_68	NC	GPIO_69	SPI_CLK_UART_RTSn
GPIO_70	SPI_CS_UART_CTSn	GPIO_71	SPI_MISO_UART_RX
GPIO_72	SPI_MOSI_UART_TX	GPIO_73	NC
GPIO_74	NC	GPIO_75	Malibu_RESET
GPIO_76	NAPA_INT0	GPIO_77	NAPA_RESET
GPIO_78	QTZ_INT	GPIO_79	QTZ_RESET

## Boot Config Switch

Boot_Config Switch (S7)			
Boot_Config			Boot up Interface Select
1	2	3	
off	off	off	SPI NOR. (Default)
off	off	on	eMMC
off	on	off	QPIC, Parallel NAND
off	on	on	USB2.0
on	off	off	SPI-NOR-GPT
4			Boot up interface select
off			Boot from code ram.(Default)
on			Boot from ROM

## Ethernet LAN/WAN Port Pin Assignment

Ethernet WAN /LAN Port (RJ45 1Gbps)			
Pin	Signal	Pin	Signal
1	1G_CH0_P	2	1G_CH0_N
3	1G_CH1_P	4	1G_CH2_P
5	1G_CH2_N	6	1G_CH1_N
7	1G_CH3_P	8	1G_CH3_N

## Ethernet LAN Port Pin Assignment

Ethernet LAN Port (RJ45 2.5Gbps)			
Pin	Signal	Pin	Signal
1	2.5G_CH0_P	2	2.5G_CH0_N
3	2.5G_CH1_P	4	2.5G_CH2_P
5	2.5G_CH2_N	6	2.5G_CH1_N
7	2.5G_CH3_P	8	2.5G_CH3_N