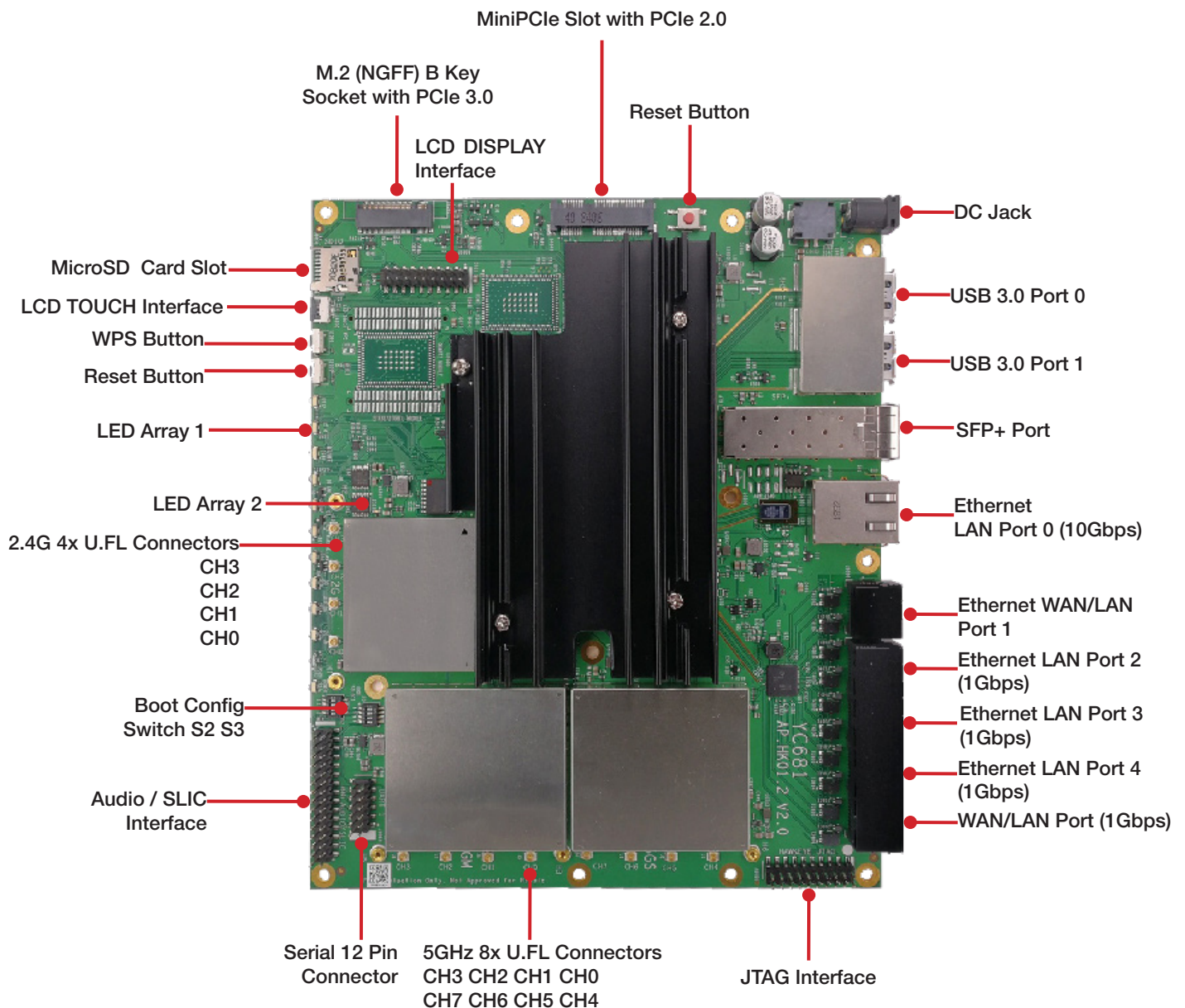
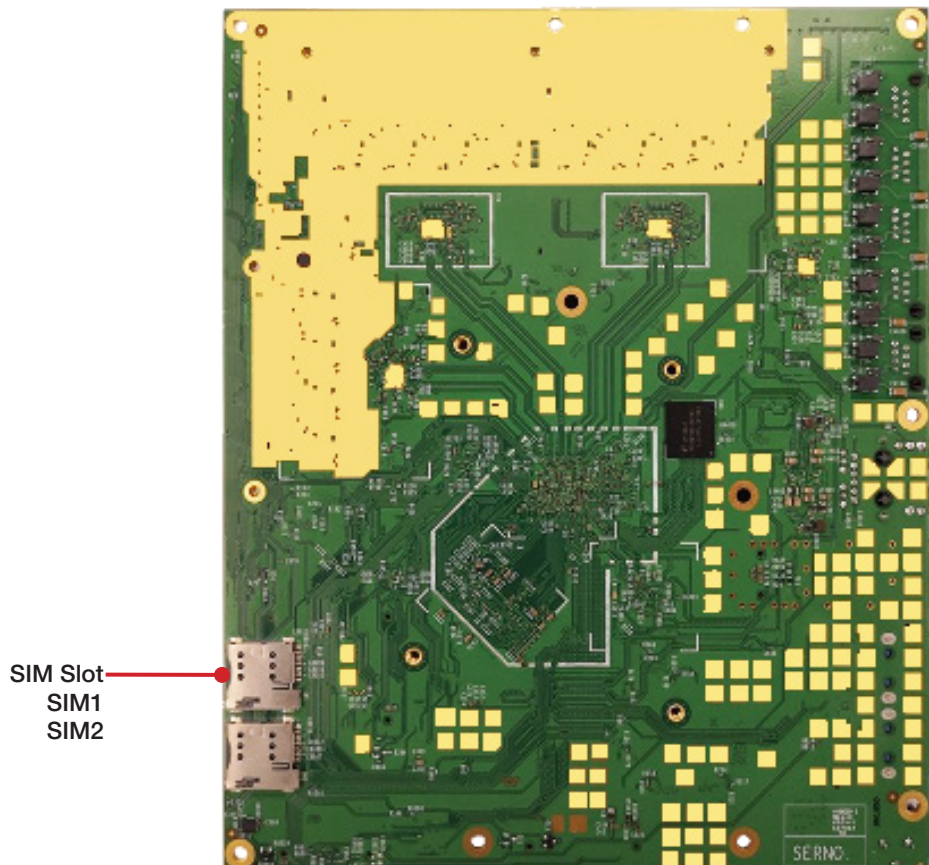


## Component and Connector Map



## Component and Connector Map



## Power Requirements

DC Power	1x DC 12V for Main Board
Power Consumption	30W

## Serial Port Pin Assignment

Serial Interface			
Pin	Signal	Pin	Signal
1	DVDD_3V3	2	DVDD_3V3
3	UART_RXD1	4	NC
5	UART_RTS1	6	NC
7	UART_CTS1	8	NC
9	UART_TXD1	10	NC
11	GND	12	GND

## JTAG Interface Pin Assignment

JTAG Interface			
Pin	Signal	Pin	Signal
1	DVDD_1V8	2	DVDD_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

## LCD Display Interface Pin Assignment

LCD Display Interface			
Pin	Signal	Pin	Signal
1	GND	2	DVDD_3V3
3	LCD_CS	4	NC
5	LCD_OE_N	6	LCD_WE_N
7	LCD_RS_N	8	LCD_TE
9	LCD_DATA[0] (QPIC_DATA)	10	LCD_DATA[1] (QPIC_DATA)
11	LCD_DATA[2] (QPIC_DATA)	12	LCD_DATA[3] (QPIC_DATA)
13	LCD_DATA[4] (QPIC_DATA)	14	LCD_DATA[5] (QPIC_DATA)
15	LCD_DATA[6] (QPIC_DATA)	16	LCD_DATA[7] (QPIC_DATA)
17	LCD_DATA[8] (QPIC_DATA)	18	NC
19	NC	20	NC

## LCD TOUCH Interface Pin Assignment

LCD TOUCH Interface			
Pin	Signal	Pin	Signal
1	I2C_CLK_3P3	2	I2C_DATA_3P3
3	DVDD_3V3	4	TP_WAKE_3P3
5	TOUCH_TP_INT_3P3	6	GND

## AUDIO & SLIC/DECT Pin Assignment

AUDIO & SLIC/DECT Interface			
Pin	Signal	Pin	Signal
1	12V_IN	2	DVDD_3V3
3	AUDIO_TXBCLK	4	AUDIO_TXMCLK
5	PCM_FSYNC	6	SLIC_RSTN (PCIE1_WAKE)
7	PCM_PCLK	8	PCM_TX
9	PCM_RX	10	GND
11	GND	12	SLIC_CS
13	NC	14	SPI2_CLK
15	SPI2_MISO	16	GND
17	SLIC_INT (SDC_DETECT)	18	SPI2_MOSI
19	12V_IN	20	AUDIO_TXFSYNC
21	I2C_CLK	22	AUDIO_RXMCLK
23	I2C_DATA	24	AUDIO_RXBCLK
25	UART2_TXD	26	AUDIO_RXFSYNC
27	UART2_RXD	28	AUDIO_RXD
29	GND	30	AUDIO_TXD

## USB0 Port Pin Assignment

USB0 Port			
Pin	Signal	Pin	Signal
1	DVDD_5V0_UDB2	2	USB0_HSDM
3	USB0_HSDP	4	GND
5	USB0_SS_RX_N	6	USB0_SS_RX_P
7	GND	8	CONN_USB0_SS_TX_N
9	CONN_USB0_SS_TX_P	10	GND
11	GND		

## USB1 Port Pin Assignment

USB1 Port			
Pin	Signal	Pin	Signal
1	DVDD_5V0_UDB1	2	USB1_HSDM
3	USB1_HSDP	4	GND
5	USB1_SS_RX_N	6	USB1_SS_RX_P
7	GND	8	CONN_USB1_SS_TX_N
9	CONN_USB1_SS_TX_P	10	GND
11	GND		

## SFP+ Port Pin Assignment

SFP+ Port			
Pin	Signal	Pin	Signal
1	GND	11	GND
2	SFP_TX_FAULT	12	USXGMII-0_RXN_SFP
3	SFP_TX_DIS	13	USXGMII-0_RXP_SFP
4	NC	14	GND
5	NC	15	SFP_VCCR (DVDD_3V3)
6	MOD_ABS	16	SFP_VCCT (DVDD_3V3)
7	SFP_RATESEL	17	GND
8	SFP_RX_LOS	18	USXGMII-0_TXP_SFP
9	GND	19	USXGMII-0_TXN_SFP
10	GND	20	GND

## LED Assignment

LED Array 1		
Location	Signal	Voltage
DS1	POWER	DVDD_3V3
DS2B	WIFI_SON_OPT	DVDD_3V3
DS3	LED_2G	DVDD_3V3
DS4	LED_5GL	DVDD_3V3
DS5	LED_5GH	DVDD_3V3
DS6	LAN_LED	DVDD_3V3
DS7	WAN_LED	DVDD_3V3
DS8	10G_LEDLINK	DVDD_3V3
DS9	SFP_LED	DVDD_3V3
DS10	BT_LED	DVDD_3V3
DS11	15.4_LED	DVDD_3V3
DS12	UNUSED_LED	DVDD_3V3
LED Array 2		
Location	Signal	Voltage
DS13	BOOT_STATUS	DVDD_3V3

## SIM Slot Pin Assignment

SIM 1		SIM 2	
Pin	Signal	Pin	Signal
1	SIM1_VCC	1	SIM2_VCC
2	SIM1_RST	2	SIM2_RST
3	SIM1_CLK	3	SIM2_CLK
4	SIM1_DET	4	SIM2_DET
5	GND	5	GND
6	SIM1_VPP	6	SIM2_VPP
7	SIM1_IO	7	SIM2_IO

## NGFF Slot Pin Assignment

NGFF Slot			
Top side		Bottom side	
1	NC	2	DVDD_3V3
3	GND	4	DVDD_3V3
5	GND	6	FULL_CARD_PWRD
7	NC	8	W_DISABLE1
9	NC	10	CON_PCIE0_LED
11	GND	12	NC
13	NC	14	NC
15	NC	16	NC
17	NC	18	NC
Mechanical Key			
19	NC	20	NC
21	NC	22	NC
23	NC	24	NC
25	NC	26	W_DISABLE2
27	GND	28	NC
29	NC	30	SIM1_RST
31	NC	32	SIM1_CLK
33	GND	34	SIM1_IO
35	NC	36	SIM1_VCC
37	NC	38	NC
39	GND	40	SIM2_DET
41	PCIE0_RX_N	42	SIM2_IO
43	PCIE0_RX_P	44	SIM2_CLK
45	GND	46	SIM2_RST
47	PCIE0_TX_N	48	SIM2_VCC
49	PCIE0_TX_P	50	PCIE0_PERST_L
51	GND	52	PCIE0_CLK_REQ_N_3P3
53	PCIE0_REFCLK_N	54	PCIE0_WAKE_3P3
55	PCIE0_REFCLK_P	56	NC
57	GND	58	NC
59	NC	60	NC
61	NC	62	NC
63	NC	64	NC
65	NC	66	SIM1_DET
67	MODULE_RST	68	NC
69	NC	70	GND
71	GND	72	GND
73	GND	74	GND

## miniPCIe Slot Pin Assignment

miniPCIe Slot			
Pin	Signal	Pin	Signal
1	NC	2	DVDD_3V3
3	PWRDN_PCIE1	4	GND
5	NC	6	NC
7	NC	8	NC
9	GND	10	NC
11	PCIE1_REFCLK_N	12	NC
13	PCIE1_REFCLK_P	14	NC
15	GND	16	NC
17	NC	18	GND
19	NC	20	NC
21	GND	22	PCIE1_PERST_L
23	PCIE1_RX_N	24	DVDD_3V3
25	PCIE1_RX_P	26	GND
27	GND	28	NC
29	GND	30	NC
31	PCIE1_TX_N	32	NC
33	PCIE1_TX_P	34	GND
35	GND	36	NC
37	GND	38	NC
39	DVDD_3V3	40	GND
41	DVDD_3V3	42	NC
43	NC	44	CON_PCIE1_LED
45	VDD_5V0_PCIE	46	NC
47	VDD_5V0_PCIE	48	NC
49	VDD_5V0_PCIE	50	GND
51	VDD_5V0_PCIE	52	DVDD_3V3
53	GND	54	GND

## GPIO Pin Mapping

GPIO Pin Mapping			
Pin	Signal	Pin	Signal
GPIO_0	LCD_TE	GPIO_1	QPIC_BUSY_N
GPIO_2	LCD_RS_N	GPIO_3	QPIC_WE_N
GPIO_4	QPIC_OE_N	GPIO_5	QPIC_DATA
GPIO_6	QPIC_DATA	GPIO_7	QPIC_DATA
GPIO_8	QPIC_DATA	GPIO_9	CS_CSR_LCD
GPIO_10	QPIC_CLE	GPIO_11	QPIC_NAND_CS_N
GPIO_12	QPIC_DATA	GPIO_13	QPIC_DATA
GPIO_14	QPIC_DATA	GPIO_15	QPIC_DATA
GPIO_16	QPIC_DATA	GPIO_17	QPIC_ALE
GPIO_18	LED_CLK	GPIO_19	LED_DATA
GPIO_20	LED_CLR	GPIO_21	SDC_PWR_EN
GPIO_22	CS_QTZ_SLIC	GPIO_23	UART1_RXD
GPIO_24	UART1_TXD	GPIO_25	AUDIO_TXMCLK
GPIO_26	AUDIO_TXBCLK	GPIO_27	AUDIO_TXFSYNC
GPIO_28	AUDIO_TXD	GPIO_29	AUDIO_RXMCLK
GPIO_30	AUDIO_RXBCLK	GPIO_31	AUDIO_RXFSYNC
GPIO_32	AUDIO_RXD	GPIO_33	MODULE_RST
GPIO_34	FULL_CARD_PWRD	GPIO_35	W_DISABLE1
GPIO_36	W_DISABLE2	GPIO_37	MALIBU_RESET
GPIO_38	SPI0_CLK	GPIO_39	SPI0_CS
GPIO_40	SPI0_MISO	GPIO_41	SPI0_MOSI
GPIO_42	I2C_CLK	GPIO_43	I2C_DATA
GPIO_44	UART2_RXD	GPIO_45	UART2_TXD
GPIO_46	IOT_UART_RTS	GPIO_47	IOT_UART_CTS
GPIO_48	IOT_UART_RX	GPIO_49	IOT_UART_TX
GPIO_50	SPI2_CLK	GPIO_51	CS_ZB_EFR32
GPIO_52	SPI2_MISO	GPIO_53	SPI2_MOSI
GPIO_54	PTA2_0	GPIO_55	PTA2_1
GPIO_56	PTA2_2	GPIO_57	WPS_L
GPIO_58	PCIE0_RST_N	GPIO_59	PCIE0_WAKE
GPIO_60	PCIE1_CLK_REQ_N	GPIO_61	PCIE1_RST_N
GPIO_62	PCIE1_WAKE	GPIO_63	SDC_DETECT
GPIO_64	PTA1_1	GPIO_65	PTA1_2
GPIO_66	PTA1_0	GPIO_67	SDC_WP
GPIO_68	MDC_OUT	GPIO_69	MDIO

## SDIO Slot Pin Assignment

SDIO Slot	
Pin	Signal
1	SDIO_SDCC0_DAT2
2	SDIO_SDCC0_DAT3/CD
3	SDIO_SDC2_CMD
4	VDD_SDC_3V
5	SDIO_SDC2_CLK
6	GND
7	SDIO_SDCC0_DAT0
8	SDIO_SDCC0_DAT1
9	SDC_DETECT
10	SDC_WP

## Ethernet LAN Port 0 Pin Assignment

Ethernet LAN Port 0			
Pin	Signal	Pin	Signal
1	AQ_MD_B_CT	2	AQ_MD_B_P
3	AQ_MD_B_N	4	AQ_MD_C_N
5	AQ_MD_C_P	6	AQ_MD_C_CT
7	AQ_MD_A_CT	8	AQ_MD_A_P
9	AQ_MD_A_N	10	AQ_MD_D_P
11	AQ_MD_D_N	12	AQ_MD_D_CT
14	AQ_LED_LINK	13	AQ_LED1_G
16	AQ_LED_ACT	15	NC
18	GND	17	AQ_LED2_G
		19	GND

## Ethernet WAN/LAN Port 1 Pin Assignment

Ethernet LAN Port1	
Pin	Signal
1	CH4_PXP0
2	CH4_PXN0
3	CH4_PXP1
4	CH4_PXP2
5	CH4_PXN2
6	CH4_PXN1
7	CH4_PXP3
8	CH4_PXN3

## Ethernet WAN/LAN Port Pin Assignment

Ethernet WAN/LAN Port		
Signal	Pin	Signal
Ethernet LAN Port 2	1	CH3_PXP0
	2	CH3_PXN0
	3	CH3_PXN1
	4	CH3_PXP2
	5	CH3_PXN2
	6	CH3_PXP1
	7	CH3_PXP3
	8	CH3_PXN3
Ethernet LAN Port 3	9	CH2_PXP0
	10	CH2_PXN0
	11	CH2_PXN1
	12	CH2_PXP2
	13	CH2_PXN2
	14	CH2_PXP1
	15	CH2_PXP3
	16	CH2_PXN3
Ethernet LAN Port 4	17	CH1_PXP0
	18	CH1_PXN0
	19	CH1_PXN1
	20	CH1_PXP2
	21	CH1_PXN2
	22	CH1_PXP1
	23	CH1_PXP3
	24	CH1_PXN3
WAN /LAN Port	25	CH0_PXP0
	26	CH0_PXN0
	27	CH0_PXN1
	28	CH0_PXP2
	29	CH0_PXN2
	30	CH0_PXP1
	31	CH0_PXP3
	32	CH4_PXN3