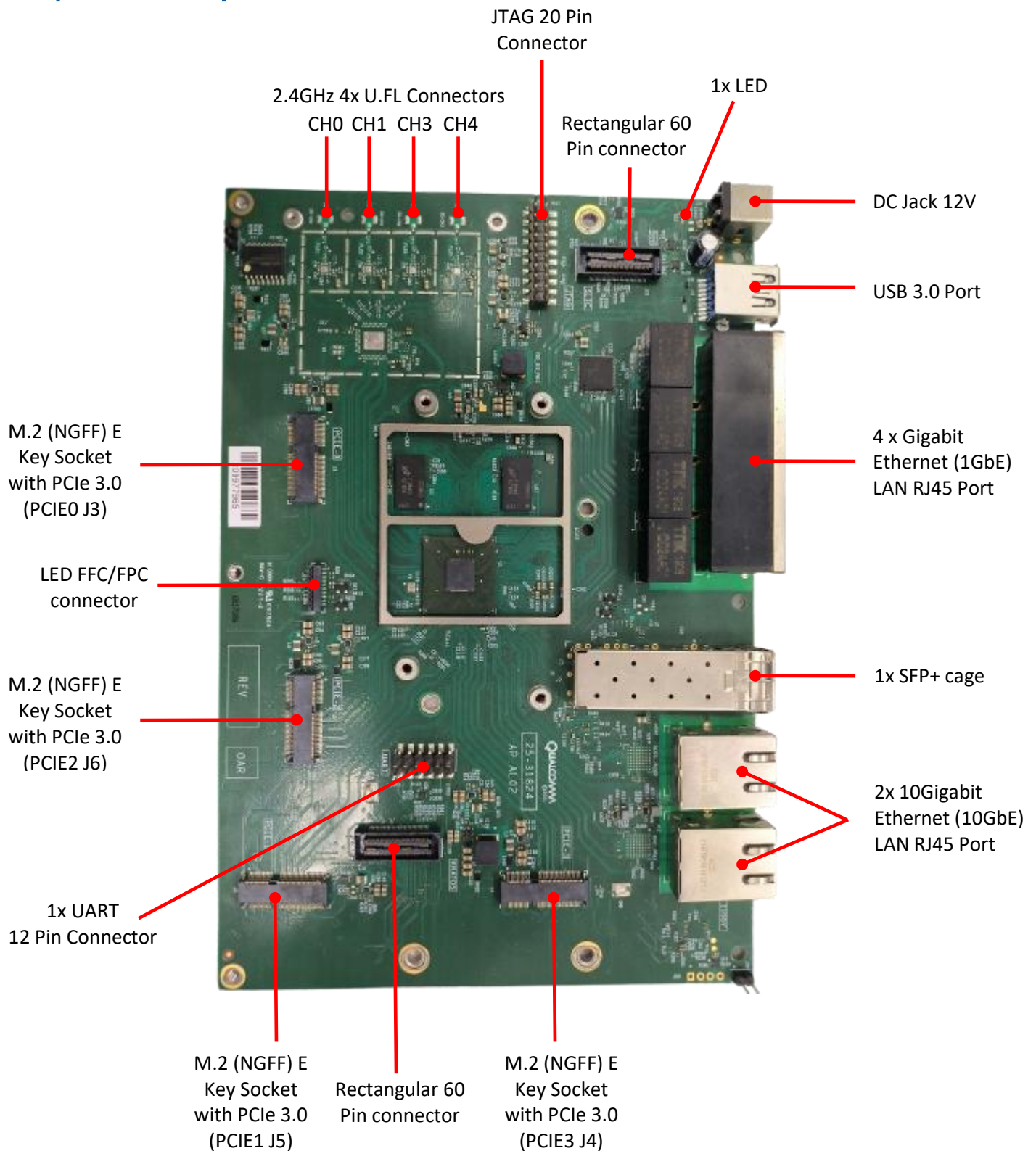


Component Map



Power Requirements

DC power	12V
Power Consumption	13W (Board only) 23W (with onboard WiFi)

M.2 Slot Pin Assignment

M.2 Slot Pin Assignment J3			
Top side		Bottom side	
1	GND	2	VDD_3P3_PCIE0
3	REFCLK_IPO_IN_WK_P	4	VDD_3P3_PCIE0
5	REFCLK_IPO_IN_WK_N	6	PCIE0_LED
7	GND	8	NC
9	NC	10	NC
11	NC	12	NC
13	NC	14	WSI_DAT_IN_PCIE0
15	VDD_XPA_PCIE0	16	NC
17	VDD_XPA_PCIE0	18	GND
19	VDD_XPA_PCIE0	20	WSI_CLK_IN_PCIE0
21	VDD_XPA_PCIE0	22	NC
23	VDD_XPA_PCIE0		
Mechanical key E			
33	GND	32	WSI_DAT_OUT_PCIE0
35	PCIE0_TX0_P	34	NC
37	PCIE0_TX0_N	36	WSI_CLK_OUT_PCIE0
39	GND	38	NC
41	PCIE0_RX0_P	40	NC
43	PCIE0_RX0_N	42	NC
45	GND	44	NC
47	PCIE0_REFCLK_P	46	NC
49	PCIE0_REFCLK_N	48	NC
51	GND	50	NC
53	PCIE0_CLKREQ_3P3_N	52	PCIE0_PERST_3P3
55	PCIE0_WAKE_3P3_N	54	NC
57	GND	56	WDIS_PCIE0
59	NC	58	NC
61	NC	60	NC
63	GND	62	NC
65	NC	64	NC
67	NC	66	NC
69	GND	68	NC
71	PCIE0_WIFI_REFCLKI_N	70	NC
73	PCIE0_WIFI_REFCLKI_P	72	VDD_3P3_PCIE0
75	GND	74	VDD_3P3_PCIE0

M.2 Slot Pin Assignment J4			
Top side		Bottom side	
1	GND	2	VDD_3P3_PCIE3
3	PCIE3_WIFI_REFCLKI_P	4	VDD_3P3_PCIE3
5	PCIE3_WIFI_REFCLKI_N	6	PCIE3_LED
7	GND	8	NC
9	NC	10	NC
11	NC	12	SDX_WK_CONN_12
13	NC	14	SDX_WK_CONN_14
15	VDD_XPA_PCIE3	16	SDX_WK_CONN_16
17	VDD_XPA_PCIE3	18	GND
19	VDD_XPA_PCIE3	20	SDX_WK_CONN_20
21	VDD_XPA_PCIE3	22	SDX_WK_CONN_22
23	VDD_XPA_PCIE3		
Mechanical key E			
33	GND	32	SDX_WK_CONN_32
35	PCIE3_TX0_P	34	SDX_WK_CONN_34
37	PCIE3_TX0_N	36	SDX_WK_CONN_36
39	GND	38	AP2SDX_STATUS
41	PCIE3_RX0_P	40	NC
43	PCIE3_RX0_N	42	AP2SDX_GP_RESET
45	GND	44	SDX_WCI2_TX
47	PCIE3_REFCLK_P	46	SDX_WCI2_RX
49	PCIE3_REFCLK_N	48	SDX_FULL_PON
51	GND	50	NC
53	PCIE3_CLKREQ_3P3_N	52	PCIE3_PERST_3P3
55	PCIE3_WAKE_3P3_N	54	NC
57	GND	56	WDIS_PCIE3_3P3
59	PCIE3_TX1_P	58	NC
61	PCIE3_TX1_N	60	NC
63	GND	62	SDX_WWAN_N
65	PCIE3_RX1_P	64	NC
67	PCIE3_RX1_N	66	SDX_WK_CONN_66
69	GND	68	SDX_WK_CONN_68
71	NC	70	VDD_3P3_PCIE3
73	NC	72	VDD_3P3_PCIE3
75	GND	74	VDD_3P3_PCIE3

M.2 Slot Pin Assignment

M.2 Slot Pin Assignment J5			
Top side		Bottom side	
1	GND	2	VDD_3P3_PCIE1
3	PCIE1_WIFI_REFCLKI_P	4	VDD_3P3_PCIE1
5	PCIE1_WIFI_REFCLKI_N	6	PCIE1_LED
7	GND	8	NC
9	WK_PTA2_ACTIVE	10	NC
11	WK_PTA2_PRIORITY	12	NC
13	WK_PTA2_WLAN_ACTIVE	14	WSI_DAT_IN_PCIE1
15	VDD_XPA_PCIE1	16	NC
17	VDD_XPA_PCIE1	18	GND
19	VDD_XPA_PCIE1	20	WSI_CLK_IN_PCIE1
21	VDD_XPA_PCIE1	22	NC
23	VDD_XPA_PCIE1		
Mechanical key E			
33	GND	32	WSI_DAT_OUT_PCIE1
35	PCIE1_TX0_P	34	GND
37	PCIE1_TX0_N	36	WSI_CLK_OUT_PCIE1
39	GND	38	NC
41	PCIE1_RX0_P	40	NC
43	PCIE1_RX0_N	42	NC
45	GND	44	PCIE1_BT_PRIORITY
47	PCIE1_REFCLK_P	46	PCIE1_BT_WLAN_ACTIVE
49	PCIE1_REFCLK_N	48	PCIE1_BT_ACTIVE
51	GND	50	NC
53	PCIE1_CLKREQ_3P3_N	52	PCIE1_PERST_3P3
55	PCIE1_WAKE_3P3_N	54	NC
57	GND	56	WDIS_PCIE1
59	NC	58	NC
61	NC	60	NC
63	GND	62	NC
65	NC	64	NC
67	NC	66	NC
69	GND	68	NC
71	NC	70	NC
73	NC	72	VDD_3P3_PCIE1
75	GND	74	VDD_3P3_PCIE1

M.2 Slot Pin Assignment J6			
Top side		Bottom side	
1	GND	2	VDD_3P3_PCIE2
3	PCIE2_WIFI_REFCLKO_L_P	4	VDD_3P3_PCIE2
5	PCIE2_WIFI_REFCLKO_L_N	6	PCIE2_LED0
7	GND	8	NC
9	NC	10	NC
11	NC	12	NC
13	NC	14	WSI_DAT_IN_PCIE2
15	VDD_XPA_PCIE2	16	PCIE2_LED1
17	VDD_XPA_PCIE2	18	GND
19	VDD_XPA_PCIE2	20	WSI_CLK_IN_PCIE2
21	VDD_XPA_PCIE2	22	NC
23	VDD_XPA_PCIE2		
Mechanical key E			
33	GND	32	WSI_DAT_OUT_PCIE2
35	PCIE2_TX0_P	34	NC
37	PCIE2_TX0_N	36	WSI_CLK_OUT_PCIE2
39	GND	38	NC
41	PCIE2_RX0_P	40	NC
43	PCIE2_RX0_N	42	NC
45	GND	44	NC
47	PCIE2_REFCLK_P	46	NC
49	PCIE2_REFCLK_N	48	NC
51	GND	50	NC
53	PCIE2_CLKREQ_3P3_N	52	PCIE2_PERST_3P3
55	PCIE2_WAKE_3P3_N	54	NC
57	GND	56	WDIS_PCIE2
59	PCIE2_TX1_P	58	NC
61	PCIE2_TX1_N	60	NC
63	GND	62	NC
65	PCIE2_RX1_P	64	NC
67	PCIE2_RX1_N	66	NC
69	GND	68	NC
71	PCIE2_WIFI_REFCLKO_R_N	70	NC
73	PCIE2_WIFI_REFCLKO_R_P	72	VDD_3P3_PCIE2
75	GND	74	VDD_3P3_PCIE2

JTAG Interface Pin Assignment

JTAG Interface Pin Assignment J1000			
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	DVDD_1V8	12	GND
13	JTAG_TDO	14	GND
15	JTAG_SRSTN	16	GND
17	GND	18	GND
19	GND	20	GND

FFC/FPC Connectors Pin Assignment

FFC/FPC Connectors Pin Assignment J19	
Pin	Signal
1	DVDD_1V8
2	DVDD_3V3
3	LAN_LED_CONN
4	DVDD_3V3
5	P0_1000_LED_CONN
6	PCIE3_LED_CONN
7	ZIGBEE_LED_CONN
8	ZIGGY_LED_CONN
9	SDX_LTE_LED
10	WAN1_LED_CONN
11	WAN2_LED_CONN
12	WPS_IN
13	PCIE0_LED_CONN
14	PMIC_RESET_IN
15	PCIE2_LED0_CONN
16	POWER_LED
17	2G_WIFI_LED_CONN
18	NC
19	GND
20	GND

USB 3.0 Port Pin Assignment

USB 3.0 Port Pin Assignment J11			
Pin	Signal	Pin	Signal
1	DVDD_USB	2	USB1_CONN_DM
3	USB1_CONN_DP	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 Pin Assignment

SFP Pin Assignment J8			
Pin	Signal	Pin	Signal
1	GND	20	GND
2	MHN_INTN_3P3	19	PSGMII_SFP_TX_N
3	SFP_RESET_3P3	18	PSGMII_SFP_TX_P
4	SFP_MDIO	17	GND
5	SFP_MDC	16	SFP_VCCT
6	SFP_PRSTNT	15	SFP_VCCR
7	MHN_REFCLK_P	14	GND
8	MHN_REFCLK_N	13	PSGMII_SFP_RX_P
9	GND	12	PSGMII_SFP_RX_N
10	GND	11	GND

UART Pin Assignment

UART Pin Assignment J1003			
Pin	Signal	Pin	Signal
1	DVDD_3V3	2	DVDD_3V3
3	UART_RXD1_CONN	4	NC
5	NC	6	NC
7	NC	8	NC
9	UART_TXD1_CONN	10	NC
11	GND	12	GND

SLIC Connector Pin Assignment

SLIC Connector Pin Assignment J14			
Pin	Signal	Pin	Signal
1	RCM_CH1_P	2	RCM_CH17_P
3	VDD_APC_CX	4	VDD_XPA_PCIE0
5	RCM_CH2_P	6	RCM_CH18_P
7	VDD_NPU_CX	8	RCM_CH18_N
9	RCM_CH3_P	10	RCM_CH19_P
11	VDD_SOC_CX	12	VDD_XPA_PCIE2
13	RCM_CH4_P	14	RCM_CH20_P
15	VDD_SOC_MX	16	VDD_XPA_PCIE3
17	RCM_CH5_P	18	RCM_CH21_P
19	VDD_LDO2_0P85	20	VDD_3P3_PCIE3
21	RCM_CH6_P	22	RCM_CH22_P
23	VAA12_PHYB	24	DVDD_0V7_AQR1
25	RCM_CH7_P	26	RCM_CH23_P
27	RCM_CH7_N	28	DVDD_0V7_AQR2
29	RCM_CH8_P	30	RCM_CH24_P
31	RCM_CH8_N	32	DVDD_1V0_AQR
33	RCM_CH9_P	34	RCM_CH25_P
35	VDDA_0P925_PCIE	36	DVDD_2V0_AQR
37	RCM_CH10_P	38	RCM_CH26_P
39	RCM_CH10_N	40	VDD_3P3_PCIE2
41	RCM_CH11_P	42	NC
43	RCM_CH11_N	44	NC
45	RCM_CH12_P	46	NC
47	RCM_CH12_N	48	NC
49	RCM_CH13_P	50	P5V0D_KRATOS
51	RCM_CH13_N	52	GND
53	RCM_CH14_P	54	NC
55	RCM_CH14_N	56	RCM_ID_2
57	RCM_CH15_P	58	RCM_ID_1
59	VDD_3P3_PCIE1	60	RCM_ID_0
61	GND		
62	GND		
63	GND		
64	GND		

SLIC Connector Pin Assignment J15			
Pin	Signal	Pin	Signal
1	GND	2	GND
3	GND	4	GND
5	DVDD_3V3	6	DVDD_3V3
7	DVDD_3V3	8	DVDD_3V3
9	PCM_FSYNC	10	GND
11	GND	12	12V_IN
13	PCM_PCLK	14	12V_IN
15	GND	16	12V_IN
17	PCM_DRX	18	SLIC_RST
19	GND	20	NC
21	GND	22	SWR_CLK_FF_SLIC_RST
23	AUDIO_GPIO_1	24	GND
25	PCM_SPI_MISO	26	PCM_DTX
27	GND	28	GND
29	SWR_DATA_SLIC_INTN	30	PCM_SPI_CS
31	GND	32	GND
33	NC	34	PCM_SPI_CLK
35	I2S_RXD	36	GND
37	GND	38	PCM_SPI_MOSI
39	GND	40	GND
41	I2C_AUDIO_SCL	42	AUDIO_GPIO_2
43	GND	44	DVDD_1V8
45	I2C_AUDIO_SDA	46	DVDD_1V8
47	GND	48	DVDD_1V8
49	GND	50	GND
51	GND	52	GND
53	WSA_EN_L	54	GND
55	GND	56	GND
57	WSA_EN_R	58	GND
59	GND	60	GND
61	GND		
62	GND		
63	GND		
64	GND		

Ethernet LAN Port Pin Assignment

Ethernet LAN Port (RJ45 10G) J12			
Pin	Signal	Pin	Signal
1	AQ2_MD_B_CT	2	AQ2_MD_B_P
3	AQ2_MD_B_N	4	AQ2_MD_C_N
5	AQ2_MD_C_P	6	AQ2_MD_C_CT
7	AQ2_MD_A_CT	8	AQ2_MD_A_P
9	AQ2_MD_A_N	10	AQ2_MD_D_P
11	AQ2_MD_D_N	12	AQ2_MD_D_CT
14	NC	13	NC
16	NC	15	NC
18	GND	17	NC
		19	GND

Ethernet LAN Port (RJ45 10G) J4500			
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	NC	13	NC
16	NC	15	NC
18	GND	17	NC
		19	GND

Ethernet LAN Port(RJ45 1G) J17	
Pin	Signal
1	CH0_PX0_P
2	CH0_PX0_N
3	CH0_PX1_P
4	CH0_PX2_P
5	CH0_PX2_N
6	CH0_PX1_N
7	CH0_PX3_P
8	CH0_PX3_N
9	CH1_PX0_P
10	CH1_PX0_N
11	CH1_PX1_P
12	CH1_PX2_P
13	CH1_PX2_N
14	CH1_PX1_N
15	CH1_PX3_P
16	CH1_PX3_N
17	CH2_PX0_P
18	CH2_PX0_N
19	CH2_PX1_P
20	CH2_PX2_P
21	CH2_PX2_N
22	CH2_PX1_N
23	CH2_PX3_P
24	CH2_PX3_N
25	CH3_PX0_P
26	CH3_PX0_N
27	CH3_PX1_P
28	CH3_PX2_P
29	CH3_PX2_N
30	CH3_PX1_N
31	CH3_PX3_P
32	CH3_PX3_N
33	GND
34	GND
35	GND
36	GND
37	GND

GPIO Pin Mapping

GPIO PIN	Function	GPIO Pin	Function
GPIO_0	QSPI_DATA[3]	GPIO_30	PCIE2_WAKE_N
GPIO_1	QSPI_DATA[2]	GPIO_31	PCIE3_CLKREQ_N
GPIO_2	QSPI_DATA[1]	GPIO_32	PCIE3_RST_N
GPIO_3	QSPI_DATA[0]	GPIO_33	PCIE3_WAKE_N
GPIO_4	QSPI_CS_N	GPIO_34	UART_RXD1
GPIO_5	QSPI_CLK	GPIO_35	UART_TXD1
GPIO_6	NC	GPIO_36	AQR_RST
GPIO_7	NC	GPIO_37	WPS_IN
GPIO_8	NC	GPIO_38	IPQ_MDC
GPIO_9	NC	GPIO_39	IPQ_MDIO
GPIO_10	NC	GPIO_40	SDX_FULL_PON_1P8
GPIO_11	SPIO_CLK	GPIO_41	SDX_WL_TX_EN
GPIO_12	SPIO_CS	GPIO_42	AP2SDX_STATUS
GPIO_13	SPIO_MISO	GPIO_43	SDX2AP_STATUS
GPIO_14	SPIO_MOSI	GPIO_44	AP2SDX_ERP_FATAL
GPIO_15	ZIGBEE_SPI_CLK	GPIO_45	SDX2AP_ERP_FATAL
GPIO_16	ZIGBEE_SPI_CS	GPIO_46	SDX_WWAN_N
GPIO_17	ZIGBEE_SPI_MISO	GPIO_47	AP2SDX_GP_RESET
GPIO_18	ZIGBEE_SPI_MOSI	GPIO_48	PMIC_I2C_SCL
GPIO_19	ZIGGY_RESET	GPIO_49	PMIC_I2C_SDA
GPIO_20	SLIC_RST	GPIO_50	ZIGGY_UART_RTS
GPIO_21	ZIGBEE_RST	GPIO_51	ZIGGY_UART_CTS
GPIO_22	PCIE0_CLKREQ_N	GPIO_52	ZIGGY_UART_RX
GPIO_23	PCIE0_RST_N	GPIO_53	ZIGGY_UART_TX
GPIO_24	PCIE0_WAKE_N	GPIO_54	IPQ_PTA1_1
GPIO_25	PCIE1_CLKREQ_N	GPIO_55	IPQ_PTA1_2
GPIO_26	PCIE1_RST_N	GPIO_56	IPQ_PTA1_0
GPIO_27	PCIE1_WAKE_N	GPIO_57	AQR2_RST
GPIO_28	PCIE2_CLKREQ_N	GPIO_58	2G_IRON_RST
GPIO_29	PCIE2_RST_N	GPIO_59	QFPROM_EN
		GPIO_60	MALIBU_RESET
		GPIO_61	IPQ_PTA2_0
		GPIO_62	IPQ_PTA2_1
		GPIO_63	IPQ_PTA2_2
		GPIO_64	IPQ_2G_LED