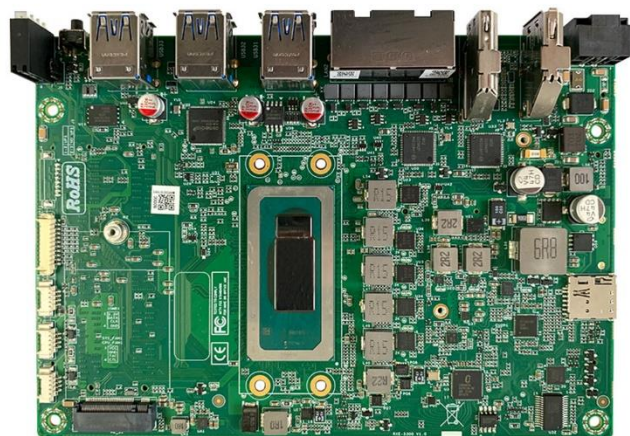


USER MANUAL

用户手册

***RXE-5300*系列**

工业主板

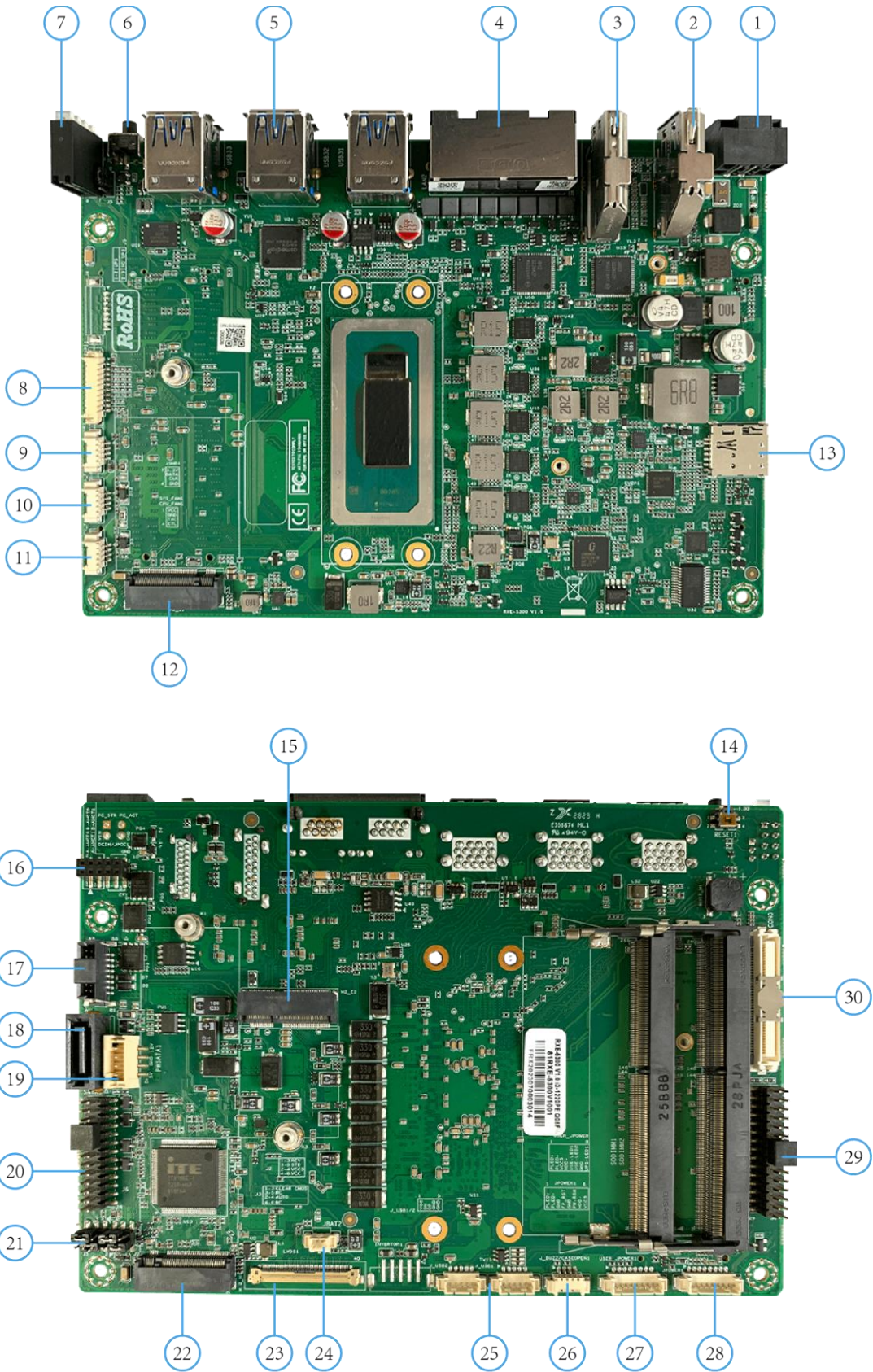


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1. 接口描述



序号	外部接口名称
1	电源输入接口
2	DP
3	HDMI
4	LAN (LAN1, LAN2)
5	6 x USB 3.0
6	Power Button
7	LED
14	Reset

序号	内部接口名称	序号	内部接口名称
8	ESPI	20	BTB (J6)
9	SMBus	21	Jumper
10	SYS FAN	22	M.2 M-KEY (M2_N1)
11	CPU FAN	23	LCD (eDP/LVDS)
12	M.2 B-KEY (M2_S1)	24	RTC Battery (JBAT)
13	Nano SIM (SIM1)	25	2 x USB 2.0
15	M.2 E-KEY (M2_E2)	26	Buzzer/Caseopen
16	DCIN/POE	27	User LED Connector (USER JPOWER)
17	UPS	28	JPOWER
18	SATA	29	BTB
19	SATA Power	30	BTB (CON3)

2. 外部接口说明

2.1 电源输入接口

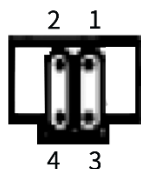


图 2-1 凤凰端子电源输入接口示意图

RXE-5300 系列配有 1 个 24V 4PIN 凤凰端子，如图 2-1 所示。

PIN	Signal
1	PC_START
2	PC_ACTIVE
3	VIN, 9~36V
4	GND

2.2 显示输入 (DP 和 HDMI)

RXE-5300 系列配有 1 个 DP 和 1 个 HDMI 显示接口，可支持 DP 接口和 HDMI 接口的显示屏，并且支持双独立显

示。接口定义如下：

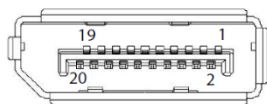


图 2-2 DP 示意图

PIN	Signal	PIN	Signal
1	ML_Lane 0 (p)	11	GND
2	GND	12	ML_Lane 3 (n)
3	ML_Lane 0 (n)	13	CONFIG1
4	ML_Lane 1 (p)	14	CONFIG2
5	GND	15	AUX CH (p)
6	ML_Lane 1 (n)	16	GND
7	ML_Lane 2 (p)	17	AUX CH (n)
8	GND	18	Hot Plug
9	ML_Lane2 (2)	19	Return
10	ML_Lane 3 (p)		

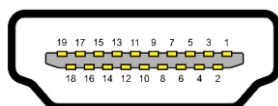


图 2-3 HDMI 示意图

PIN	Signal	PIN	Signal
1	TMDS Data2+	11	TMDS Clock Shield
2	TMDS Data2 Shield	12	TMDS Clock-
3	TMDS Data2-	13	CEC
4	TMDS Data1+	14	Reserved (N.C. on device)
5	TMDS Data1 Shield	15	SCL(I ² C serial clock for DDC)
6	TMDS Data1-	16	SDA(I ² C serial data for DDC)
7	TMDS Data0+	17	DDC/CEC Ground)
8	TMDS Data0 Shield	18	+5 V Power
9	TMDS Data0-	19	Hot Plug Detect
10	TMDS Clock+		

2.3 LAN

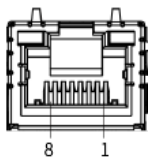


图 2-4 LAN 口示意图

RXE-5300 具有 2 个以太网接口，每个接口都由独立的 Intel 芯片 i210-AT 控制，同时支持 POE 功能。

PIN	Signal	Description
1	TRD0P	Tranceive Data+
2	TRD0N	Tranceive Data-
3	TRD1P	Received Data+
4	TRD2P	Bi-directionalData+
5	TRD2N	Bi-directionalData-
6	TRD1N	Received Data-
7	TRD3P	Bi-directionalData+
8	TRD3N	Bi-directionalData-

2.4 USB 3.0

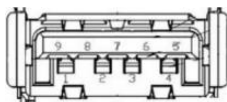


图 2-5 USB3.0 接口示意图

RXE-5300 具有 6 个 USB3.0 接口，高速的数据传输，支持即插即用。

PIN	Signal
1	Vbus
2	D -
3	D +
4	GND
5	StdA_SSRX-
6	StdA_SSRX+
7	GND_DRIAN
8	StdA_SSTX-
9	StdA_SSTX+

2.5 电源开关



图 2-6 电源开关接口示意图

RXE-5300 系列配有 1 个开关按钮，如图 2-5 所示,按下电源开关可开启或关闭系统。

2.6 Reset

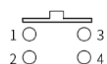


图 2-7 Reset 示意图

RXE-5300 上有 1 个系统复位按钮 (Reset)，按下系统复位按钮可重启系统。

PIN	Signal
1	FP_RST_N
2	
3	GND
4	

2.8 LED



图 2-8 LED 示意图

从上至下分别为 Power status(电源), HDD (硬盘) , USER1 (用户自定义) ,USER2 (用户自定义) ,靠近板边的为 USER2。

名称	描述
Power status	LED on computer on, LED off computer off
HDD	LED fast flashes access to storage medium
USER1	Programmable LED for user configurations
USER2	Programmable LED for user configurations

3. 内部接口说明

3.1 ESPI



图 3-1 ESPI 示意图

PIN	Signal	PIN	Signal
1	+V3.3S	6	PLTRST#
2	D0	7	CS#
3	D1	8	RESET#
4	D2	9	CLK
5	D3	10	GND

3.2 SMBus

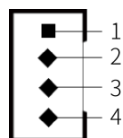


图 3-2 SMBus 示意图

PIN	Signal
1	VCC3
2	DATA-
3	CLK
4	GND

3.3 CPU FAN/SYS FAN

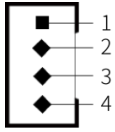


图 3-3 CPU FAN/SYS FAN PIN 示意图

PIN	Signal
1	VCC
2	GND
3	TAC
4	CTL

3.4 Nano SIM

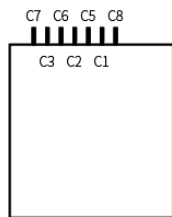


图 3-4 Nano SIM 示意图

PIN	Signal
C1	VCC
C2	RST
C3	CLK
C5	GND
C6	VPP
C7	I/O
C8	NC1

3.5 UPS

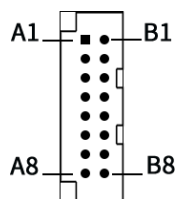


图 3-5 UPS 示意图

PIN	Signal	PIN	Signal
A1	DC_24V	B1	DC_OUT
A2	DC_24V	B2	DC_OUT
A3	DC_24V	B3	DC_OUT
A4	GND	B4	GND
A5	GND	B5	GND
A6	RX	B6	UPS_LED1
A7	TX	B7	POWERSW
A8	VCC3	B8	POWER_OFF_MCU

3.6 DC IN/POE

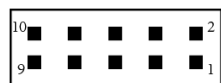


图 3-6 DCIN/POE 示意图

PIN (J2)	Signal	PIN (J3)	Signal
1	POE_A_AMCT0	2	POE_B_AMCT0
3	POE_A_AMCT1	4	POE_B_AMCT1
5	DC IN	6	GND
7			
8			
9			
		10	

3.7 SATA (SATA 3.0 接口)



图 3-7 SATA 3.0 示意图

SATA 接口支持 SATA 3.0 规格，一个 SATA 接口只能连接一个 SATA 设备。接脚定义如下：

PIN	Signal
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

3.8 SATA Power

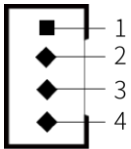


图 3-8 SATA Power 示意图

PIN	Signal
1	VCC
2	GND
3	GND
4	+V12_S

3.9 Jumper

Jumper 是一种金属连接器，用于关闭或断开电路的一部分。它由两个金属引脚和一个金属夹子（通常由塑料外壳保护）组成，金属夹在引脚间滑动以此来连接它们。要关闭 Jumper，请将夹子连接某两个针脚；要打开 Jumper，请移除夹子。当 Jumper 有三个针脚时，可以连接针脚 1 和 2 或者针脚 2 和 3（如图 3-9 所示）。

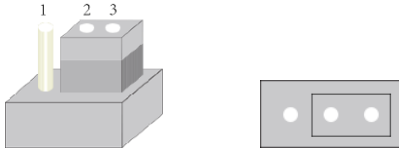


图 3-9 Jumper 接线示意图

处理 Jumper 时，一把尖嘴钳可能会有帮助。如果您对适合您的应用的最佳硬件配置有任何疑问，请联系您当地的经销商或销售代表。



为了避免损坏计算机，请在设置操作时确保关闭电源!

RXE-5300 中具有 2 个 Jumper (J2,J3)，定义如下：

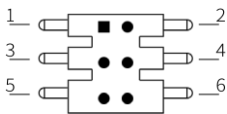


图 3-10 Jumper 示意图

PIN (J2)	Signal	PIN (J3)	Signal
1-3	CLEAR CMOS	1-3	REV
3-5	NC	3-5	STD
2-4	AUTO	2-4	VCC3
4-6	NC	4-6	VCC

3.10 USB 2.0

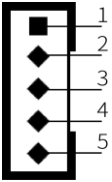


图 3-11 USB2.0 接口示意图

PIN	Signal
1	VCC
2	DN
3	DP
4	GND
5	GND

3.11 LCD(Edp/LVDS)



图 3-12 LCD (eDP/LVDS)示意图

PIN	Signal	PIN	Signal
1	BL_V12_S	21	LVDS_D5P
2	BL_V12_S	22	LVDS_D5N
3	BL_V12_S	23	GND
4	BL_V12_S	24	LVDS_D4P
5	BL_PWN	25	LVDS_D4N
6	BL_EN	26	GND
7	GND	27	EDP_CLK1P
8	GND	28	EDP_CLK1N
9	LCD_VCC	29	GND
10	LCD_VCC	30	LVDS_D3P
11	HDP	31	LVDS_D3N
12	LVDS_CLK2P	32	GND
13	LVDS_CLK2N	33	EDP_D0P
14	GND	34	EDP_D0N
15	LVDS_D7P	35	GND
16	LVDS_D7N	36	EDP_D1P
17	GND	37	EDP_D1N
18	LVDS_D6P	38	GND
19	LVDS_D6N	39	LVDS_D0P
20	GND	40	LVDS_D0N

3.12 RTC Battery

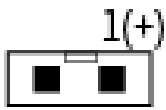


图 3-13 RTC Battery 示意图

PIN	Signal
1	+VBAT_a1
2	GND

3.13 User LED Connector (USER JPOWER)

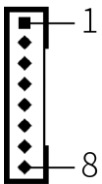


图 3-14 User Jpower 接口示意图

PIN	Signal	PIN	Signal
1	PLED+	5	USER1_LEDR
2	PLED-	6	USER2_LEDR
3	VCC3	7	GND
4	HDD_LED-	8	UPS_LED1

3.14 JPOWER

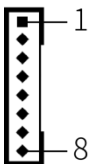


图 3-14 Jpower 接口示意图

PIN	Signal	PIN	Signal
1	PLED+	5	GND
2	PLED-	6	POWERSW
3	GND	7	HDD_LED-
4	FP_RST_N	8	VCC3

3.15 BTB (J6)



图 3-15 BTB (J6)接口示意图

PIN	Signal	PIN	Signal
1	DCD1	2	SIN1
3	SOUT1	4	DTR1
5	RTS1	6	DSR1
7	RI1	8	CTS1
9	DCD2	10	SIN2
11	SOUT2	12	DTR2
13	RTS2	14	DSR2
15	RI2	16	CTS2
17	GP74	18	GP70
19	GP75	20	GP71
21	GP76	22	GP72
23	GP77	24	GP73
25	GND	26	VCC3

3.16 BTB



图 3-16 BTB 接口示意图

PIN	Signal	PIN	Signal
1	+V3.3_A	2	VCC
3	MCLK/GP56	4	NC
5	GND	6	NC
7	NC	8	NC
9	NC	10	NC
11	VCC3	12	GND
13	HDA_1.8V	14	NC
15	ACDAOUT	16	5VSB
17	ACDAIN0	18	ACSYNC
19	ACBCLK	20	ACRST_N
21	GND	22	GND
23	TPM_CSN	24	TPM_VDD
25	GPPC_E13_TPMIRQ	26	PLTRST_N
27	MISO_TPM	28	CLK_TPM
29	GND	30	MOSI_TPM

3.17 BTB (CON3)



图 3-17 BTB (CON3)接口示意图

PIN	Signal	PIN	Signal	PIN	Signal	PIN	Signal
A1	PCIE_2_TXP	A21	LPC_FRAME_N	B1	NC	B21	GND
A2	PCIE_2_TXN	A22	GP_G22_ESPI_RST0_N	B2	NC	B22	GND
A3	PCIE_2_RXP	A23	CLKOUT_LPC0	B3	NC	B23	GND
A4	PCIE_2_RXN	A24	SOUTC	B4	NC	B24	5VSB
A5	GND	A25	SINC	B5	GND	B25	5VSB
A6	NC	A26	RTSC_	B6	NC	B26	5VSB
A7	NC	A27	CTSC_	B7	NC	B27	VCC
A8	NC	A28	SOUTD	B8	NC	B28	VCC
A9	NC	A29	SIND	B9	NC	B29	VCC
A10	GND	A30	RTSD_	B10	GND	B30	VCC
A11	PCIE_REFCLK1_DP	A31	CTSD_	B11	NC	B31	VCC3
A12	PCIE_REFCLK1_DN	A32	SOUTE	B12	NC	B32	VCC3
A13	GND	A33	SINE	B13	I2C_SDA	B33	VCC3
A14	USB_PP1_R	A34	RTSE_	B14	I2C_SCL	B34	VCC3
A15	USB_PN1_R	A35	CTSE_	B15	PLTRST_N	B35	VCC3
A16	GND	A36	SOUTF	B16	GP_DSW04_PMC_SLP_S3_N	B36	+V3P3_A
A17	LPC_AD0	A37	SINF	B17	PMC_WAKE_N	B37	+V3P3_A
A18	LPC_AD1	A38	RTSF_	B18	UFS_RESET_N	B38	+V3P3_A
A19	LPC_AD2	A39	CTSF_	B19	POWERSW	B39	VCCIN_24V
A20	LPC_AD3	A40	NC	B20	GND	B40	VCCIN_24V

3.18 M.2 B-Key (M2_S2)



图 3-18 M.2 B-Key 示意图

RXE-5300 具有一个 M.2 3052,可支持 4G/5G 模块, PIN 定义如下:

PIN	Signal	PIN	Signal	PIN	Signal	PIN	Signal
1	M.2_CONFIG_3_S	27	GND	45	GND	63	NC
2	VCC3_M.2_S	28	NC	46	NC	64	NC
3	GND	29	RXN_4_HUB	47	NC	65	NC
4	VCC3_M.2_S	30	USIM1_RST	48	NC	66	NC
5	GND	31	RXP_4_HUB	49	NC	67	W_RESET#_S
6	W_PWR_ON_S	32	USIM1_CLK	50	PLTRST_N	68	NC
7	DP_4_HUB_R	33	GND	51	GND	69	M.2_CONFIG_1_S
8	W_DISABLE1#	34	USIM1_IO	52	NC	70	VCC3_M.2_S
9	DM_4_HUB_R	35	RXP_4_HUB	53	NC	71	GND
10	NC	36	USIM1_VCC	54	NC	72	VCC3_M.2_S
11	GND	37	TXP_4_HUB	55	NC	73	GND
20	NC	38	NC	56	NC	74	VCC3_M.2_S
21	M.2_CONFIG_0_S	39	GND	57	GND	75	M.2_CONFIG_2_S
22	NC	40	NC	58	NC	H1	NC
23	NC	41	NC	59	NC	H2	NC
24	NC	42	NC	60	NC	H3	GND
25	BodySAR	43	NC	61	NC	H4	GND
26	NC	44	NC	62	NC		

3.19 M.2 M-Key (M2_N1)



图 3-19 M.2 B-Key 示意图

RXE-5300 具有一个 M.2 2280 PCIe x4，接脚定义如下：

PIN	Signal	PIN	Signal	PIN	Signal	PIN	Signal
1	GND	19	PCIE4_KEY-M_RX2+	37	PCIE4_KEY-M_a_TX1+	55	CLK_100M_a_MKEY_P
2	+V3.3_M.2	20	NC	38	NC	56	NC
3	GND	21	GND	39	GND	57	GND
4	+V3.3SB_M.2	22	NC	40	NC	58	NC
5	PCIE4_KEY-M_RX3-	23	PCIE4_KEY-M_a_TX2-	41	PCIE4_KEY-M_RX0-	68	PCH_SUSCLK_R_MKEY
6	NC	24	NC	42	NC	69	NC
7	GPCIE4_KEY-M_RX3+	25	PCIE4_KEY-M_a_TX2+	43	PCIE4_KEY-M_RX0+	70	+V3.3_M.2
8	M.2_PLN#	26	NC	44	NC	71	GND
9	GND	27	GND	45	GND	72	+V3.3_M.2
10	NC	28	NC	46	NC	73	GND
11	PCIE4_KEY-M_a_TX3-	29	PCIE4_KEY-M_RX1-	47	PCIE4_KEY-M_a_TX0-	74	+V3.3_M.2
12	+V3.3_M.2	30	NC	48	NC	75	GND
13	PCIE4_KEY-M_a_TX3+	31	PCIE4_KEY-M_RX1+	49	PCIE4_KEY-M_a_TX0+	H1	NC
14	+V3.3_M.2	32	NC	50	PLRST_MKEY_BUFFER#	H2	NC
15	GND	33	GND	51	GND	H3	NC
16	+V3.3_M.2	34	NC	52	CLK2_M2B2_a_PCIE_REQ#	H4	NC
17	PCIE4_KEY-M_RX2-	35	PCIE4_KEY-M_a_TX1-	53	CLK_100M_a_MKEY_N		
18	+V3.3_M.2	36	NC	54	M.2_PCIE_WAKE#		

3.20 M.2 E-Key



图3-20 M.2 E-Key接口示意图

RXE-5300 具有一个 M.2 E-KEY 2230 支持 WiFi，接脚定义如下：

PIN	Signal	PIN	Signal	PIN	Signal	PIN	Signal
1	GND	19	NC	45	GND	63	GND
2	+V3.3SB_M.2_E	20	NC	46	NC	64	NC
3	USB6_z_P+	21	NC	47	CLK_M2E_z_PCIE+	65	NC
4	+V3.3SB_M.2_E	22	NC	48	NC	66	NC
5	USB6_z_P	23	NC	49	CLK_M2E_z_PCIE	67	NC
6	NC	32	NC	50	SUSCLK_z_EKEY	68	NC
7	GND	33	GND	51	GND	69	GND
8	NC	34	NC	52	PLTRST_BUFFER#	70	NC
9	NC	35	PCIE_M2_z_TX7+	53	PCIE_a_CLKREQ2#	71	NC
10	NC	36	NC	54	BT_DISABLE#	72	+V3.3SB_M.2_E
11	NC	37	PCIE_M2_z_TX7-	55	PCIE_WAKE#	73	NC
12	NC	38	NC	56	WIFI_DISABLE#	74	+V3.3SB_M.2_E
13	NC	39	GND	57	GND	75	GND
14	NC	40	NC	58	NC	H1	NC
15	NC	41	PCIE_M2_RX11+	59	NC	H2	NC
16	NC	42	NC	60	NC	H3	GND
17	NC	43	PCIE_M2_RX11-	61	NC	H4	GND
18	GND	44	NC	61	NC		