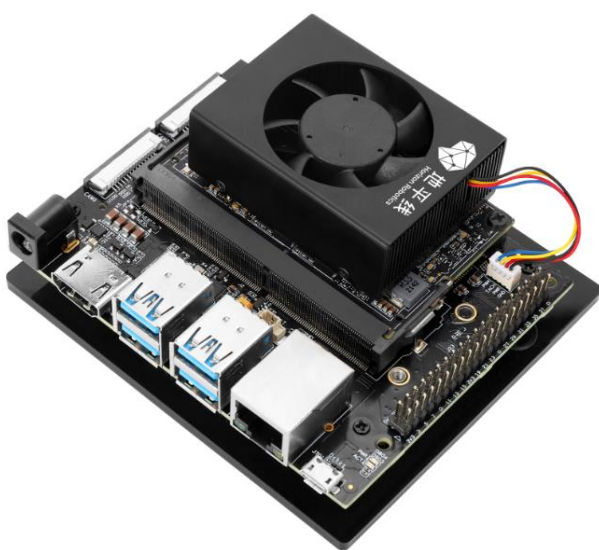


RDK Ultra Product Brief

v1.0

RDK Ultra 是一款面向生态开发者的高性能边缘计算平台。硬件接口兼容 Jetson Orin 系列开发板，方便用户快速集成和产品化落地。

概述



RDK Ultra 主要特性包括八核 Cortex® A55 处理器、96Tops 算力、最高 8GB 内存、支持 4K@60 帧视频编解；主要接口包括 HDMI、千兆以太网、USB 3.0、MIPI CSI、PCIe3.0 等。

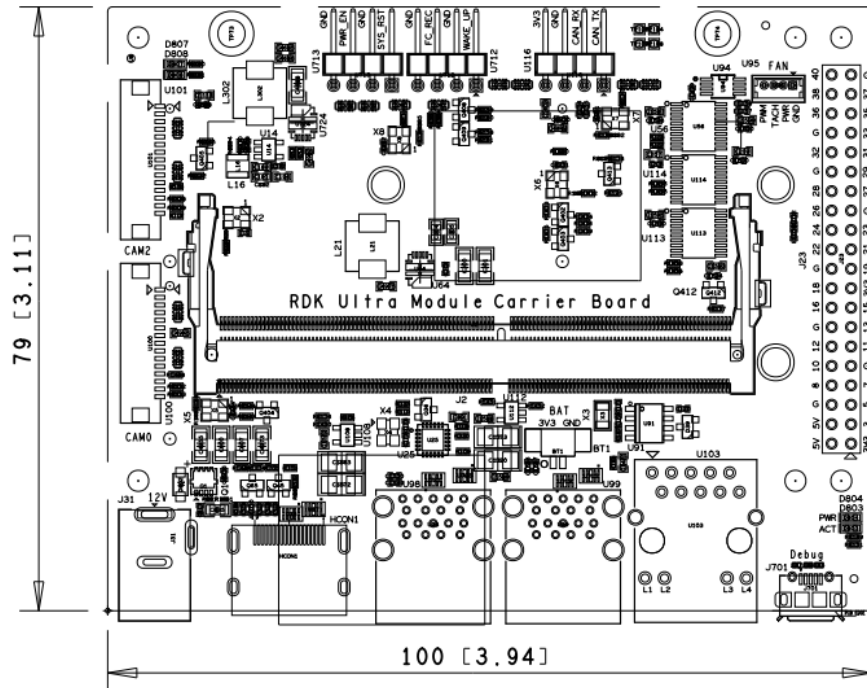
模组支持 M.2 接口双频 2.4/5.0GHz 无线局域网和蓝牙 4.2 模组。搭配外部天线套件使用，能够实现无线连接，降低用户开发和测试成本，缩短上市时间。

RDK Ultra 板载 eMMC 容量包括 64GB。

套件内容

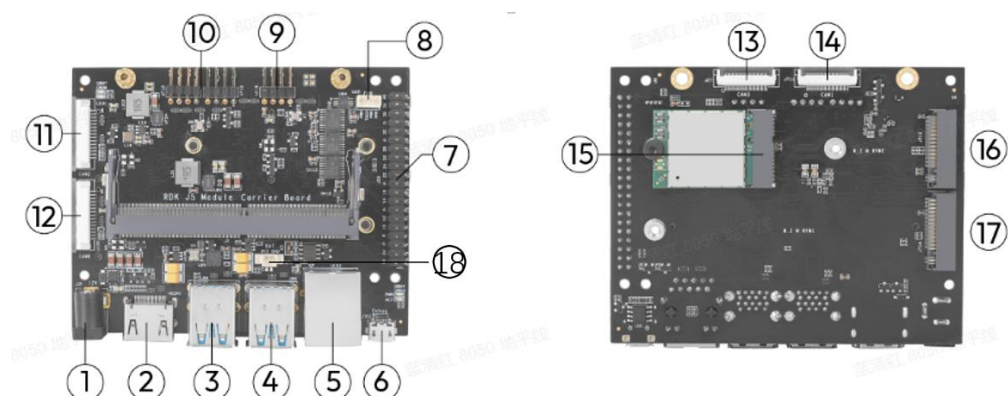
- RDK Ultra 核心板 x1
- RDK Ultra 底板 x1
- 散热器风扇 x1
- 电源适配器 x1
- IMX219 Camera 模组 x1
- 摄像头模组支架 x1
- 快速操作指南 x1

尺寸



接口定义

RDK Ultra 接口定义如下图：



功能	编号	编号	功能
12V DC 电源口	1	10	4pin 功能插针 x2
HDMI(1080P)	2	11	MIPI CAM2 15PIN
USB A 3.0 x2	3	12	MIPI CAM0 15PIN
USB A 3.0 x2	4	13	MIPI CAM3 24PIN
千兆网口	5	14	MIPI CAM1 24PIN
Micro USB 2.0 Debug	6	15	WIFI&BT
40PIN 扩展口	7	16	NVME 硬盘 2230
FAN	8	17	NVME 硬盘 2280
CAN	9	18	RTC BAT

信号定义

电源接口（接口 1）

序号	名称	描述	属性
1	12V	电源输入	12V / 5A 输入
2	GND	参考地	参考地

HDMI 接口（座子 2）

序号	名称	描述	属性
1	HDMI_D2P	Output HDMI TX2 positive	差分信号
2	GND	Ground (0V)	地
3	HDMI_D2N	Output HDMI TX2 negative	差分信号
4	HDMI_D1P	Output HDMI TX1 positive	差分信号
5	GND	Ground (0V)	地
6	HDMI_D1N	Output HDMI TX1 negative	差分信号
7	HDMI_D0P	Output HDMI TX0 positive	差分信号
8	GND	Ground (0V)	地

9	HDMI_D0N	Output HDMI TX0 negative	差分信号
10	HDMI_CLKP	Output HDMI clock positive	差分时钟
11	GND	Ground (0V)	地
12	HDMI_CLKN	Output HDMI clock negative	差分时钟
13	HDMI_CEC	Input HDMI0 CEC.	I-3V3
14	NC	NORMAL CLOSE	预留
15	HDMI_SCL	Bidirectional HDMI SCL.	IO-3V3
16	HDMI_SDA	Bidirectional HDMI SDA.	IO-3V3
17	GND	Ground (0V)	地
18	5V	Power 5V@50mA	O-5V
19	HDMI_HPD	Input HDMI hotplug. 0V: plug in	I-3V3

USB3.0 接口 (座子 3)

序号	名称	描述	属性
1	VBUS	USB 电源	O-5V
2	D1-	Connect to Module USB2.0 Port0 negative	差分信号
3	D1+	Connect to Module USB2.0 Port0 positive	差分信号
4	GND	Ground (0V)	GND
5	SSRX1-	Connect to Module USB3.0 Port0 RX negative	差分信号
6	SSRX1+	Connect to Module USB3.0 Port0 RX positive	差分信号
7	GND	Ground (0V)	GND
8	SSTX1-	Connect to Module USB3.0 Port0 TX negative	差分信号
9	SSTX1+	Connect to Module USB3.0 Port0 TX positive	差分信号
10	VBUS	USB 电源	O-5V
11	D2-	Connect to Module USB2.0 Port1 negative	差分信号
12	D2+	Connect to Module USB2.0 Port1 positive	差分信号
13	GND	Ground (0V)	GND
14	SSRX2-	Connect to Module USB3.0 Port1 RX negative	差分信号
15	SSRX2+	Connect to Module USB3.0 Port1 RX positive	差分信号
16	GND	Ground (0V)	GND
17	SSTX2-	Connect to Module USB3.0 Port1 TX negative	差分信号
18	SSTX2+	Connect to Module USB3.0 Port1 TX positive	差分信号

USB3.0 接口 (座子 4)

序号	名称	描述	属性
1	VBUS	USB 电源	O-5V
2	D1-	Connect to Module USB2.0 Port2 negative	差分信号
3	D1+	Connect to Module USB2.0 Port2 positive	差分信号
4	GND	Ground (0V)	GND
5	SSRX1-	Connect to Module USB3.0 Port2 RX negative	差分信号
6	SSRX1+	Connect to Module USB3.0 Port2 RX positive	差分信号
7	GND	Ground (0V)	GND
8	SSTX1-	Connect to Module USB3.0 Port2 TX negative	差分信号
9	SSTX1+	Connect to Module USB3.0 Port2 TX positive	差分信号
10	VBUS	USB 电源	O-5V
11	D2-	Connect to Module USB2.0 Port3 negative	差分信号
12	D2+	Connect to Module USB2.0 Port3 positive	差分信号

13	GND	Ground (0V)	GND
14	SSRX2-	Connect to Module USB3.0 Port3 RX negative	差分信号
15	SSRX2+	Connect to Module USB3.0 Port3 RX positive	差分信号
16	GND	Ground (0V)	GND
17	SSTX2-	Connect to Module USB3.0 Port3 TX negative	差分信号
18	SSTX2+	Connect to Module USB3.0 Port3 TX positive	差分信号

千兆以太网（座子 5）

序号	名称	描述	属性
2	TD1+	GbE Transformer Data 0 positive	差分信号
3	TD1-	GbE Transformer Data 0 negative	差分信号
4	TD2+	GbE Transformer Data 1 positive	差分信号
7	TD2-	GbE Transformer Data 1 negative	差分信号
5	TD3+	GbE Transformer Data 2 positive	差分信号
6	TD3-	GbE Transformer Data 2 negative	差分信号
8	TD4+	GbE Transformer Data 3 positive	差分信号
9	TD4-	GbE Transformer Data 3 negative	差分信号
L2	LED1-	Ethernet Link LED (Green)	O-指示灯
L3	LED2-	Ethernet Activity LED (Yellow)	O-指示灯

Micro USB 2.0 Debug（接口 6）

序号	名称	描述	属性
1	VBUS	USB Vbus	O-5V
2	D-	USB 差分数据+	差分信号
3	D+	USB 差分数据-	差分信号
4	NC	NORMAL CLOSE	预留
5	GND	Ground (0V)	GND

40PIN 扩展口（接口 7）

序号	名称	描述	属性
1	VDD_3V3	Power, 3V3±5%	O-3V3
3	I2C1_SDA	General I2C 1 Clock. 2.2kΩ pull-up to 3V3	IO-3V3
5	I2C1_SCL	General I2C 1 Data. 2.2kΩ pull-up to 3V3	IO-3V3
7	GPIO9	GPIO#9 or Audio Codec Master Clock	IO-3V3
9	GND	Ground (0V)	GND
11	UART3_TXD	UART #3 Transmit or GPIO	IO-3V3
13	SPI1_SCLK	SPI 1 Master Out / Slave In or GPIO	IO-3V3
15	GPIO12	GPIO #12 or LPWM	IO-3V3
17	VDD_3V3	Power, 3V3±5%	O-3V3
19	SPI0_MOSI	SPI 0 Master Out / Slave In or GPIO	IO-3V3
21	SPI0_MISO	SPI 0 Master In / Slave Out or GPIO	IO-3V3
23	SPI0_SCLK	SPI 0 Clock or GPIO	IO-3V3
25	GND	Ground (0V)	GND
27	ID_I2C_SDA	General I2C 0 Data. 2.2kΩ pull-up to 3V3.	IO-3V3
29	GPIO1	GPIO #1	IO-3V3
31	GPIO11	GPIO #11	IO-3V3
33	GPIO13	GPIO #13 or PWM	IO-3V3

35	I2S0_LRCK	I2S Audio Port 0 Left/Right Clock or GPIO	IO-3V3
37	SPI1_MOSI	SPI 1 Master Out / Slave In or GPIO	IO-3V3
39	GND	Ground (0V)	GND

序号	名称	描述	属性
2	VDD_5V	Power, 5V0±5%	O-5V
4	VDD_5V	Power, 5V0±5%	O-5V
6	GND	Ground (0V)	GND
8	UART1_TXD	UART #1 Transmit or GPIO	IO-3V3
10	UART1_RXD	UART #1 Receive or GPIO	IO-3V3
12	I2S0_SCLK	I2S Audio Port 0 Clock or GPIO	IO-3V3
14	GND	Ground (0V)	GND
16	SPI1_CS1	SPI 1 Chip Select 1 or GPIO	IO-3V3
18	SPI1_CS0	SPI 1 Chip Select 0 or GPIO	IO-3V3
20	GND	Ground (0V)	GND
22	SPI1_MISO	SPI 1 Master In / Slave Out or GPIO	IO-3V3
24	SPI0_CS0	SPI 0 Chip Select 0 or GPIO	IO-3V3
26	SPI0_CS1	SPI 0 Chip Select 1 or GPIO	IO-3V3
28	ID_I2C_SCL	General I2C 0 Clock. 2.2kΩ pull-up to 3V3.	IO-3V3
30	GND	Ground (0V)	GND
32	GPIO7	GPIO #7 or PWM	IO-3V3
34	GND	Ground (0V)	GND
36	UART3_RXD	UART #3 Transmit or GPIO	IO-3V3
38	I2S0_DIN	I2S Audio Port 0 Data In or GPIO	IO-3V3
40	I2S0_DOUT	I2S Audio Port 0 Data Out or GPIO	IO-3V3

FAN (接口 8)

序号	名称	描述	属性
1	GND	Ground (0V)	GND
2	PWR	Power, 5V±5%	O-5V
3	PWM	Push-Pull PWM output driver for the Fan	O-3V3
4	TACH	Open drain tachometer input for the Fan	I-3V3

CAN (接口 9)

序号	名称	描述	属性
1	CAN_TX	CAN Receive	I-3V3
2	CAN_RX	CAN Transmit	O-3V3
3	VDD	Power, 3V3±5%	O-3V3
4	GND	Ground (0V)	GND

4pin 功能插针 x2 (接口 10)

U712 连接器:

序号	名称	描述	属性
1	SLEEP/WAKE	Configured as GPIO for optional use to indicate the system should enter or exit sleep mode.	IO-5V
2	GND	Ground (0V)	GND

3	FORCE_REC	Force Recovery strap pin. Held low when SYS_RESET* goes high (i.e., during power-on) places system in USB recovery mode.	I-1V8
4	GND	Ground (0V)	GND

U713 连接器:

序号	名称	描述	属性
1	SYS_RESET	Module Reset. Reset to the module when driven low by the carrier board. Used as carrier board supply enable when driven high by the module when module power sequence is complete. Used to ensure proper power on/off sequencing between module and carrier board supplies.	I-1V8
2	GND	Ground (0V)	GND
3	POWER_EN	Signal for module on/off: high level on, low level off. Connects to module Power Sequencer/PMIC EN0 through converter logic. POWER_EN is routed to a Schmitt trigger buffer on the module.	I-12V
4	GND	Ground (0V)	GND

MIPI CAM2 15PIN (接口 11)

序号	名称	描述	属性
1	GND	Ground (0V)	GND
2	RX_D0N	Input MIPI_CSI3 D0 negative	差分信号
3	RX_D0P	Input MIPI_CSI3 D0 positive	差分信号
4	GND	Ground (0V)	GND
5	RX_D1N	Input MIPI_CSI3 D1 negative	差分信号
6	RX_D1P	Input MIPI_CSI3 D1 positive	差分信号
7	GND	Ground (0V)	GND
8	RX_CLKN	Input MIPI_CSI3 clock negative	差分信号
9	RX_CLKP	Input MIPI_CSI3 clock positive	差分信号
10	GND	Ground (0V)	GND
11	PWDN	power down, Connect to Module CAM1_PWDN	O-3V3
12	MCLK	System input clock, Connect to Module CAM1_MCLK	O-1V8
13	SCL	General I2C 1 Clock. 2.2k Ω pull-up to 3V3	O-3V3
14	SDA	General I2C 1 Data. 2.2k Ω pull-up to 3V3	IO-3V3
15	3V3	Power, 3V3 $\pm$ 5%	O-3V3

MIPI CAM0 15PIN (接口 12)

序号	名称	描述	属性
1	GND	Ground (0V)	GND
2	RX_D0N	Input MIPI_CSI1 D0 negative	差分信号
3	RX_D0P	Input MIPI_CSI1 D0 positive	差分信号
4	GND	Ground (0V)	GND
5	RX_D1N	Input MIPI_CSI1 D1 negative	差分信号
6	RX_D1P	Input MIPI_CSI1 D1 positive	差分信号
7	GND	Ground (0V)	GND
8	RX_CLKN	Input MIPI_CSI1 clock negative	差分信号
9	RX_CLKP	Input MIPI_CSI1 clock positive	差分信号
10	GND	Ground (0V)	GND
11	PWDN	power down, Connect to Module CAM0_PWDN	O-3V3
12	MCLK	System input clock, Connect to Module CAM0_MCLK	O-1V8
13	SCL	General I2C 0 Clock. 2.2k Ω pull-up to 3V3	O-3V3
14	SDA	General I2C 0 Data. 2.2k Ω pull-up to 3V3	IO-3V3
15	3V3	Power, 3V3 $\pm$ 5%	O-3V3

MIPI CAM3 24PIN (接口 13)

序号	名称	描述	属性
1	SDA	General I2C2 Data. 2.2k Ω pull-up to 1V8	IO-1V8
2	SCL	General I2C2 Clock. 2.2k Ω pull-up to 1V8	O-1V8
3	GND	Ground (0V)	GND
4	PWDN	power down, Connect to Module GPIO8	O-1V8
5	RSET	Reset control, Connect to Module GPIO4	O-1V8
6	GND	Ground (0V)	GND
7	RX_CLKN	Input MIPI_CSI2 clock negative	差分信号
8	RX_CLKP	Input MIPI_CSI2 clock positive	差分信号
9	GND	Ground (0V)	GND
10	MCLK	24M clock output	O-1V8
11	GND	Ground (0V)	GND
12	RX_D0N	Input MIPI_CSI2 D0 negative	差分信号
13	RX_D0P	Input MIPI_CSI2 D0 positive	差分信号
14	RX_D1N	Input MIPI_CSI2 D1 negative	差分信号
15	RX_D1P	Input MIPI_CSI2 D1 positive	差分信号
16	RX_D2N	Input MIPI_CSI2 D2 negative	差分信号
17	RX_D2P	Input MIPI_CSI2 D2 positive	差分信号
18	RX_D3N	Input MIPI_CSI2 D3 negative	差分信号
19	RX_D3P	Input MIPI_CSI2 D3 positive	差分信号
20	GND	Ground (0V)	GND
21	VDD_3V3	Power, 3V3 $\pm$ 5%	O-3V3
22	NC	NORMAL CLOSE	预留
23	VDD_3V3	Power, 3V3 $\pm$ 5%	O-3V3
24	NC	NORMAL CLOSE	预留

MIPI CAM1 24PIN (接口 14)

序号	名称	描述	属性
1	SDA	General CAM_I2C_SDA.2.2k Ω pull-up to 1V8	IO-1V8
2	SCL	General CAM_I2C_SCL. 2.2k Ω pull-up to 1V8	O-1V8
3	GND	Ground (0V)	GND
4	STBY	power down, Connect to Module GPIO14 or LPWM	O-1V8
5	RSET	Reset control, Connect to Module GPIO6	O-1V8
6	GND	Ground (0V)	GND
7	RX_CLKN	Input MIPI_CSI0 clock negative	差分信号
8	RX_CLKP	Input MIPI_CSI0 clock positive	差分信号
9	GND	Ground (0V)	GND
10	MCLK	24M clock output	O-1V8
11	GND	Ground (0V)	GND
12	RX_D0N	Input MIPI_CSI0 D0 negative	差分信号
13	RX_D0P	Input MIPI_CSI0 D0 positive	差分信号
14	RX_D1N	Input MIPI_CSI0 D1 negative	差分信号
15	RX_D1P	Input MIPI_CSI0 D1 positive	差分信号
16	RX_D2N	Input MIPI_CSI0 D2 negative	差分信号
17	RX_D2P	Input MIPI_CSI0 D2 positive	差分信号
18	RX_D3N	Input MIPI_CSI0 D3 negative	差分信号
19	RX_D3P	Input MIPI_CSI0 D3 positive	差分信号
20	GND	Ground (0V)	GND
21	VDD_3V3	Power, 3V3 $\pm$ 5%	O-3V3
22	NC	NORMAL CLOSE	预留
23	VDD_3V3	Power, 3V3 $\pm$ 5%	O-3V3
24	NC	NORMAL CLOSE	预留

WIFI&BT (接口 15)

Top Odd	名称	描述	属性
1	GND	Ground (0V)	GND
3	USB_DP	USB2.0 Port3 positive	差分信号
5	USB_DM	USB2.0 Port3 negative	差分信号
7	GND	Ground (0V)	GND
10	I2S_FS	I2S Audio Port 1 Left/Right Clock	IO-1V8
33	GND	Ground (0V)	GND
35	PERp0	PCle 1 Receive positive	差分信号
37	PERn0	PCle 1 Receive negative	差分信号
39	GND	Ground (0V)	GND
41	PETp0	PCle 1 Transmit positive	差分信号
43	PETn0	PCle 1 Transmit negative	差分信号
45	GND	Ground (0V)	GND
47	REFCLKP	PCle 1 Reference Clock positive	差分信号
49	REFCLKN	PCle 1 Reference Clock negative	差分信号
50	SUSCLK	32K output.	O-3V3
51	GND	Ground (0V)	GND
53	CLKREQ0	PCle 1 Clock Request. 51k Ω pull-up to 3V3	I-3V3

55	PEWAKE#	PCIe Wake. 51k Ω pull-up to 3V3	I-3V3
57	GND	Ground (0V)	GND
63	GND	Ground (0V)	GND
69	GND	Ground (0V)	GND
75	GND	Ground (0V)	GND
77	GND	Ground (0V)	GND

Bot even	名称	描述	属性
2	VDD	power supply	3V3 $\pm$ 5%
4	VDD	power supply	3V3 $\pm$ 5%
8	I2S_SCLK	I2S Audio Port 1 Clock	O-1V8
12	I2S_DIN	I2S Audio Port 1 Data In	I-1V8
14	I2S_DOUT	I2S Audio Port 1 Data Out	O-1V8
18	GND	Ground (0V)	GND
20	UART_WAKE	UART WAKE UP, Connect to module GPIO #2	IO-3V3
22	UART_RXD	UART #0 Receive	I-1V8
32	UART_TXD	UART #0 Transmit	O-1V8
34	UART_CTS	UART #0 Clear to Send	O-1V8
36	UART_RTS	UART #0 Request to Send	I-1V8
52	PERST0	PCIe 0/1/2 Reset. 4.7k Ω pull-up to 3V3	O-3V3
54	BT_EN	BT disable control. Connect to module GPIO #3	O-3V3
56	WL_EN	WLAN Radio-offfunction. BT disable control. Connect to module GPIO #5	O-3V3
58	I2C_DATA	General I2C 2 Data. 2.2k Ω pull-up to 1V8	IO-1V8
60	I2C_CLK	General I2C 2 Clock. 2.2k Ω pull-up to 1V8	O-1V8
62	ALERT	Connect to module GPIO #10	IO-1V8
72	VDD	power supply	3V3 $\pm$ 5%
74	VDD	power supply	3V3 $\pm$ 5%
76	GND	Ground (0V)	GND

NVME 硬盘 2230 (接口 16)

Top Odd	名称	描述	属性
1	GND	Ground (0V)	GND
3	GND	Ground (0V)	GND
9	GND	Ground (0V)	GND
10	LED	LED, 2k Ω pull-up to 3V3	O-3V3
15	GND	Ground (0V)	GND
21	GND	Ground (0V)	GND
27	GND	Ground (0V)	GND
33	GND	Ground (0V)	GND
39	GND	Ground (0V)	GND
41	PERn0	PCIe 0 Receive negative	差分信号
43	PERp0	PCIe 0 Receive positive	差分信号
45	GND	Ground (0V)	GND
47	PETn0	PCIe 0 Transmit negative	差分信号
49	PETp0	PCIe 0 Transmit positive	差分信号

50	PCIE_RST	PCIE 0/1/2 Reset. 4.7k Ω pull-up to 3V3	O-3V3
51	GND	Ground (0V)	GND
53	PEFCLKN	PCIE 0 Reference Clock negative	差分信号
55	PEFCLKP	PCIE 0 Reference Clock positive	差分信号
57	GND	Ground (0V)	GND
70	VDD	power supply	3V3 $\pm$ 5%
71	GND	Ground (0V)	GND
73	GND	Ground (0V)	GND
75	GND	Ground (0V)	GND

Bot even	名称	描述	属性
2	VDD	power supply	3V3 $\pm$ 5%
4	VDD	power supply	3V3 $\pm$ 5%
12	VDD	power supply	3V3 $\pm$ 5%
14	VDD	power supply	3V3 $\pm$ 5%
16	VDD	power supply	3V3 $\pm$ 5%
18	VDD	power supply	3V3 $\pm$ 5%
40	SMB_CLK	General I2C 2 Clock. 2.2k Ω pull-up to 1V8	O-1V8
42	SMB_DATA	General I2C 2 Data. 2.2k Ω pull-up to 1V8	IO-1V8
44	ALERT	4.7k Ω pull-up to 1V8	O-1V8
52	PCIE_CREQ	PCIE 0 Clock Request. 51k Ω pull-up to 3V3	I-3V3
54	PCIE_WAK	PCIE Wake. 51k Ω pull-up to 3V3	I-3V3
68	SUSCLK	32K output.	O-3V3
72	VDD	power supply	3V3 $\pm$ 5%
74	VDD	power supply	3V3 $\pm$ 5%

NVME 硬盘 2280 (接口 17)

Top Odd	名称	描述	属性
1	GND	Ground (0V)	GND
3	GND	Ground (0V)	GND
9	GND	Ground (0V)	GND
10	LED	LED, 2k Ω pull-up to 3V3	O-3V3
15	GND	Ground (0V)	GND
21	GND	Ground (0V)	GND
27	GND	Ground (0V)	GND
33	GND	Ground (0V)	GND
39	GND	Ground (0V)	GND
41	PERn0	PCIE 2 Receive negative	差分信号
43	PERp0	PCIE 2 Receive positive	差分信号
45	GND	Ground (0V)	GND
47	PETn0	PCIE 2 Transmit negative	差分信号
49	PETp0	PCIE 2 Transmit positive	差分信号
50	PCIE_RST	PCIE 0/1/2 Reset. 4.7k Ω pull-up to 3V3	O-3V3
51	GND	Ground (0V)	GND
53	PEFCLKN	PCIE 2 Reference Clock negative	差分信号
55	PEFCLKP	PCIE 2 Reference Clock positive	差分信号
57	GND	Ground (0V)	GND

70	VDD	power supply	3V3±5%
71	GND	Ground (0V)	GND
73	GND	Ground (0V)	GND
75	GND	Ground (0V)	GND

Bot even	名称	描述	属性
2	VDD	power supply	3V3±5%
4	VDD	power supply	3V3±5%
12	VDD	power supply	3V3±5%
14	VDD	power supply	3V3±5%
16	VDD	power supply	3V3±5%
18	VDD	power supply	3V3±5%
40	SMB_CLK	General I2C 2 Clock. 2.2kΩ pull-up to 1V8	O-1V8
42	SMB_DATA	General I2C 2 Data. 2.2kΩ pull-up to 1V8	IO-1V8
44	ALERT	4.7kΩ pull-up to 1V8	O-1V8
52	PCIE_CREQ	PCIE 2 Clock Request. 51kΩ pull-up to 3V3	I-3V3
54	PCIE_WAK	PCIE Wake. 51kΩ pull-up to 3V3	I-3V3
68	SUSCLK	32K output.	O-3V3
72	VDD	power supply	3V3±5%
74	VDD	power supply	3V3±5%

RTC BAT (接口 18)

序号	名称	描述	属性
1	3V3	Power input, 3V0±5%	I-3V0
2	GND	Ground (0V)	GND

警告

- RDK Ultra 使用外接电源需满足相关地区的法规标准。
- 本产品应在通风良好的环境中使用，在密闭空间使用时，需要做好散热措施。
- 使用时，本产品应放置在稳固、平坦、不导电的表面上。
- 将不兼容的设备与 RDK Ultra 连接时，导致设备损坏，将不支持维修。
- 所有与本产品配套使用的外围设备均应符合使用国家的相关标准，并标明相应地确保满足安全和性能要求。外围设备包括但不限于与 RDK Ultra 结合使用时的键盘、显示器和鼠标。
- 与本产品一起使用的所有外围设备的电缆和连接器必须有足够的绝缘，以便相关的满足安全要求。

安全守则

为避免本产品发生故障或损坏，请遵守以下事项：

- 运行时请勿接触水或湿气，或放置在导电物体表面上。
- 不要接触任何热源；RDK Ultra 在正常环境温度下可靠运行。
- 装配时，避免对印刷电路板和连接器造成机械或电气损坏。
- 当设备通电时，避免手触摸印刷电路板及设备边缘，减少静电放电损坏的风险。
- 散热器螺丝如松动，请不要锁紧，否则会出现板子变形损坏。

修订记录

Version	Date	Description
v1.0	2023.08.30	初版