

IDO-SOM3588-V1 (B to B) -规格书

1. 产品概述

1.1 IDO-SOM3588-V1适用范围

1.2 IDO-SOM3588-V1产品概述

1.3 IDO-SOM3588-V1产品特点

1.4 IDO-SOM3588-V1产品图片

2. 硬件参数规格

2.1 基本参数

2.2 工作环境

2.3 系统支持

3. PCB 尺寸和电气参数

3.1 PCB尺寸

3.2 电气参数

3.2.1 电源输入

3.2.2 电源输出

4. 采购型号

5. 引脚定义说明 (Connector)

5.1 核心板引脚示意图

5.2 核心板引脚列表

5.2.1 J1连接器引脚定义

5.2.2 J2连接器引脚定义

5.2.3 J3连接器引脚定义

5.2.4 J4连接器引脚定义

IDO-SOM3588-V1

(B to B)核心板规格书

深圳触觉智能科技有限公司

www.industio.cn

文档修订历史

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V1.0	创建文档			2022/09/6
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1. 产品概述

1.1 IDO-SOM3588-V1适用范围

IDO-SOM3588-1适用于工业主机，边缘计算网关、嵌入式智能设备、人机交互、广告一体机、互动自助终端，教学实验平台、显示控制等多个领域。

1.2 IDO-SOM3588-V1产品概述

IDO-SOM3588-V1采用瑞芯微最新旗舰SOC芯片RK3588。RK3588是一款采用ARM架构的通用型SoC，集成了四核Cortex-A76和四核Cortex-A55 CPU，G610 MP4 GPU，以及6 TOPs算力的NPU。内置多种功能强大的嵌入式硬件引擎，支持8K@60fps的H.265 和VP9解码器、8K@30fps的H.264 解码器和4K@60fps的AV1解码器；支持8K@30fps 的H.264和H.265编码器，高质量的JPEG编

码器/解码器，专门的图像预处理器和后处理器。RK3588还引入了新一代完全基于硬件的最大4800万像素ISP（图像信号处理器），实现了许多算法加速器，如HDR、3A、LSC、3DNR、2DNR、锐化、dehaze、鱼眼校正、伽马校正等，在图形后期处理方面拥有广泛应用。RK3588集成了瑞芯微自研的第三代NPU处理器，可支持 INT4/INT8/INT16/FP16 混合运算，其强大的兼容性，可以轻松转换基于 TensorFlow / MXNet/PyTorch/Caffe 等一系列框架的网络模型。。RK3588 拥有 SATA/PCIE/USB3.0/双千兆等各类型接口，支持多种视频输入输出接口，可应用于物联网网关、智能NVR、工控平板、工业检测、工控盒、智慧城市、云终端、车载中控等行业定制市场。丰富的外部接口支持，RK3588 SoC 内部组成：

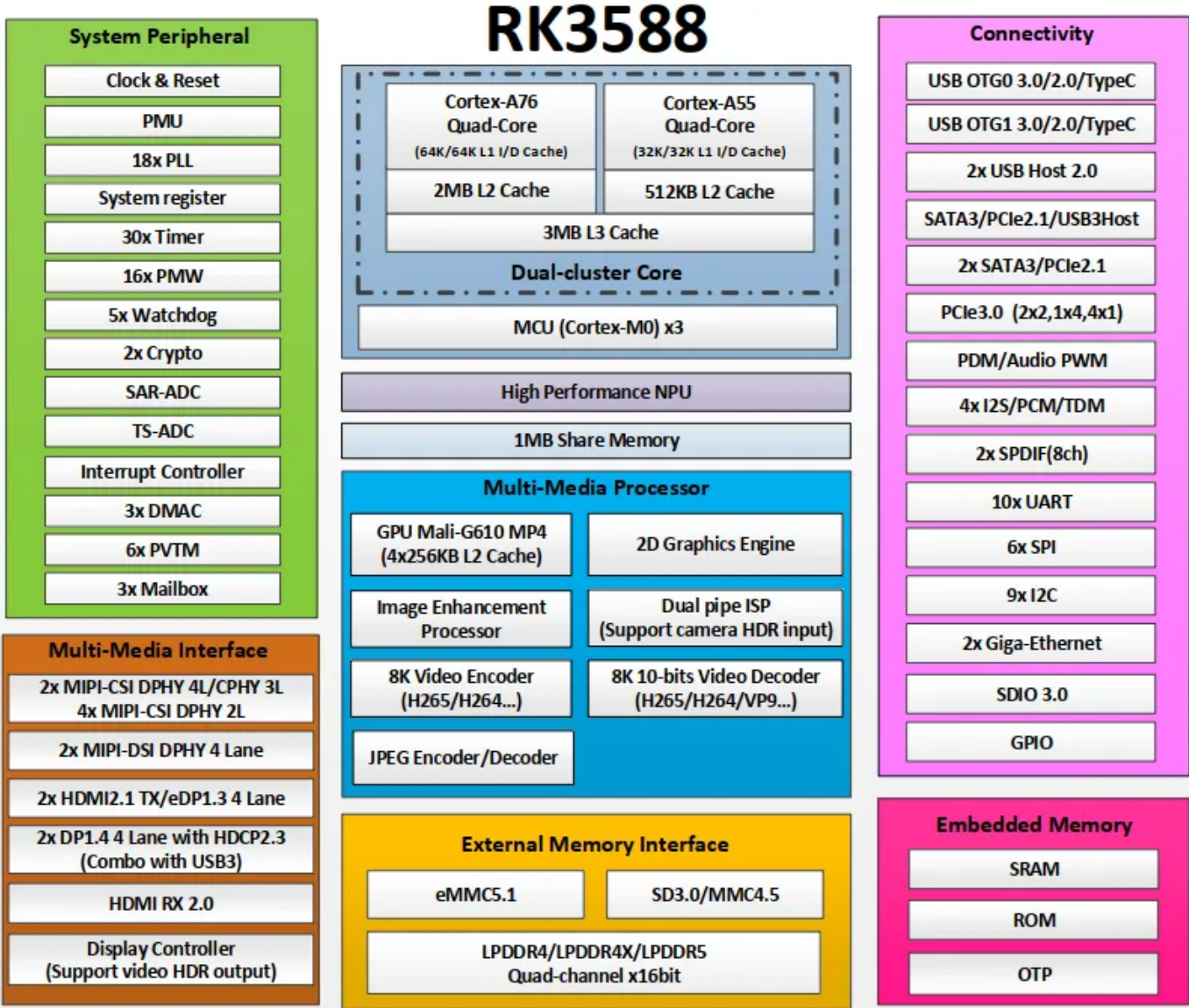


图1. RK3588 SoC框图

IDO-SOM3588-V1核心板进行了严格的电源完整性和信号完整性仿真设计，通过各项电磁兼容、温度冲击、高温高湿老化、长时间存储压力等测试，稳定可靠，批量供货。用户仅需设计外围电路

即可快速实现项目的稳定量产。

图2. IDO-SOM3588-V1模块逻辑框图

1.3 IDO-SOM3588-V1产品特点

- 搭载RK3588高性能SOC，集成了四核Cortex-A76和四核Cortex-A55 CPU，主频高达2.4G；
- NPU算力高达6Tops，支持INT4/INT8/INT16/FP16混合运算，满足大多数人工智能模型的算力需求；
- 强大的编解码能力，最高支持8K@60fps；
- 5*6cm超小尺寸B to B接口，便于交付使用；
- 丰富的系统支持，Android 12, Ubuntu, Debian 全面支持。

1.4 IDO-SOM3588-V1产品图片

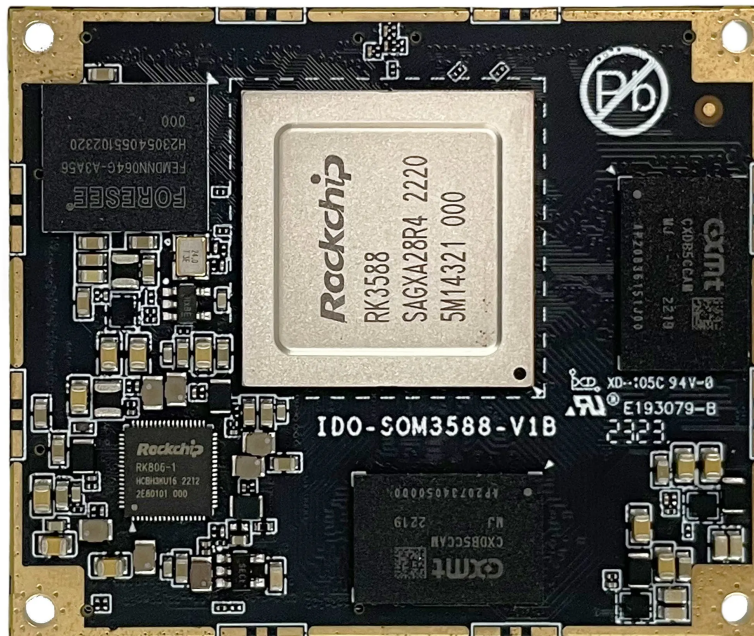


图3. IDO-SOM3588-V1核心板正面

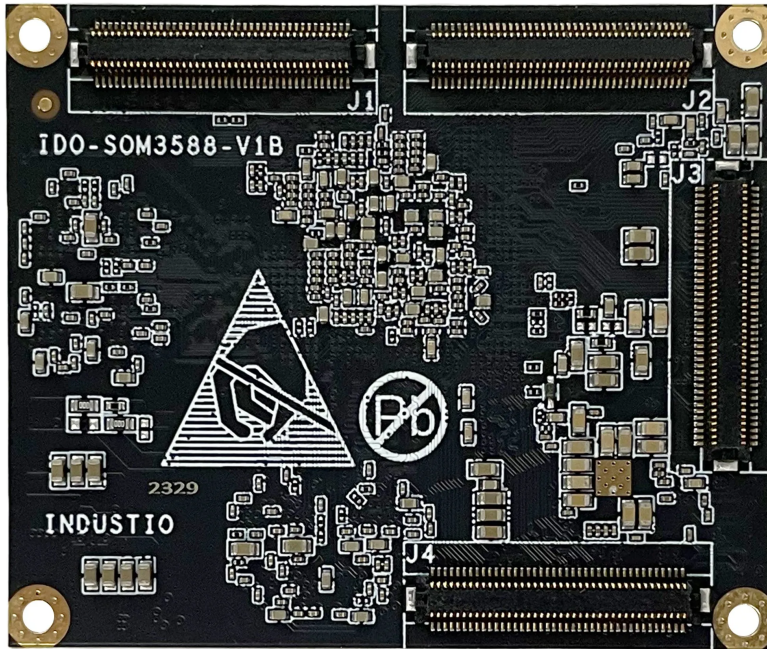


图4. IDO-SOM3588-V1核心板背面

2. 硬件参数规格

2.1 基本参数

基本参数	
SOC系统芯片	RockChip RK3588
CPU中央处理器	Quad-core Cortex-A76 and quad-core Cortex-A55, 主频高达2.4GHz
GPU图形处理器	<ul style="list-style-type: none"> • Mali-G610 GPU • 支持OpenGL ES 3.2, OpenCL 2.2, Vulkan 1.1 • 内嵌高性能2D、3D加速硬件
NPU嵌入式神经网络处理器	支持6.0T算力, 支持INT4/INT8/INT16/FP16运算

VPU视频处理单元	<p>视频解码</p> <ul style="list-style-type: none"> • H.265/AVS2/VP9, 8bits/10bits, 8K@60fps • H.264/AV1, 8bits/10bits, 8K@30fps • Multi-channel decoder in parallel for less resolution (4K/1080p/720p etc.) <p>视频编码</p> <ul style="list-style-type: none"> • H.265/H.264, 8K@30fps • Multi-channel encoder in parallel for less resolution (1080p/720p etc.) <p>Muti-format 视频解码</p> <ul style="list-style-type: none"> • H.265/H.264, 8K@30fps • 1080P@60fps video decoder for VP8/AVS1/AVS1+/MPEG-4
内存	4GB/8GB/16GB LPDDR4/4x
存储	32GB/64GB/128GB eMMC
硬件参数	
网络	集成 PCIe3.0/PCIe2.0/GMAC/SDIO3.0/USB3.0/USB2.0, 可扩展千兆以太网、WiFi6/蓝牙, 5G/4G LTE
显示	<p>视频输出:</p> <ul style="list-style-type: none"> • 1x HDMI2.1接口, 支持 (8K/60fps或4K/120fps) 输出 • 1x HDMI2.0接口, 支持4K/60fps输出 • 2x MIPI DSI接口, 支持4k@60fps输出 • 2x eDP接口, 支持4K@60fps输出 • 2x DP接口, 支持8k@30fp输出 <p>视频输入:</p> <ul style="list-style-type: none"> • 1x HDMI-IN, 支持 (4K/60fps, HDCP2.3) • 2x MIPI CSI (4Lane) 或者4x MIPI CSI (2Lane) • 2x MIPI DC (4通道DPHY v2.0或者3通道CPHY v1.1) • 1x DVP (最高150MHz输入) <p>最多可支持4屏异显输出</p>
音频	<p>2 × 8 通道I2C</p> <p>2 × 8 通道I2S</p> <p>2 × SPDIF</p> <p>2 × 8 通道PDM</p>

USB	2 × USB3.0 OTG 1 × USB3.0 HOST 2 × USB2.0 HOST
PCIe/SATA	1 × PCIe3.0 (1×4lanes, 4×1lanes, 2×2lanes) 3 × PCIe2.0 (1lanes) 3 × SATA3.0
扩展接口	10 × UART 5 × SPI 3 × CAN 9 × I2C 3 × SDMMC 16 × PWM 4 × ADC 118 × GPIO
其他	
主板尺寸	5cm X 6cm
接口类型	320Pin 间距0.5 B to B连接器
PCB规格	板厚 1.6mm , 10层板 高Tg材质, 沉金工艺

2.2 工作环境

工作环境	
工作温度	0~70°C[商规型号] ; -40~85°C [工规型号]
存储温度	-40°C~85°C
存储湿度	10%~80%

2.3 系统支持

序号	操作系统	支持	说明
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1	Android12	✓	
2	Debian10	✓	
3	Ubuntu20	✓	
4	Buildroot	✓	
5	麒麟OS	✓	
6	鸿蒙OpenHamoney	✓	

3. PCB 尺寸和电气参数

3.1 PCB尺寸

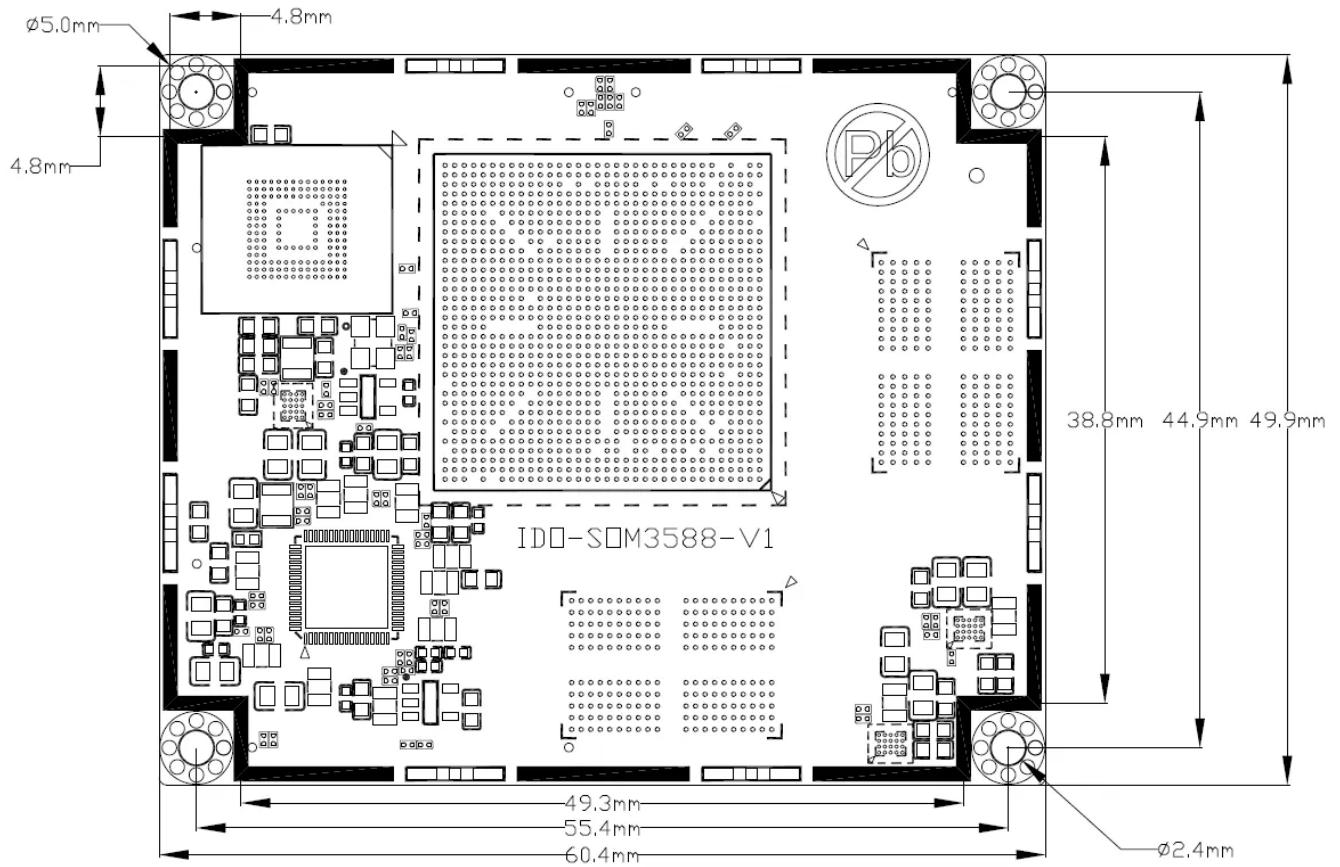


图5. ID0-SOM3588-V1核心板正面尺寸

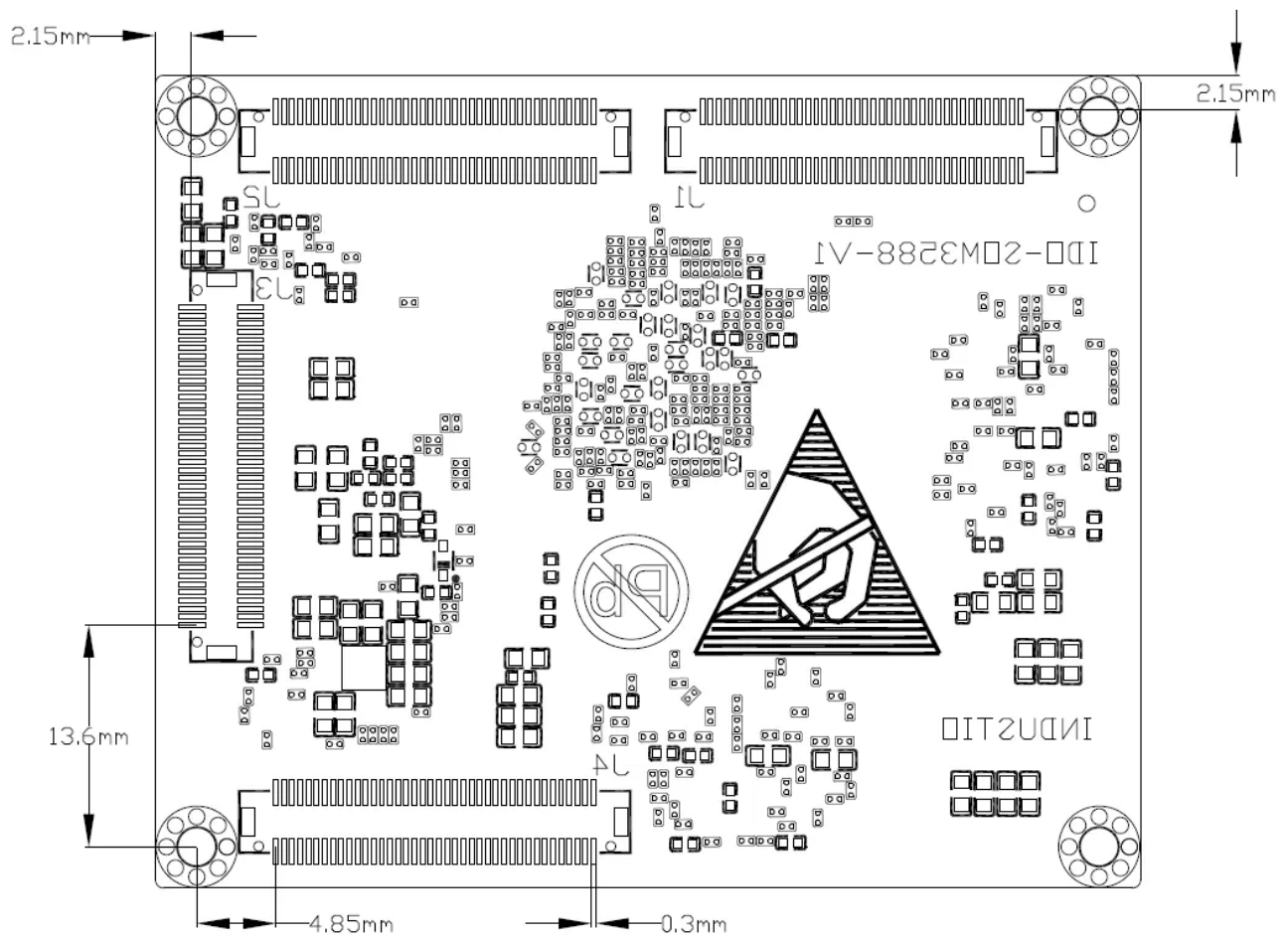


图6. ID0-SOM3588-V1核心板背面尺寸

3.2 电气参数

3.2.1 电源输入

电源名称	最小电压	标称值	最大电压	峰值电流	待机电流	关机电流
VCC4V0_S YS	3.6V	4.0V	5.0V	4.0V/4000 mA	4V/18mA	

3.2.2 电源输出

电源名称	最小电压	标称值	最大电压	限制电流

VCC_1V8_S3	1.75V	1.8V	1.85V	300mA
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4. 采购型号

采购型号	LPDDR4/4x	eMMC	标称工作温度
IDO-SOM3588-V1-D4E32	4GB	32GB	0~70°C
IDO-SOM3588-V1-D4E64	4GB	64GB	0~70°C
IDO-SOM3588-V1-D8E64	8GB	64GB	0~70°C
IDO-SOM3588-V1-D8E128	8GB	128GB	0~70°C
IDO-SOM3588J-V1-D4E64	4GB	64GB	-40~85°C
IDO-SOM3588J-V1-D8E64	8GB	64GB	-40~85°C
IDO-SOM3588J-V1-D8E128	8GB	128GB	-40~85°C

5. 引脚定义说明 (Connector)

IDO-SOM3588-V1核心板可适配如下两个品牌型号连接器：

广濂 (HRS)：

核心板连接器采用HRS的连接器 **DF12NA(3.0)-80DS-0.5V(51)**

[DF12NA\(3.0\)-80DS-0.5V\(51\).pdf](#)

底板对应采用HRS的连接器 **DF12NA(3.0)-80DP-0.5V(51)** [DF12NA\(3.0\)-80DP-0.5V\(51\).pdf](#)

维峰 (WCON)：

核心板连接器采用WCON的连接器 **3622-S080-022G1R-02** [3622-S080-022G1R-02.pdf](#)

底板对应采用WCON的连接器 **3622-P080-023G1R-02** [3622-P080-023G1R-02.pdf](#)

注意：

广濂和维峰两个品牌的连接器不能混用，标准出货的连接器型号均采用广濂型号；需要采用维峰座子的模组需要定制生产，核心板和底板必须同时采用维峰的连接器。

5.1 核心板引脚示意图

TOP VIEW

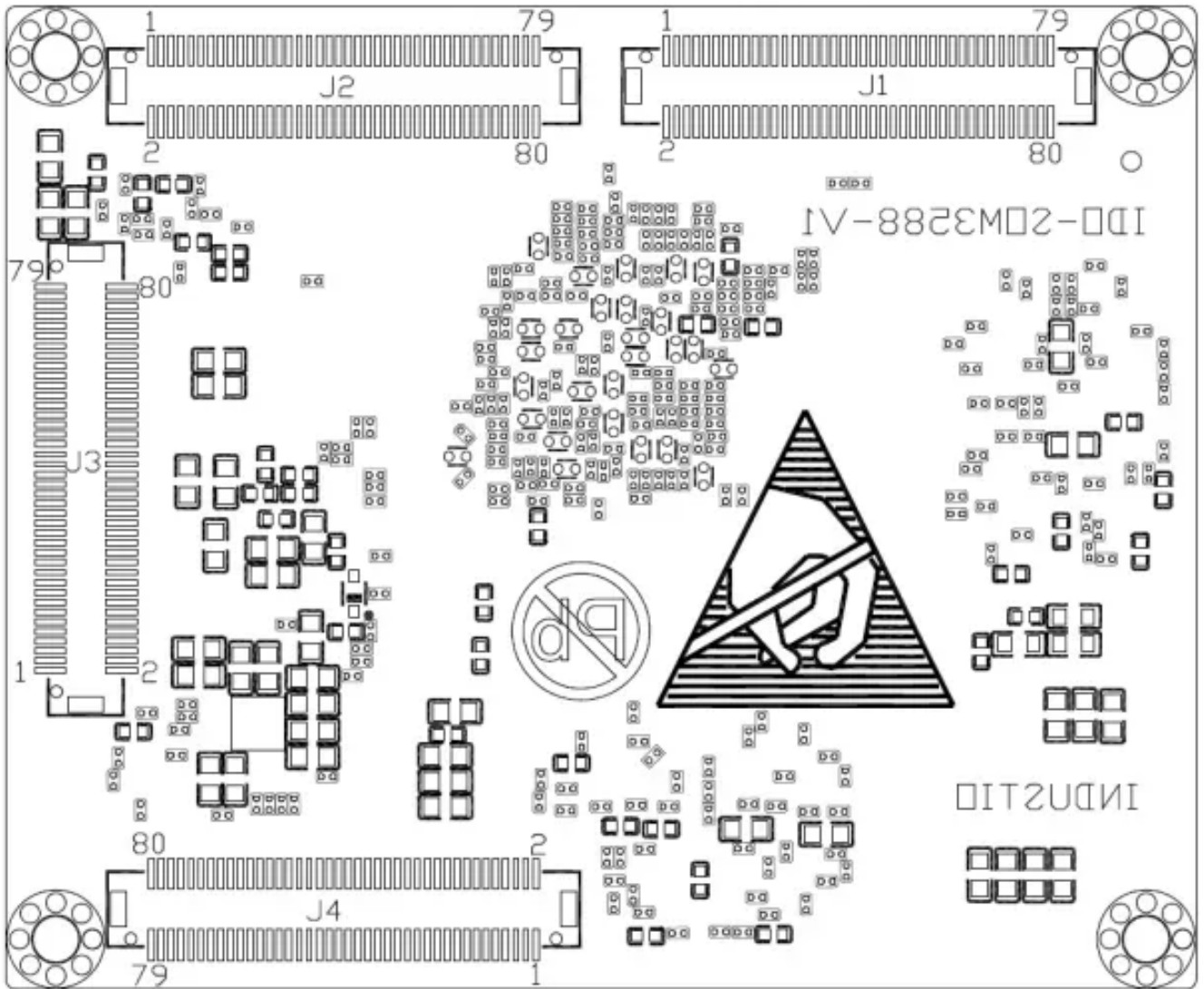


图7. IDO-SOM3588-V1核心板BTB连接器TOP VIEW

J1A

PMUIO1 1.8V	PMUIO1_GPIO0_B2_u SDMMC_DET/PMUIO1_GPIO0_A4_u	A2 A4
SARADC 1.8V 12-bit 1MS/s	SARADC_VIN3_HP_HOOK SARADC_VIN2 SARADC_VIN1_KEY/RECOVERY BOOT_SARADC_IN0	A6 A8 A10 A12
USB3.0 OTG/DP1.4 Alt of TYPEC0 USB:U3/Gen1----Controller0 DP:RBR/HBR/HBR2/HBR3 USB2.0 of TYPEC0 (OTG/HOST/DEVICE) HS/FS/LS Download Port	GND_A1 TYPEC0_SSTX2N/DP0_TX3N TYPEC0_SSTX2P/DP0_TX3P TYPEC0_SSRX2P/DP0_TX2P TYPEC0_SSRX2N/DP0_TX2N TYPEC0_SSTX1N/DP0_TX1N TYPEC0_SSTX1P/DP0_TX1P TYPEC0_SSRX1P/DP0_TX0P TYPEC0_SSRX1N/DP0_TX0N TYPEC0_SBU2/DP0_AUXN TYPEC0_SBU1/DP0_AUXP TYPEC0_OTG_DP TYPEC0_OTG_DM GND_A2 TYPEC0_USB20_VBUSDET TYPEC0_USB20_OTG_ID GND_A3	A1 A3 A5 A7 A9 A11 A13 A15 A17 A16 A18 A20 A22 A14 A24 A26 A28
USB3.0 OTG/DP1.4 Alt of TYPEC1 USB:U3/Gen1----Controller1 DP:RBR/HBR/HBR2/HBR3 USB2.0 of TYPEC1 (OTG/HOST/DEVICE) HS/FS/LS	TYPEC1_SSTX2N/DP1_TX3N TYPEC1_SSTX2P/DP1_TX3P TYPEC1_SSRX2P/DP1_TX2P TYPEC1_SSRX2N/DP1_TX2N TYPEC1_SSTX1N/DP1_TX1N TYPEC1_SSTX1P/DP1_TX1P TYPEC1_SSRX1P/DP1_TX0P TYPEC1_SSRX1N/DP1_TX0N TYPEC1_SBU2/DP1_AUXN TYPEC1_SBU1/DP1_AUXP TYPEC1_OTG_DP TYPEC1_OTG_DM TYPEC1_USB20_VBUSDET TYPEC1_USB20_OTG_ID	A19 A21 A23 A25 A27 A29 A31 A33 A30 A32 A34 A36 A38 A40
USB2.0 HOST HS/FS/LS	USB20_HOST1_DM USB20_HOST1_DP USB20_HOST0_DM USB20_HOST0_DP	A42 A44 A46 A48
HDMI TX/eDP MUX Port1 HDMI:V2.1 12Gbps eDP: V1.3 5.4Gbps	GND_A4 HDMI1_TX2P_PORT/eDP1_TX_D2P HDMI1_TX2N_PORT/eDP1_TX_D2N HDMI1_TX1P_PORT/eDP1_TX_D1P HDMI1_TX1N_PORT/eDP1_TX_D1N HDMI1_TX0P_PORT/eDP1_TX_D0P HDMI1_TX0N_PORT/eDP1_TX_D0N HDMI1_TX3P_PORT/eDP1_TX_D3P HDMI1_TX3N_PORT/eDP1_TX_D3N HDMI1_TX_SBDP/eDP1_TX_AUXP HDMI1_TX_SBDN/eDP1_TX_AUXN	A35 A37 A39 A41 A43 A45 A47 A49 A51 A53 A55
HDMI TX/eDP MUX Port0 HDMI:V2.1 12Gbps eDP: V1.3 5.4Gbps	GND_A6 HDMI0_TX2P_PORT/eDP0_TX_D2P HDMI0_TX2N_PORT/eDP0_TX_D2N HDMI0_TX1P_PORT/eDP0_TX_D1P HDMI0_TX1N_PORT/eDP0_TX_D1N HDMI0_TX0P_PORT/eDP0_TX_D0P HDMI0_TX0N_PORT/eDP0_TX_D0N HDMI0_TX3P_PORT/eDP0_TX_D3P HDMI0_TX3N_PORT/eDP0_TX_D3N HDMI0_TX_SBDP/eDP0_TX_AUXP HDMI0_TX_SBDN/eDP0_TX_AUXN GND_A8	A57 A59 A61 A63 A65 A67 A69 A71 A73 A75 A77 A79
HDMI_RX HDMI:V2.0	GND_A5 HDMI_RX_D2P HDMI_RX_D2N HDMI_RX_D1P HDMI_RX_D1N HDMI_RX_D0P HDMI_RX_D0N HDMI_RX_CLKP HDMI_RX_CLKN GND_A7	A50 A52 A54 A56 A58 A60 A62 A64 A66 A68
VCCIO2 Domain VCCIO_SD_S0 PLDO5	I2C8_SCL_M0/PDM1_SDI1_M0/JTAG_TCK_M0/UART5_CTSN_M0/SDMMC0_D2/GPIO4_D2_1 PWM10_M1/I2C8_SDA_M0/PDM1_SDI0_M0/JTAG_TMS_M0/UART5_RTSN_M0/SDMMC0_D3/GPIO4_D3_1 PWM7_IR_M1/CAN0_TX_M1/PDM1_CLK0_M0/MCU_JTAG_TCK_M0/UART5_RX_M0/SDMMC0_CMD/GPIO4_D4_1 TEST_CLKOUT_M0/CAN0_RX_M1/PDM1_CLK0_M0/MCU_JTAG_TMS_M0/UART5_TX_M0/SDMMC0_CLK/GPIO4_D5_1 PWM8_M1/I2C3_SCL_M4/PDM1_SDI3_M0/JTAG_TCK_M1/UART2_TX_M1/SDMMC0_D0/GPIO4_D0_1 PWM9_M1/I2C3_SDA_M4/PDM1_SDI2_M0/JTAG_TMS_M1/UART2_RX_M1/SDMMC0_D1/GPIO4_D1_1	A70 A72 A74 A76 A78 A80
	PAD_A1 PAD_A2 NTH_A1 NTH_A2	A81 A82 A83 A84

IL30M3588-300P

图8. ID0-SOM3588-V1核心板J1连接器引脚定义图

<p>VCCIO6 Domain 3.3V</p>	<p>SATA2_ACT_LED_M0/SPDIF1_TX_M1/SPI0_CS1_M1/UART8_RX_M0/I2C6_SCL_M3/I2S1_SDO0_M0/PCIE30X1_0_BUTTON_RSTN/MIPI_CAMERA0_CLK_M0/GPIO4_B1 SPI2_CS1_M1/UART8_TX_M0/I2C6_SDA_M3/I2S1_SDI3_M0/PCIE30X2_PERSTN_M1/BT1120_CLKOUT/CIF_CLKIN/GPIO4_B0 SPI2_CS0_M1/I2C5_SDA_M2/I2S1_SDI2_M0/PCIE30X2_WAKEN_M1/BT1120_D7/CIF_D7/GPIO4_A7 CAN1_RX_M1/PWM14_M1/SPI0_CS0_M1/UART8_RTSN_M0/I2C7_SCL_M3/I2S1_SDO1_M0/PCIE30X1_1_BUTTON_RSTN/BT1120_D8/CIF_HREF/GPIO4_B2 SPI2_CLK_M1/UART3_RX_M2/I2C5_SCL_M2/I2S1_SDI1_M0/PCIE30X2_CLKREQN_M1/BT1120_D6/CIF_D6/GPIO4_A6 SPI0_CLK_M1/I2S1_LRCK_M0/PCIE30X1_1_PERSTN_M1/BT1120_D2/CIF_D2/GPIO4_A2 SPI2_MOSI_M1/UART3_TX_M2/I2C3_SDA_M2/I2S1_SDI0_M0/PCIE30X1_0_PERSTN_M1/BT1120_D5/CIF_D5/GPIO4_A5 SPI0_MOSI_M1/UART9_CTSN_M1/I2S1_SCL_M0/PCIE30X1_1_WAKEN_M1/BT1120_D1/CIF_D1/GPIO4_A1 SPI2_MISO_M1/UART0_RX_M2/I2C3_SCL_M2/PCIE30X1_0_WAKEN_M1/BT1120_D4/CIF_D4/GPIO4_A4 SPI0_MISO_M1/UART9_RTSN_M1/I2S1_MCLK_M0/PCIE30X1_1_CLKREQN_M1/BT1120_D0/CIF_D0/GPIO4_A0</p>	<p>B11 B12 B13 B14 B15 B16 B17 B18 B19 B20 B21 B22 B23 B24 B25 B26 B27 B28 B29 B30 B31 B32 B33 B34 B35</p>
<p>MIPI_CSI0_RX MIPI V1.2/2.5Gbps</p>	<p>GND_B1 MIPI_CSI0_RX_D0N MIPI_CSI0_RX_D0P MIPI_CSI0_RX_D1N MIPI_CSI0_RX_D1P MIPI_CSI0_RX_CLK0N MIPI_CSI0_RX_CLK0P MIPI_CSI0_RX_D2N MIPI_CSI0_RX_D2P MIPI_CSI0_RX_D3N MIPI_CSI0_RX_D3P MIPI_CSI0_RX_CLK1N MIPI_CSI0_RX_CLK1P</p>	<p>B11 B13 B15 B17 B19 B21 B23 B25 B27 B29 B31 B33 B35</p>
<p>MIPI_CSI1_RX MIPI V1.2/2.5Gbps</p>	<p>GND_B2 MIPI_CSI1_RX_D0P MIPI_CSI1_RX_D0N MIPI_CSI1_RX_D1P MIPI_CSI1_RX_D1N MIPI_CSI1_RX_CLK0P MIPI_CSI1_RX_CLK0N MIPI_CSI1_RX_D2P MIPI_CSI1_RX_D2N MIPI_CSI1_RX_D3P MIPI_CSI1_RX_D3N MIPI_CSI1_RX_CLK1P MIPI_CSI1_RX_CLK1N</p>	<p>B12 B14 B16 B18 B20 B22 B24 B26 B28 B30 B32 B34 B36 B38</p>
<p>MIPI D/C-PHY DSI_TX Port0 D-PHY:V2.0 4.5Gbps/Lane C-PHY:V1.1 5.7Gbps/Trio</p>	<p>GND_B3 MIPI_DPHY0_TX_D3P/NO_USE MIPI_DPHY0_TX_D3N/MIPI_CPHY0_TX_TRIO2_C MIPI_DPHY0_TX_D2P/MIPI_CPHY0_TX_TRIO2_B MIPI_DPHY0_TX_D2N/MIPI_CPHY0_TX_TRIO2_A MIPI_DPHY0_TX_CLKP/MIPI_CPHY0_TX_TRIO1_C MIPI_DPHY0_TX_CLKN/MIPI_CPHY0_TX_TRIO1_B MIPI_DPHY0_TX_D1P/MIPI_CPHY0_TX_TRIO1_A MIPI_DPHY0_TX_D1N/MIPI_CPHY0_TX_TRIO0_C MIPI_DPHY0_TX_D0P/MIPI_CPHY0_TX_TRIO0_B MIPI_DPHY0_TX_D0N/MIPI_CPHY0_TX_TRIO0_A</p>	<p>B37 B39 B41 B43 B45 B47 B49 B51 B53 B55 B57</p>
<p>MIPI D/C-PHY DSI_TX Port1 D-PHY:V2.0 4.5Gbps/Lane C-PHY:V1.1 5.7Gbps/Trio</p>	<p>GND_B5 MIPI_DPHY1_TX_D3P/NO_USE MIPI_DPHY1_TX_D3N/MIPI_CPHY1_TX_TRIO2_C MIPI_DPHY1_TX_D2P/MIPI_CPHY1_TX_TRIO2_B MIPI_DPHY1_TX_D2N/MIPI_CPHY1_TX_TRIO2_A MIPI_DPHY1_TX_CLKP/MIPI_CPHY1_TX_TRIO1_C MIPI_DPHY1_TX_CLKN/MIPI_CPHY1_TX_TRIO1_B MIPI_DPHY1_TX_D1P/MIPI_CPHY1_TX_TRIO1_A MIPI_DPHY1_TX_D1N/MIPI_CPHY1_TX_TRIO0_C MIPI_DPHY1_TX_D0P/MIPI_CPHY1_TX_TRIO0_B MIPI_DPHY1_TX_D0N/MIPI_CPHY1_TX_TRIO0_A</p>	<p>B59 B61 B63 B65 B67 B69 B71 B73 B75 B77 B79</p>
<p>MIPI D/C-PHY CSI_RX Port0 D-PHY:V2.0 4.5Gbps/Lane C-PHY:V1.1 5.7Gbps/Trio</p>	<p>MIPI_DPHY0_RX_D3P/NO_USE MIPI_DPHY0_RX_D3N/MIPI_CPHY0_RX_TRIO2_C MIPI_DPHY0_RX_D2P/MIPI_CPHY0_RX_TRIO2_B MIPI_DPHY0_RX_D2N/MIPI_CPHY0_RX_TRIO2_A MIPI_DPHY0_RX_CLKP/MIPI_CPHY0_RX_TRIO1_C MIPI_DPHY0_RX_CLKN/MIPI_CPHY0_RX_TRIO1_B MIPI_DPHY0_RX_D1P/MIPI_CPHY0_RX_TRIO1_A MIPI_DPHY0_RX_D1N/MIPI_CPHY0_RX_TRIO0_C MIPI_DPHY0_RX_D0P/MIPI_CPHY0_RX_TRIO0_B MIPI_DPHY0_RX_D0N/MIPI_CPHY0_RX_TRIO0_A</p>	<p>B40 B42 B44 B46 B48 B50 B52 B54 B56 B58</p>
<p>MIPI D/C-PHY CSI_RX Port1 D-PHY:V2.0 4.5Gbps/Lane C-PHY:V1.1 5.7Gbps/Trio</p>	<p>GND_B6 MIPI_DPHY1_RX_D3P/NO_USE MIPI_DPHY1_RX_D3N/MIPI_CPHY1_RX_TRIO2_C MIPI_DPHY1_RX_D2P/MIPI_CPHY1_RX_TRIO2_B MIPI_DPHY1_RX_D2N/MIPI_CPHY1_RX_TRIO2_A MIPI_DPHY1_RX_CLKP/MIPI_CPHY1_RX_TRIO1_C MIPI_DPHY1_RX_CLKN/MIPI_CPHY1_RX_TRIO1_B MIPI_DPHY1_RX_D1P/MIPI_CPHY1_RX_TRIO1_A MIPI_DPHY1_RX_D1N/MIPI_CPHY1_RX_TRIO0_C MIPI_DPHY1_RX_D0P/MIPI_CPHY1_RX_TRIO0_B MIPI_DPHY1_RX_D0N/MIPI_CPHY1_RX_TRIO0_A</p>	<p>B60 B62 B64 B66 B68 B70 B72 B74 B76 B78 B80</p>
	<p>PAD_B1 PAD_B2 NTH_B1 NTH_B2</p>	<p>B81 B82 B83 B84</p>

图9. ID0-SOM3588-V1核心板J1连接器引脚定义图

	VCC4V0_SYS1	C2
	VCC4V0_SYS2	C4
	VCC4V0_SYS3	C8
	VCC4V0_SYS4	C8
	VCC4V0_SYS5	C10
	GND_C1	C1
	GND_C2	C3
	GND_C3	C5
	GND_C4	C7
PMUIO2 Domain 3.3V	UART2_TX_M0_DEBUG/I2S1_MCLK_M1/PCIE30X1_1_CLKREQN_M0/I2C1_SCL_M0/JTAG_TCK_M2/GPIO0_B5	C9
	UART2_RX_M0_DEBUG/I2S1_SCL_M1/PCIE30X1_1_WAKEN_M0/I2C1_SDA_M0/JTAG_TMS_M2/GPIO0_B6	C11
	PWM4_M0/UART0_TX_M0/DP1_HPDIN_M1/I2S1_SDIO_M1/PCIE30X1_0_PERSTN_M0/I2C4_SCL_M2/GPU_AVS/GPIO0_C5	C13
	UART0_RX_M0/DP0_HPDIN_M1/PDM0_CLK1_M1/PCIE30X1_0_WAKEN_M0/I2C4_SDA_M2/PWM2_M0/GPIO0_C4	C15
	CAN0_TX_M0/I2S1_LRCK_M1/PCIE30X1_1_PERSTN_M0/SPI0_CS1_M0/I2C2_SCL_M0/PWM0_M0/GPIO0_B7	C17
	CAN0_RX_M0/PDM0_CLK0_M1/PCIE30X1_0_CLKREQN_M0/SPI0_MISO_M0/I2C2_SDA_M0/PWM1_M0/GPIO0_C0	C19
	PDM0_SDIO_M1/I2S1_SDIO2_M1/PCIE30X4_WAKEN_M0/SPI0_MISO_M0/I2C6_SDA_M0/PWM6_M0/GPIO0_C7	C21
	PDM0_SDIO1_M1/I2S1_SDIO3_M1/PCIE30X4_PERSTN_M0/SPI3_MISO_M2/I2C6_SCL_M0/PWM7_IR_M0/GPIO0_D0	C23
VCCIO3 Domain 1.8V	GND_C5	C25
	I2C4_SDA_M1/UART7_RX_M0/FSPI_CS0N_M1/HDMI_TX1_SDA_M0/GMAC0_PTP_REFCLK/GPIO2_B4	C27
	I2C7_SDA_M1/UART9_RTSN_M0/SPI3_MISO_M0/PWM5_M2/GMAC0_MDC/GPIO4_C4	C29
	I2C0_SCL_M1/UART9_CTSN_M0/SPI3_MOSI_M0/PWM6_M2/GMAC0_MDIO/GPIO4_C5	C31
	I2C4_SCL_M1/UART7_TX_M0/FSPI_CS1N_M1/HDMI_TX1_SCL_M0/GMAC0_PPSTRIG/GPIO2_B5	C33
	I2C4_SCL_M1/UART7_TX_M0/FSPI_CS1N_M1/HDMI_TX1_SCL_M0/GMAC0_PPSTRIG/GPIO2_B5	C35
	TEST_CLKOUT_M1/UART9_RX_M0/SPI1_CS1_M0/HDMI_TX1_CEC_M0/GMAC0_PPSTRIG/GPIO2_C4	C37
	I2C6_SCL_M2/SPI1_CS0_M0/I2S2_SDIO_M0/ETH0_REFCLK0_25M/GPIO2_C3	C39
	I2C2_SDA_M1/UART1_RTSN_M0/SPI1_CLK_M0/I2S2_LRCK_M0/GMAC0_TXEN/GPIO2_C0	C41
	I2C5_SDA_M4/UART1_TX_M0/I2S2_SCL_M0/GMAC0_TX1/GPIO2_B7	C43
	I2C0_SDA_M1/UART7_CTSN_M0/SPI3_CLK_M0/PWM7_IR_M3/GMAC0_TXER/GPIO4_C6	C45
	I2C7_SCL_M1/PWM4_M1/SPI3_CS1_M0/I2S2_SDO_M0/GMAC0_MCLKINOUT/GPIO4_C3	C47
	I2C5_SCL_M4/UART1_RX_M0/I2S2_MCLK_M0/GMAC0_TX0/GPIO2_B6	C49
	I2C2_SCL_M1/UART1_CTSN_M0/SPI1_MISO_M0/GMAC0_RX0/GPIO2_C1	C51
	I2C6_SDA_M2/UART9_TX_M0/SPI1_MOSI_M0/GMAC0_RX1/GPIO2_C2	C53
	UART7_RTSN_M0/SPI3_CS0_M0/PWM2_M2/GMAC0_RXDV_CRS/GPIO4_C2	C55
	CLK32K_OUT1/GPIO2_C5	C57
	GND_C7	C59
	I2C3_SDA_M3/FSPI_CLK_M1/SDIO_CLK_M0/GMAC0_TXCLK/GPIO2_B3	C61
I2C3_SCL_M3/SDIO_CMD_M0/GMAC0_TXD3/GPIO2_B2	C63	
I2C8_SDA_M1/UART6_CTSN_M0/FSPI_D3_M1/SDIO_D3_M0/GMAC0_TXD2/GPIO2_B1	C65	
I2C8_SCL_M1/UART6_RTSN_M0/FSPI_D2_M1/SDIO_D2_M0/GMAC0_RXCLK/GPIO2_B0	C67	
UART6_TX_M0/FSPI_D1_M1/SDIO_D1_M0/GMAC0_RXD3/GPIO2_A7	C69	
UART6_RX_M0/FSPI_D0_M1/SDIO_D0_M0/GMAC0_RXD2/GPIO2_A6	C69	
VCCIO5 Domain 1.8V	PWM10_M0/SPI4_MISO_M1/I2C6_SDA_M4/FSPI_D0_M2/I2S3_MCLK/SDIO_D0_M1/GMAC1_TXD2/GPIO3_A0	C12
	AUDDSM_LN/SPI4_MOSI_M1/PWM11_IR_M0/I2C6_SCL_M4/FSPI_D1_M2/I2S3_SCL/SDIO_D1_M1/GMAC1_TXD3/GPIO3_A1	C14
	AUDDSM_LP/SPI4_CLK_M1/UART8_TX_M1/FSPI_D2_M2/I2S3_LRCK/SDIO_D2_M1/GMAC1_RXD2/GPIO3_A2	C16
	AUDDSM_RN/SPI4_CS0_M1/UART8_RX_M1/FSPI_D3_M2/I2S3_SDO/SDIO_D3_M1/GMAC1_RXD3/GPIO3_A3	C18
	AUDDSM_RP/SPI4_CS1_M1/UART8_RTSN_M1/I2S3_SDIO_CMD_M1/GMAC1_TXCLK/GPIO3_A4	C20
	PWM8_M0/MIPI_CAMERA2_CLK_M1/GMAC1_RXD0/GPIO3_A7	C22
	PWM9_M0/MIPI_CAMERA3_CLK_M1/GMAC1_RXD1/GPIO3_B0	C24
	MIPI_CAMERA0_CLK_M1/UART8_CTSN_M1/I2C4_SDA_M0/FSPI_CLK_M2/SDIO_CLK_M1/GMAC1_RXCLK/GPIO3_A5	C26
	PWM2_M1/MIPI_CAMERA4_CLK_M1/UART2_TX_M2/GMAC1_RXDV_CRS/GPIO3_B1	C28
	MIPI_CAMERA1_CLK_M1/I2C4_SCL_M0/ETH1_REFCLK0_25M/GPIO3_A6	C30
	PWM3_IR_M1/UART2_RX_M2/I2S2_SDIO_M1/GMAC1_TXER/GPIO3_B2	C32
	UART2_RTSN/I2S2_SDO_M1/GMAC1_TXD0/GPIO3_B3	C34
	UART2_CTSN/I2S2_MCLK_M1/GMAC1_TXD1/GPIO3_B4	C36
	PWM12_M0/CAN1_RX_M0/UART3_TX_M1/I2S2_SCL_M1/GMAC1_TXEN/GPIO3_B5	C38
	PWM13_M0/CAN1_TX_M0/UART3_RX_M1/I2S2_LRCK_M1/GMAC1_MCLKINOUT/GPIO3_B6	C40
	GND_C8	C42
	PCIE30X2_PERSTN_M2/UART9_RX_M2/SPI0_CS0_M3/HDMI_RX_HPDUOUT_M1/HDMI_TX0_HPD_M1/MCU_JTAG_TCK_M1/GPIO3_D4	C44
	PCIE30X2_BUTTON_RSTN/UART7_RX_M1/SPI1_CLK_M1/GMAC1_PPSTRIG/GPIO3_C1	C46
	UART7_TX_M1/I2C3_SDA_M1/SPI1_MISO_M1/GMAC1_PPSTRIG/GPIO3_C0	C48
	PWM15_IR_M0/UART7_CTSN_M1/I2C8_SDA_M4/SPI1_CS1_M1/MIPI_TE1/GMAC1_MDIO/GPIO3_C3	C50
	I2C3_SCL_M1/SPI1_MOSI_M1/HDMI_TX1_HPD_M1/GMAC1_PTP_REF_CLK/GPIO3_B7	C52
	PWM14_M0/UART7_RTSN_M1/I2C8_SCL_M4/SPI1_CS0_M1/MIPI_TE0/GMAC1_MDC/GPIO3_C2	C54
PWM10_M2/PCIE30X2_WAKEN_M2/UART9_CTSN_M2/I2C7_SDA_M2/SPI0_CLK_M3/HDMI_RX_SDA_M1/CIF_D15/GPIO3_D3	C56	
PCIE30X2_CLKREQN_M2/UART9_RTSN_M2/I2C7_SCL_M2/SPI0_MOSI_M3/HDMI_RX_SCL_M1/CIF_D14/GPIO3_D2	C58	
PCIE30X4_PERSTN_M2/SPI3_MISO_M3/HDMITX1_SCL_M1/CIF_D10/GPIO3_C6	C60	
CAN2_RX_M0/PCIE30X4_CLKREQN_M2/UART5_TX_M1/FSPI_CS0N_M2/SPI3_CS0_M3/HDMITX1_CEC_M2/CIF_D8/GPIO3_C4	C62	
CAN2_TX_M0/PCIE30X4_WAKEN_M2/UART5_RX_M1/FSPI_CS1N_M2/SPI3_CS1_M3/HDMITX1_SDA_M1/CIF_D9/GPIO3_C5	C64	
PWM9_M2/PCIE20X1_2_PERSTN_M0/UART4_TX_M1/SPI0_MISO_M3/HDMI_RX_CEC_M1/CIF_D13/GPIO3_D1	C66	
PWM8_M2/PCIE20X1_2_WAKEN_M0/UART4_RX_M1/I2C5_SDA_M0/SPI3_CLK_M3/HDMI_TX0_SDA_M2/CIF_D12/GPIO3_D0	C68	
PCIE20X1_2_CLKREQN_M0/I2C5_SCL_M0/SPI3_MOSI_M3/HDMI_TX0_SCL_M2/CIF_D11/GPIO3_C7	C70	
GND_C8	C72	
PWM11_IR_M3/PCIE30X4_BUTTON_RSTN/UART9_TX_M2/SPI0_CS1_M3/DP1_HPDIN_M0/MCU_JTAG_TMS_M1/GPIO3_D5	C74	
VCCIO6 Domain 3.3V	SATA0_ACT_LED_M0/PWM13_M1/SPI3_MOSI_M1/I2C5_SCL_M1/HDMI_RX_HPDUOUT_M0/PCIE30X4_PERSTN_M1/BT1120_D12/GPIO4_B6	C71
	SATA1_ACT_LED_M0/PWM12_M1/SPI3_MISO_M1/UART9_RX_M1/HDMI_RX_CEC_M0/PCIE30X4_WAKEN_M1/BT1120_D11/GPIO4_B5	C73
	SPDIF0_TX_M1/PWM11_IR_M1/DP0_HPDIN_M0/UART9_TX_M1/I2S1_SDO3_M0/PCIE30X4_CLKREQN_M1/BT1120_D10/CIF_CLKOUT/GPIO4_B4	C75
	SPDIF1_TX_M2/PWM6_M1/SPI3_CS1_M1/I2C8_SDA_M3/HDMITX0_CEC_M0/PCIE20X1_2_PERSTN_M1/BT1120_D15/GPIO4_C1	C77
	CAN1_TX_M1/PWM15_IR_M1/UART8_CTSN_M0/I2C7_SDA_M3/I2S1_SDO2_M0/PCIE20X1_2_BUTTON_RSTN/BT1120_D9/CIF_VSYNC/GPIO4_B3	C79
	SPI3_CLK_M1/I2C5_SDA_M1/HDMITX0_SCL_M0/PCIE20X1_2_CLKREQN_M1/BT1120_D13/GPIO4_B7	C81
	UART0_TX_M2/PCIE30X1_0_CLKREQN_M1/BT1120_D3/CIF_D3/GPIO4_A3	C83
	SPI3_CS0_M1/I2C8_SCL_M3/HDMITX0_SDA_M0/PCIE20X1_2_WAKEN_M1/BT1120_D14/GPIO4_C0	C85

图10. IDO-SOM3588-V1核心板J3连接器引脚定义图

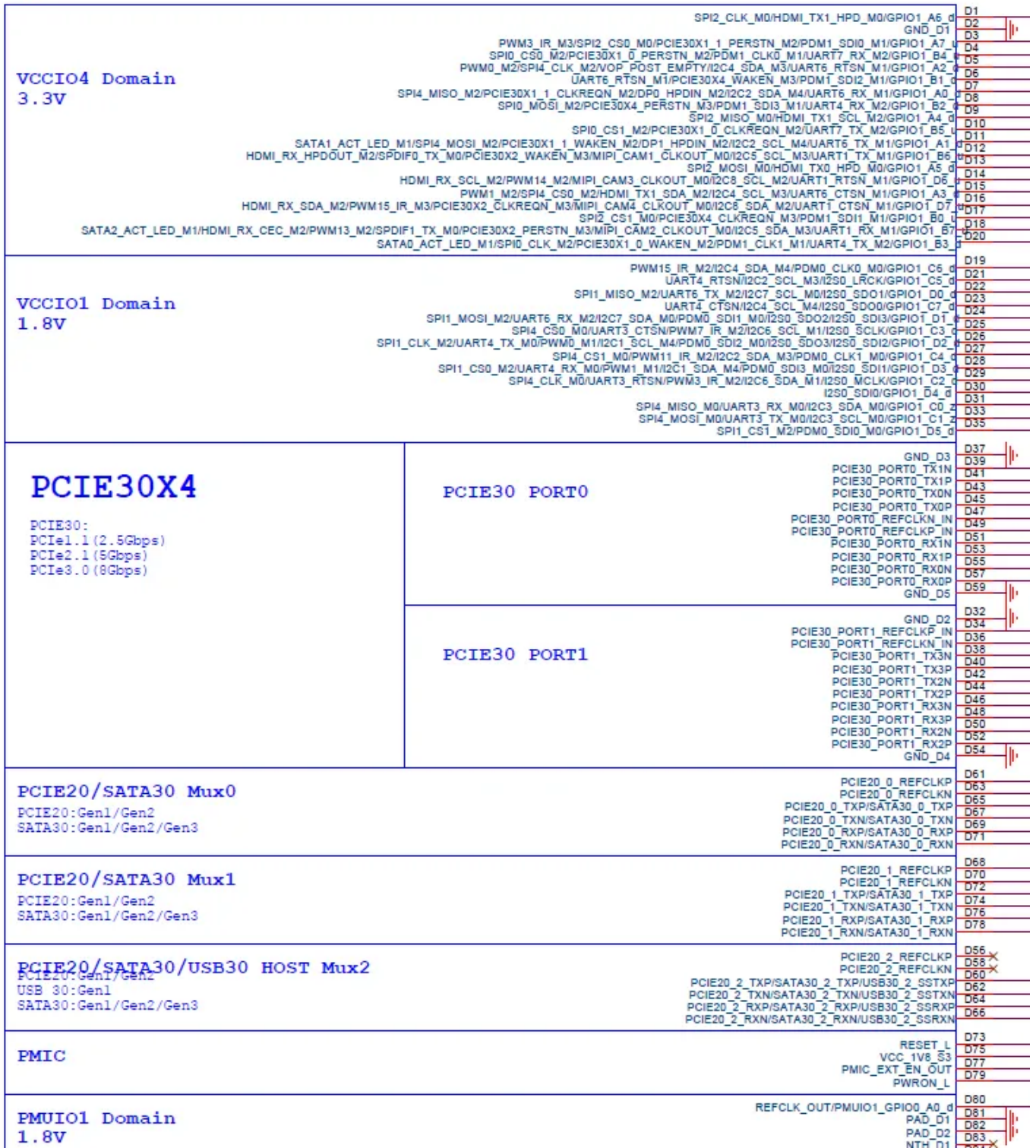


图11. IDO-SOM3588-V1核心板J4连接器引脚定义图

5.2 核心板引脚列表

5.2.1 J1连接器引脚定义

J1 DF12NA(3.0)-80DS-0.5V(51)

Num	Pin Name	Signal Name	Power Rail
2	SDMMC_PWREN_GPI IO0_B2	PMUIO1_GPIO0_B2_u	1.8V
4	SDMMC_DET_L_GPI O0_A4	SDMMC_DET	1.8V
		PMUIO1_GPIO0_A4_u	
6	SARADC_VIN3_HP_H OOK	SARADC_VIN3	1.8V
8		SARADC_VIN2	1.8V
10	SARADC_VIN1_KEY/ RECOVERY	SARADC_VIN1_RECO VERY	1.8V
12	BOOT_SARADC_IN0	SARADC_IN0_BOOT	1.8V
1	GND	GND	GND
3	TYPECO_SSTX2N	TYPECO_SSTX2N	
		DP0_TX3N	
5	TYPECO_SSTX2P	TYPECO_SSTX2P	
		DP0_TX3P	
7	TYPECO_SSRX2P	TYPECO_SSRX2P	
		DP0_TX2P	
9	TYPECO_SSRX2N	TYPECO_SSRX2N	
		DP0_TX2N	
11	TYPECO_SSTX1N	TYPECO_SSTX1N	
		DP0_TX1N	
13	TYPECO_SSTX1P	TYPECO_SSTX1P	
		DP0_TX1P	
15	TYPECO_SSRX1P	TYPECO_SSRX1P	

		DP0_TX0P	
17	TYPEC0_SSRX1N	TYPEC0_SSRX1N	
		DP0_TX0N	
16	TYPEC0_SBU2	TYPEC0_SBU2	
		DP0_AUXN	
18	TYPEC0_SBU1	TYPEC0_SBU1	
		DP0_AUXP	
20	TYPEC0_OTG_DP	TYPEC0_OTG_DP	
22	TYPEC0_OTG_DM	TYPEC0_OTG_DM	
14	GND	GND	GND
24	TYPEC0_USB20_VB USDET	TYPEC0_USB20_VB USDET	3.3V
26	TYPEC0_USB20_OT G_ID	TYPEC0_USB20_OT G_ID	1.8V
28	GND	GND	GND
19	TYPEC1_SSTX2N	TYPEC1_SSTX2N	
		DP1_TX3N	
21	TYPEC1_SSTX2P	TYPEC1_SSTX2P	
		DP1_TX3P	
23	TYPEC1_SSRX2P	TYPEC1_SSRX2P	
		DP1_TX2P	
25	TYPEC1_SSRX2N	TYPEC1_SSRX2N	
		DP1_TX2N	
27	TYPEC1_SSTX1N	TYPEC1_SSTX1N	
		DP1_TX1N	
29	TYPEC1_SSTX1P	TYPEC1_SSTX1P	

		DP1_TX1P	
31	TYPEC1_SSRX1P	TYPEC1_SSRX1P	
		DP1_TX0P	
33	TYPEC1_SSRX1N	TYPEC1_SSRX1N	
		DP1_TX0N	
30	TYPEC1_SBU2	TYPEC1_SBU2	
		DP1_AUXN	
32	TYPEC1_SBU1	TYPEC1_SBU1	
		DP1_AUXP	
34	TYPEC1_OTG_DP	TYPEC1_OTG_DP	
36	TYPEC1_OTG_DM	TYPEC1_OTG_DM	
38	TYPEC1_USB20_VBUSDET	TYPEC1_USB20_VBUSDET	3.3V
40	TYPEC1_USB20_OTG_ID	TYPEC1_USB20_OTG_ID	1.8V
42	USB20_HOST1_DM	USB20_HOST1_DM	
44	USB20_HOST1_DP	USB20_HOST1_DP	
46	USB20_HOST0_DM	USB20_HOST0_DM	
48	USB20_HOST0_DP	USB20_HOST0_DP	
35	GND	GND	GND
37	HDMI1_TX2P_PORT	HDMI1_TX2P_PORT	
		eDP1_TX_D2P	
39	HDMI1_TX2N_PORT	HDMI1_TX2N_PORT	
		eDP1_TX_D2N	
41	HDMI1_TX1P_PORT	HDMI1_TX1P_PORT	
		eDP1_TX_D1P	

43	HDMI1_TX1N_PORT	HDMI1_TX1N_PORT	
		eDP1_TX_D1N	
45	HDMI1_TX0P_PORT	HDMI1_TX0P_PORT	
		eDP1_TX_D0P	
47	HDMI1_TX0P_PORT	HDMI1_TX0N_PORT	
		eDP1_TX_D0N	
49	HDMI1_TX3P_PORT	HDMI1_TX3P_PORT	
		eDP1_TX_D3P	
51	HDMI1_TX3N_PORT	HDMI1_TX3N_PORT	
		eDP1_TX_D3N	
53	HDMI1_TX_SBDP	HDMI1_TX_SBDP	
		eDP1_TX_AUXP	
55	HDMI1_TX_SBDN	HDMI1_TX_SBDN	
		eDP1_TX_AUXN	
57	GND	GND	GND
59	HDMI0_TX2P_PORT	HDMI0_TX2P_PORT	
		eDP0_TX_D2P	
61	HDMI0_TX2N_PORT	HDMI0_TX2N_PORT	
		eDP0_TX_D2N	
63	HDMI0_TX1P_PORT	HDMI0_TX1P_PORT	
		eDP0_TX_D1P	
65	HDMI0_TX1N_PORT	HDMI0_TX1N_PORT	
		eDP0_TX_D1N	
67	HDMI0_TX0P_PORT	HDMI0_TX0P_PORT	
		eDP0_TX_D0P	

69	HDMI0_TX0N_PORT	HDMI0_TX0N_PORT	
		eDP0_TX_D0N	
71	HDMI0_TX3P_PORT	HDMI0_TX3P_PORT	
		eDP0_TX_D3P	
73	HDMI0_TX3N_PORT	HDMI0_TX3N_PORT	
		eDP0_TX_D3N	
75	HDMI0_TX_SBDP	HDMI0_TX_SBDP	
		eDP0_TX_AUXP	
77	HDMI0_TX_SBDN	HDMI0_TX_SBDN	
		eDP0_TX_AUXN	
79	GND	GND	GND
50	GND	GND	GND
52	HDMI_RX_D2P	HDMI_RX_D2P	
54	HDMI_RX_D2N	HDMI_RX_D2N	
56	HDMI_RX_D1P	HDMI_RX_D1P	
58	HDMI_RX_D1N	HDMI_RX_D1N	
60	HDMI_RX_D1P	HDMI_RX_D1P	
62	HDMI_RX_D1N	HDMI_RX_D1N	
64	HDMI_RX_CLKP	HDMI_RX_CLKP	
66	HDMI_RX_CLKN	HDMI_RX_CLKN	
68	GND	GND	GND
70	SDMMC0_D2	I2C8_SCL_M0	3.3V
		PDM1_SDI1_M0	
		JTAG_TCK_M0	
		UART5_CTSN_M0	

		SDMMC0_D2	
		GPIO4_D2_u	
72	SDMMC0_D3	PWM10_M1	3.3V
		I2C8_SDA_M0	
		PDM1_SDI0_M0	
		JTAG_TMS_M0	
		UART5_RTSN_M0	
		SDMMC0_D3	
		GPIO4_D3_u	
74	SDMMC0_CMD	PWM7_IR_M1	3.3V
		CAN0_TX_M1	
		PDM1_CLK1_M0	
		MCU_JTAG_TCK_M0	
		UART5_RX_M0	
		SDMMC0_CMD	
		GPIO4_D4_u	
76	SDMMC0_CLK	TEST_CLKOUT_M0	3.3V
		CAN0_RX_M1	
		PDM1_CLK0_M0	
		MCU_JTAG_TMS_M0	
		UART5_TX_M0	
		SDMMC0_CLK	
		GPIO4_D5_d	
78	SDMMC0_D0	PWM8_M1	3.3V
		I2C3_SCL_M4	

		PDM1_SDI3_M0	
		JTAG_TCK_M1	
		UART2_TX_M1	
		SDMMC0_D0	
		GPIO4_D0_u	
80	SDMMC0_D1	PWM9_M1	3.3V
		I2C3_SDA_M4	
		PDM1_SDI2_M0	
		JTAG_TMS_M1	
		UART2_RX_M1	
		SDMMC0_D1	
		GPIO4_D1_u	

5.2.2 J2连接器引脚定义

J2 DF12NA(3.0)-80DS-0.5V(51)			
Num	Pin Name	Signal Name	Power Rail
1	HDMI0_TX_ON_H_GP IO4_B1	SATA2_ACT_LED_M 0	3.3V
		SPDIF1_TX_M1	
		SPI0_CS1_M1	
		UART8_RX_M0	
		I2C6_SCL_M3	
		I2S1_SDO0_M0	
		PCIE30X1_0_BUTTO N_RSTN	

		MIPI_CAMERA0_CLK_M0	
		GPIO4_B1_u	
2	HDMI1_TX_ON_H_GPIO4_B0	SPI2_CS1_M1	3.3V
		UART8_TX_M0	
		I2C6_SDA_M3	
		I2S1_SDI3_M0	
		PCIE30X2_PERSTN_M1	
		BT1120_CLKOUT	
		CIF_CLKIN	
		GPIO4_B0_d	
3	GMAC1_RSTn_GPIO4_A7	SPI2_CS0_M1	3.3V
		I2C5_SDA_M2	
		I2S1_SDI2_M0	
		PCIE30X2_WAKEN_M1	
		BT1120_D7	
		CIF_D7	
		GPIO4_A7_d	
4	TYPECO_SBU2_DC	CAN1_RX_M1	3.3V
		PWM14_M1	
		SPI0_CS0_M1	
		UART8_RTSM_M0	
		I2C7_SCL_M3	
		I2S1_SDO1_M0	

		PCIE30X1_1_BUTTON _RSTN	
		BT1120_D8	
		CIF_HREF	
		GPIO4_B2_u	
5	SYS_LED_GPIO4_A6	SPI2_CLK_M1	3.3V
		UART3_RX_M2	
		I2C5_SCL_M2	
		I2S1_SDI1_M0	
		PCIE30X2_CLKREQN _M1	
		BT1120_D6	
		CIF_D6	
		GPIO4_A6_d	
6	PCIEX1_1_PERSTn_M 1_L	SPI0_CLK_M1	3.3V
		I2S1_LRCK_M0	
		PCIE30X1_1_PERSTN _M1	
		BT1120_D2	
		CIF_D2	
		GPIO4_A2_d	
7	WDT_EN_GPIO4_A5	SPI2_MOSI_M1	3.3V
		UART3_TX_M2	
		I2C3_SDA_M2	
		I2S1_SDI0_M0	
		PCIE30X1_0_PERST N_M1	

		BT1120_D5	
		CIF_D5	
		GPIO4_A5_d	
8	PCIEX1_1_WAKEn_M1_L	SPI0_MOSI_M1	3.3V
		UART9_CTSN_M1	
		I2S1_SCLK_M0	
		PCIE30X1_1_WAKEN_M1	
		BT1120_D1	
		CIF_D1	
		GPIO4_A1_d	
9	TYPEC1_SBU2_DC	SPI2_MISO_M1	3.3V
		UART0_RX_M2	
		I2C3_SCL_M2	
		PCIE30X1_0_WAKEN_M1	
		BT1120_D4	
		CIF_D4	
		GPIO4_A4_d	
10	PCIEX1_1_CLKREQn_M1_L	SPI0_MISO_M1	3.3V
		UART9_RTSN_M1	
		I2S1_MCLK_M0	
		PCIE30X1_1_CLKREQ_N_M1	
		BT1120_D0	
		CIF_D0	

		GPIO4_A0_d	
11	GND	GND	GND
13	MIPI_CSI0_RX_D0N	MIPI_CSI0_RX_D0N	
15	MIPI_CSI0_RX_D0P	MIPI_CSI0_RX_D0P	
17	MIPI_CSI0_RX_D1N	MIPI_CSI0_RX_D1N	
19	MIPI_CSI0_RX_D1P	MIPI_CSI0_RX_D1P	
21	MIPI_CSI0_RX_CLK0 N	MIPI_CSI0_RX_CLK0 N	
23	MIPI_CSI0_RX_CLK0 P	MIPI_CSI0_RX_CLK0 P	
25	MIPI_CSI0_RX_D2N	MIPI_CSI0_RX_D2N	
27	MIPI_CSI0_RX_D2P	MIPI_CSI0_RX_D2P	
29	MIPI_CSI0_RX_D3N	MIPI_CSI0_RX_D3N	
31	MIPI_CSI0_RX_D3P	MIPI_CSI0_RX_D3P	
33	MIPI_CSI0_RX_CLK1 N	MIPI_CSI0_RX_CLK1 N	
35	MIPI_CSI0_RX_CLK1 P	MIPI_CSI0_RX_CLK1 P	
12	GND	GND	GND
14	MIPI_CSI1_RX_D0P	MIPI_CSI1_RX_D0P	
16	MIPI_CSI1_RX_D0N	MIPI_CSI1_RX_D0N	
18	MIPI_CSI1_RX_D1P	MIPI_CSI1_RX_D1P	
20	MIPI_CSI1_RX_D1N	MIPI_CSI1_RX_D1N	
22	MIPI_CSI1_RX_CLK0 P	MIPI_CSI1_RX_CLK0 P	
24	MIPI_CSI1_RX_CLK0 N	MIPI_CSI1_RX_CLK0 N	

26	MIPI_CSI1_RX_D2P	MIPI_CSI1_RX_D2P	
28	MIPI_CSI1_RX_D2N	MIPI_CSI1_RX_D2N	
30	MIPI_CSI1_RX_D3P	MIPI_CSI1_RX_D3P	
32	MIPI_CSI1_RX_D3N	MIPI_CSI1_RX_D3N	
34	MIPI_CSI1_RX_CLK1P	MIPI_CSI1_RX_CLK1P	
36	MIPI_CSI1_RX_CLK1N	MIPI_CSI1_RX_CLK1N	
38	GND	GND	GND
37	GND	GND	GND
39	MIPI_DPHY0_TX_D3 P	MIPI_DPHY0_TX_D3 P	
41	MIPI_DPHY0_TX_D3 N	MIPI_DPHY0_TX_D3 N	
		MIPI_CPHY0_TX_TRI O2_C	
43	MIPI_DPHY0_TX_D2 P	MIPI_DPHY0_TX_D2 P	
		MIPI_CPHY0_TX_TRI O2_B	
45	MIPI_DPHY0_TX_D2 N	MIPI_DPHY0_TX_D2 N	
		MIPI_CPHY0_TX_TRI O2_A	
47	MIPI_DPHY0_TX_CL KP	MIPI_DPHY0_TX_CL KP	
		MIPI_CPHY0_TX_TRI O1_C	
49	MIPI_DPHY0_TX_CL KN	MIPI_DPHY0_TX_CL KN	

		MIPI_CPHY0_TX_TRI O1_B	
51	MIPI_DPHY0_TX_D1P	MIPI_DPHY0_TX_D1P MIPI_CPHY0_TX_TRI O1_A	
53	MIPI_DPHY0_TX_D1N	MIPI_DPHY0_TX_D1N MIPI_CPHY0_TX_TRI O0_C	
55	MIPI_DPHY0_TX_D0 P	MIPI_DPHY0_TX_D0 P MIPI_CPHY0_TX_TRI O0_B	
57	MIPI_DPHY0_TX_D0 N	MIPI_DPHY0_TX_D0 N MIPI_CPHY0_TX_TRI O0_A	
59	GND	GND	GND
61	MIPI_DPHY1_TX_D3P	MIPI_DPHY1_TX_D3P	
63	MIPI_DPHY1_TX_D3N	MIPI_DPHY1_TX_D3N MIPI_CPHY1_TX_TRI O2_C	
65	MIPI_DPHY1_TX_D2P	MIPI_DPHY1_TX_D2P MIPI_CPHY1_TX_TRI O2_B	
67	MIPI_DPHY1_TX_D2N	MIPI_DPHY1_TX_D2N MIPI_CPHY1_TX_TRI O2_A	
69	MIPI_DPHY1_TX_CLK P	MIPI_DPHY1_TX_CLK P	

		MIPI_CPHY1_TX_TRI O1_C	
71	MIPI_DPHY1_TX_CLK N	MIPI_DPHY1_TX_CLK N MIPI_CPHY1_TX_TRI O1_B	
73	MIPI_DPHY1_TX_D1P	MIPI_DPHY1_TX_D1P MIPI_CPHY1_TX_TRI O1_A	
75	MIPI_DPHY1_TX_D1N	MIPI_DPHY1_TX_D1N MIPI_CPHY1_TX_TRI O0_C	
77	MIPI_DPHY1_TX_D0P	MIPI_DPHY1_TX_D0P MIPI_CPHY1_TX_TRI O0_B	
79	MIPI_DPHY1_TX_D0N	MIPI_DPHY1_TX_D0N MIPI_CPHY1_TX_TRI O0_A	
40	MIPI_DPHY0_RX_D3 P	MIPI_DPHY0_RX_D3 P	
42	MIPI_DPHY0_RX_D3 N	MIPI_DPHY0_RX_D3 N MIPI_CPHY0_RX_TRI O2_C	
44	MIPI_DPHY0_RX_D2 P	MIPI_DPHY0_RX_D2 P MIPI_CPHY0_RX_TRI O2_B	

46	MIPI_DPHY0_RX_D2 N	MIPI_DPHY0_RX_D2 N	
		MIPI_CPHY0_RX_TRI O2_A	
48	MIPI_DPHY0_RX_CL KP	MIPI_DPHY0_RX_CL KP	
		MIPI_CPHY0_RX_TRI O1_C	
50	MIPI_DPHY0_RX_CL KN	MIPI_DPHY0_RX_CL KN	
		MIPI_CPHY0_RX_TRI O1_B	
52	MIPI_DPHY0_RX_D1P	MIPI_DPHY0_RX_D1P	
		MIPI_CPHY0_RX_TRI O1_A	
54	MIPI_DPHY0_RX_D1N	MIPI_DPHY0_RX_D1N	
		MIPI_CPHY0_RX_TRI O0_C	
56	MIPI_DPHY0_RX_D0 P	MIPI_DPHY0_RX_D0 P	
		MIPI_CPHY0_RX_TRI O0_B	
58	MIPI_DPHY0_RX_D0 N	MIPI_DPHY0_RX_D0 N	
		MIPI_CPHY0_RX_TRI O0_A	
60	GND	GND	GND
62	MIPI_DPHY1_RX_D3P	MIPI_DPHY1_RX_D3P	
64	MIPI_DPHY1_RX_D3N	MIPI_DPHY1_RX_D3N	

		MIPI_CPHY1_RX_TRI O2_C	
66	MIPI_DPHY1_RX_D2P	MIPI_DPHY1_RX_D2P	
		MIPI_CPHY1_RX_TRI O2_B	
68	MIPI_DPHY1_RX_D2N	MIPI_DPHY1_RX_D2N	
		MIPI_CPHY1_RX_TRI O2_A	
70	MIPI_DPHY1_RX_CLK P	MIPI_DPHY1_RX_CLK P	
		MIPI_CPHY1_RX_TRI O1_C	
72	MIPI_DPHY1_RX_CLK N	MIPI_DPHY1_RX_CLK N	
		MIPI_CPHY1_RX_TRI O1_B	
74	MIPI_DPHY1_RX_D1P	MIPI_DPHY1_RX_D1P	
		MIPI_CPHY1_RX_TRI O1_A	
76	MIPI_DPHY1_RX_D1N	MIPI_DPHY1_RX_D1N	
		MIPI_CPHY1_RX_TRI O0_C	
78	MIPI_DPHY1_RX_D0P	MIPI_DPHY1_RX_D0P	
		MIPI_CPHY1_RX_TRI O0_B	
80	MIPI_DPHY1_RX_D0N	MIPI_DPHY1_RX_D0N	
		MIPI_CPHY1_RX_TRI O0_A	

5.2.3 J3连接器引脚定义

J3 DF12NA(3.0)-80DS-0.5V(51)			
Num	Pin Name	Signal Name	Power Rail
2	VCC4V0_SYS	VCC4V0_SYS	4.0V/input
4	VCC4V0_SYS	VCC4V0_SYS	
6	VCC4V0_SYS	VCC4V0_SYS	
8	VCC4V0_SYS	VCC4V0_SYS	
10	VCC4V0_SYS	VCC4V0_SYS	
1	GND	GND	GND
3	GND	GND	
5	GND	GND	
7	GND	GND	
9	UART2_TX_M0_DEB UG	UART2_TX_M0_DEB UG	3.3V
		I2S1_MCLK_M1	
		PCIE30X1_1_CLKREQ N_M0	
		I2C1_SCL_M0	
		JTAG_TCK_M2	
		GPIO0_B5_d	
11	UART2_RX_M0_DEB UG	UART2_RX_M0_DEB UG	3.3V
		I2S1_SCLK_M1	
		PCIE30X1_1_WAKEN _M0	
		I2C1_SDA_M0	

		JTAG_TMS_M2	
		GPIO0_B6_d	
13	I2C4_SCL_M2	PWM4_M0	3.3V
		UART0_TX_M0	
		DP1_HPDIN_M1	
		I2S1_SDI0_M1	
		PCIE30X1_0_PERST N_M0	
		I2C4_SCL_M2	
		GPU_AVS	
		GPIO0_C5_u	
15	I2C4_SDA_M2	UART0_RX_M0	3.3V
		DP0_HPDIN_M1	
		PDM0_CLK1_M1	
		PCIE30X1_0_WAKEN _M0	
		I2C4_SDA_M2	
		PWM2_M0	
		GPIO0_C4_d	
17	I2C2_SCL_M0	CAN0_TX_M0	3.3V
		I2S1_LRCK_M1	
		PCIE30X1_1_PERSTN _M0	
		SPI0_CS1_M0	
		I2C2_SCL_M0	
		PWM0_M0	

		GPIO0_B7_d	
19	I2C2_SDA_M0	CAN0_RX_M0	3.3V
		PDM0_CLK0_M1	
		PCIE30X1_0_CLKRE QN_M0	
		SPI0_MOSI_M0	
		I2C2_SDA_M0	
		PWM1_M0	
		GPIO0_C0_d	
21	PWM6_M0	PDM0_SDI0_M1	3.3V
		I2S1_SDI2_M1	
		PCIE30X4_WAKEN_ M0	
		SPI0_MISO_M0	
		I2C6_SDA_M0	
		PWM6_M0	
23	PWM7_IR_M0	PDM0_SDI1_M1	3.3V
		I2S1_SDI3_M1	
		PCIE30X4_PERSTN_ M0	
		SPI3_MISO_M2	
		I2C6_SCL_M0	
		PWM7_IR_M0	
25	GND	GPIO0_D0_d	GND
		GND	

27	WIFI_REG_ON_H_GPI O2_B4	I2C4_SDA_M1	1.8V
		UART7_RX_M0	
		FSPI_CS0N_M1	
		HDMI_TX1_SDA_M0	
		GMAC0_PTP_REFCL K	
		GPIO2_B4_u	
29	UART9_RTSh_M0_B T	I2C7_SDA_M1	1.8V
		UART9_RTSh_M0	
		SPI3_MISO_M0	
		PWM5_M2	
		GMAC0_MDC	
		GPIO4_C4_d	
31	UART9_CTSh_M0_B T	I2C0_SCL_M1	1.8V
		UART9_CTSh_M0	
		SPI3_MOSI_M0	
		PWM6_M2	
		GMAC0_MDIO	
		GPIO4_C5_d	
33	BT_REG_ON_H_GPIO 2_B5	I2C4_SCL_M1	1.8V
		UART7_TX_M0	
		FSPI_CS1N_M1	
		HDMI_TX1_SCL_M0	
		GMAC0_PPSTRIG	
		GPIO2_B5_u	
35	UART9_RX_M0_BT	TEST_CLKOUT_M1	1.8V

		UART9_RX_M0 SPI1_CS1_M0 HDMI_TX1_CEC_M0 GMAC0_PPSCCLK GPIO2_C4_d	
37	TYPEC1_CC_INT_L_ GPIO2_C3	I2C6_SCL_M2 SPI1_CS0_M0 I2S2_SDI_M0 ETH0_REFCLKO_25 M GPIO2_C3_d	1.8V
39	TYPEC0_CC_INT_L_ GPIO2_C0	I2C2_SDA_M1 UART1_RTSN_M0 SPI1_CLK_M0 I2S2_LRCK_M0 GMAC0_TXEN GPIO2_C0_d	1.8V
41	TYPEC0_5V_PWREN _H_GPIO2_B7	I2C5_SDA_M4 UART1_TX_M0 I2S2_SCLK_M0 GMAC0_TX1 GPIO2_B7_d	1.8V
43	PCA9539PW_RESET _L_GPIO4_C6	I2C0_SDA_M1 UART7_CTSN_M0 SPI3_CLK_M0 PWM7_IR_M3	1.8V

		GMAC0_TXER	
		GPIO4_C6_d	
45	WIFI_WAKE_HOST_H _GPIO4_C3	I2C7_SCL_M1	1.8V
		PWM4_M1	
		SPI3_CS1_M0	
		I2S2_SDO_M0	
		GMAC0_MCLKINOU T	
		GPIO4_C3_d	
47	HOST_WAKE_BT_H_ GPIO2_B6	I2C5_SCL_M4	1.8V
		UART1_RX_M0	
		I2S2_MCLK_M0	
		GMAC0_TX0	
		GPIO2_B6_d	
49	BT_WAKE_HOST_H_ GPIO2_C1	I2C2_SCL_M1	1.8V
		UART1_CTSN_M0	
		SPI1_MISO_M0	
		GMAC0_RX0	
		GPIO2_C1_d	
51	UART9_TX_M0_BT	I2C6_SDA_M2	1.8V
		UART9_TX_M0	
		SPI1_MOSI_M0	
		GMAC0_RX1	
		GPIO2_C2_d	
53	PCA9539_INT_L_GPI O4_C2	UART7_RTSN_M0	1.8V
		SPI3_CS0_M0	

		PWM2_M2	
		GMAC0_RXDV_CRCS	
		GPIO4_C2_d	
55	SOC_CLK32K_OUT1	CLK32K_OUT1	1.8V
		GPIO2_C5_d	
57	GND	GND	GND
59	SDIO_CLK_M0_WIFI	I2C3_SDA_M3	1.8V
		FSPI_CLK_M1	
		SDIO_CLK_M0	
		GMAC0_TXCLK	
		GPIO2_B3_d	
61	SDIO_CMD_M0_WIFI	I2C3_SCL_M3	1.8V
		SDIO_CMD_M0	
		GMAC0_TXD3	
		GPIO2_B2_u	
63	SDIO_D3_M0_WIFI	I2C8_SDA_M1	1.8V
		UART6_CTSN_M0	
		FSPI_D3_M1	
		SDIO_D3_M0	
		GMAC0_TXD2	
		GPIO2_B1_u	
65	SDIO_D2_M0_WIFI	I2C8_SCL_M1	1.8V
		UART6_RTSN_M0	
		FSPI_D2_M1	
		SDIO_D2_M0	

		GMAC0_RXCLK	
		GPIO2_B0_u	
67	SDIO_D1_M0_WIFI	UART6_TX_M0	1.8V
		FSPI_D1_M1	
		SDIO_D1_M0	
		GMAC0_RXD3	
		GPIO2_A7_u	
69	SDIO_D0_M0_WIFI	UART6_RX_M0	1.8V
		FSPI_D0_M1	
		SDIO_D0_M0	
		GMAC0_RXD2	
		GPIO2_A6_u	
12	GMAC1_TXD2	PWM10_M0	1.8V
		SPI4_MISO_M1	
		I2C6_SDA_M4	
		FSPI_D0_M2	
		I2S3_MCLK	
		SDIO_D0_M1	
		GMAC1_TXD2	
		GPIO3_A0_u	
14	GMAC1_TXD3	AUDDSM_LN	1.8V
		SPI4_MOSI_M1	
		PWM11_IR_M0	
		I2C6_SCL_M4	
		FSPI_D1_M2	

		I2S3_SCLK	
		SDIO_D1_M1	
		GMAC1_TXD3	
		GPIO3_A1_u	
16	GMAC1_RXD2	AUDDSM_LP	1.8V
		SPI4_CLK_M1	
		UART8_TX_M1	
		FSPI_D2_M2	
		I2S3_LRCK	
		SDIO_D2_M1	
		GMAC1_RXD2	
		GPIO3_A2_u	
18	GMAC1_RXD3	AUDDSM_RN	1.8V
		SPI4_CS0_M1	
		UART8_RX_M1	
		FSPI_D3_M2	
		I2S3_SDO	
		SDIO_D3_M1	
		GMAC1_RXD3	
		GPIO3_A3_u	
20	GMAC1_TXCLK	AUDDSM_RP	1.8V
		SPI4_CS1_M1	
		UART8_RTSM_M1	
		I2S3_SDI	
		SDIO_CMD_M1	

		GMAC1_TXCLK	
		GPIO3_A4_d	
22	GMAC1_RXD0	PWM8_M0	1.8V
		MIPI_CAMERA2_CLK_M1	
		GMAC1_RXD0	
		GPIO3_A7_u	
24	GMAC1_RXD1	PWM9_M0	1.8V
		MIPI_CAMERA3_CLK_M1	
		GMAC1_RXD1	
		GPIO3_B0_u	
26	GMAC1_RXCLK	MIPI_CAMERA0_CLK_M1	1.8V
		UART8_CTSN_M1	
		I2C4_SDA_M0	
		FSPI_CLK_M2	
		SDIO_CLK_M1	
		GMAC1_RXCLK	
		GPIO3_A5_d	
28	GMAC1_RXDV_CRS	PWM2_M1	1.8V
		MIPI_CAMERA4_CLK_M1	
		UART2_TX_M2	
		GMAC1_RXDV_CRS	
		GPIO3_B1_d	

30	MIPI_CAM1_PDN_L_ GPIO2_B4	MIPI_CAMERA1_CLK_M1	1.8V
		I2C4_SCL_M0	
		ETH1_REFCLKO_25M	
		GPIO3_A6_d	
32	MIPI_CAM1_RESET_L_ _GPIO4_C6	PWM3_IR_M1	1.8V
		UART2_RX_M2	
		I2S2_SDI_M1	
		GMAC1_TXER	
		GPIO3_B2_d	
34	GMAC1_TXD0	UART2_RTSN	1.8V
		I2S2_SDO_M1	
		GMAC1_TXD0	
		GPIO3_B3_u	
36	GMAC1_TXD1	UART2_CTSN	1.8V
		I2S2_MCLK_M1	
		GMAC1_TXD1	
		GPIO3_B4_u	
38	GMAC1_TXEN	PWM12_M0	1.8V
		CAN1_RX_M0	
		UART3_TX_M1	
		I2S2_SCLK_M1	
		GMAC1_TXEN	
		GPIO3_B5_u	
40	GMAC1_MCLKINOUT	PWM13_M0	1.8V

		CAN1_TX_M0	
		UART3_RX_M1	
		I2S2_LRCK_M1	
		GMAC1_MCLKINOUT	
		GPIO3_B6_d	
42	GND	GND	GND
44	HDMI_RX_HPDPDOUT_H_M1	PCIE30X2_PERSTN_M2	1.8V
		UART9_RX_M2	
		SPI0_CS0_M3	
		HDMI_RX_HPDPDOUT_M1	
		HDMI_TX0_HPDPD_M1	
		MCU_JTAG_TCK_M1	
		GPIO3_D4_d	
46	MIPI_CAM2_PDN_L_GPIO2_B5	PCIE30X2_BUTTON_RSTN	1.8V
		UART7_RX_M1	
		SPI1_CLK_M1	
		GMAC1_PPSCCLK	
		GPIO3_C1_d	
48	MIPI_CAM2_RESET_L_GPIO2_B6	UART7_TX_M1	1.8V
		I2C3_SDA_M1	
		SPI1_MISO_M1	
		GMAC1_PPSTRIG	
		GPIO3_C0_d	

50	GMAC1_MDIO	PWM15_IR_M0	1.8V
		UART7_CTSN_M1	
		I2C8_SDA_M4	
		SPI1_CS1_M1	
		MIPI_TE1	
		GMAC1_MDIO	
		GPIO3_C3_d	
52	HDMITX1_HPDI_M1	I2C3_SCL_M1	1.8V
		SPI1_MOSI_M1	
		HDMI_TX1_HPDI_M1	
		GMAC1_PTP_REF_C LK	
		GPIO3_B7_d	
54	GMAC1_MDC	PWM14_M0	1.8V
		UART7_RTSN_M1	
		I2C8_SCL_M4	
		SPI1_CS0_M1	
		MIPI_TE0	
		GMAC1_MDC	
		GPIO3_C2_d	
56	HDMI_RX_SDA_M1	PWM10_M2	1.8V
		PCIE30X2_WAKEN_ M2	
		UART9_CTSN_M2	
		I2C7_SDA_M2	
		SPI0_CLK_M3	

		HDMI_RX_SDA_M1	
		CIF_D15	
		GPIO3_D3_d	
58	HDMI_RX_SCL_M1	PCIE30X2_CLKREQN_M2	1.8V
		UART9_RTSN_M2	
		I2C7_SCL_M2	
		SPI0_MOSI_M3	
		HDMI_RX_SCL_M1	
		CIF_D14	
		GPIO3_D2_d	
60	HDMITX1_SCL_M1	PCIE30X4_PERSTN_M2	1.8V
		SPI3_MISO_M3	
		HDMITX1_SCL_M1	
		CIF_D10	
		GPIO3_C6_u	
62	HDMITX1_CEC_M2	CAN2_RX_M0	1.8V
		PCIE30X4_CLKREQN_M2	
		UART5_TX_M1	
		FSPI_CS0N_M2	
		SPI3_CS0_M3	
		HDMITX1_CEC_M2	
		CIF_D8	
		GPIO3_C4_u	

64	HDMITX1_SDA_M1	CAN2_TX_M0	1.8V
		PCIE30X4_WAKEN_M2	
		UART5_RX_M1	
		FSPI_CS1N_M2	
		SPI3_CS1_M3	
		HDMITX1_SDA_M1	
		CIF_D9	
		GPIO3_C5_u	
66	HDMI_RX_CEC_M1	PWM9_M2	1.8V
		PCIE20X1_2_PERST_N_M0	
		UART4_TX_M1	
		SPI0_MISO_M3	
		HDMI_RX_CEC_M1	
		CIF_D13	
		GPIO3_D1_d	
68	SPK_CTL_H_GPIO3_D0	PWM8_M2	1.8V
		PCIE20X1_2_WAKEN_M0	
		UART4_RX_M1	
		I2C5_SDA_M0	
		SPI3_CLK_M3	
		HDMI_TX0_SDA_M2	
		CIF_D12	
		GPIO3_D0_u	

70	SPK_MUTE_H_GPIO3_C7	PCIE20X1_2_CLKRE	1.8V
		QN_M0	
		I2C5_SCL_M0	
		SPI3_MOSI_M3	
		HDMI_TX0_SCL_M2	
		CIF_D11	
		GPIO3_C7_u	
72	GND	GND	GND
74	SENSOR_INT_L_GPIO3_D5	PWM11_IR_M3	1.8V
		PCIE30X4_BUTTON_RSTN	
		UART9_TX_M2	
		SPI0_CS1_M3	
		DP1_HPDIN_M0	
		MCU_JTAG_TMS_M1	
		GPIO3_D5_d	
71	PCIE30X4_PERSTn_M1_L_GPIO4_B6	SATA0_ACT_LED_M0	3.3V
		PWM13_M1	
		SPI3_MOSI_M1	
		I2C5_SCL_M1	
		HDMI_RX_HPDPDOUT_M0	
		PCIE30X4_PERSTN_M1	
		BT1120_D12	
		GPIO4_B6_d	

73	PCIE30X4_WAKEn_M1_L_GPIO4_B5	SATA1_ACT_LED_M0	3.3V
		PWM12_M1	
		SPI3_MISO_M1	
		UART9_RX_M1	
		HDMI_RX_CEC_M0	
		PCIE30X4_WAKEN_M1	
		BT1120_D11	
		GPIO4_B5_d	
75	PCIE30X4_CLKREQn_M1_L_GPIO4_B4	SPDIF0_TX_M1	3.3V
		PWM11_IR_M1	
		DP0_HPDIN_M0	
		UART9_TX_M1	
		I2S1_SDO3_M0	
		PCIE30X4_CLKREQN_M1	
		BT1120_D10	
		CIF_CLKOUT	
GPIO4_B4_u			
76	HDMITX0_CEC_M0	SPDIF1_TX_M2	3.3V
		PWM6_M1	
		SPI3_CS1_M1	
		I2C8_SDA_M3	
		HDMITX0_CEC_M0	
		PCIE20X1_2_PERST_N_M1	

		BT1120_D15	
		GPIO4_C1_d	
77	TYPECO_SBU1_DC	CAN1_TX_M1	3.3V
		PWM15_IR_M1	
		UART8_CTSN_M0	
		I2C7_SDA_M3	
		I2S1_SDO2_M0	
		PCIE20X1_2_BUTTON_RSTN	
		BT1120_D9	
		CIF_VSYNC	
		GPIO4_B3_u	
78	HDMITX0_SCL_M0	SPI3_CLK_M1	3.3V
		I2C5_SDA_M1	
		HDMITX0_SCL_M0	
		PCIE20X1_2_CLKREQN_M1	
		BT1120_D13	
		GPIO4_B7_u	
79	TYPECO_SBU1_DC	UART0_TX_M2	3.3V
		PCIE30X1_0_CLKREQN_M1	
		BT1120_D3	
		CIF_D3	
		GPIO4_A3_d	
80	HDMITX0_SDA_M0	SPI3_CS0_M1	3.3V

		I2C8_SCL_M3	
		HDMITX0_SDA_M0	
		PCIE20X1_2_WAKEN_M1	
		BT1120_D14	
		GPIO4_C0_u	

5.2.4 J4连接器引脚定义

J4 DF12NA(3.0)-80DS-0.5V(51)			
Num	Pin Name	Signal Name	Power Rail
1	MIPI_DPHY_TX1_RST_GPIO1_A6	SPI2_CLK_M0	3.3V
		HDMI_TX1_HPD_M0	
		GPIO1_A6_d	
2	GND	GND	GND
3	LVDS_ON_H_GPIO1_A7	PWM3_IR_M3	3.3V
		SPI2_CS0_M0	
		PCIE30X1_1_PERSTN_M2	
		PDM1_SDI0_M1	
		GPIO1_A7_u	
4	UART7_RX_M2	SPI0_CS0_M2	3.3V
		PCIE30X1_0_PERSTN_M2	
		PDM1_CLK0_M1	
		UART7_RX_M2	

		GPIO1_B4_u	
5	PWM0_M2	PWM0_M2	3.3V
		SPI4_CLK_M2	
		VOP_POST_EMPTY	
		I2C4_SDA_M3	
		UART6_RTSN_M1	
		GPIO1_A2_d	
6	TP_RST_L_GPIO1_B1	UART6_RTSN_M1	3.3V
		PCIE30X4_WAKEN_M3	
		PDM1_SDI2_M1	
		GPIO1_B1_d	
7	UART6_RX_M1	SPI4_MISO_M2	3.3V
		PCIE30X1_1_CLKREQ_N_M2	
		DP0_HPDIN_M2	
		I2C2_SDA_M4	
		UART6_RX_M1	
		GPIO1_A0_d	
8	UART4_RX_M2	SPI0_MOSI_M2	3.3V
		PCIE30X4_PERSTN_M3	
		PDM1_SDI3_M1	
		UART4_RX_M2	
		GPIO1_B2_d	
9	RS485_DIR4_GPIO1_A4	SPI2_MISO_M0	3.3V

		HDMI_TX1_SCL_M2	
		GPIO1_A4_d	
10	UART7_TX_M2	SPI0_CS1_M2	3.3V
		PCIE30X1_0_CLKRE QN_M2	
		UART7_TX_M2	
		GPIO1_B5_u	
11	UART6_TX_M1	SATA1_ACT_LED_M1	3.3V
		SPI4_MOSI_M2	
		PCIE30X1_1_WAKEN _M2	
		DP1_HPDIN_M2	
		I2C2_SCL_M4	
		UART6_TX_M1	
		GPIO1_A1_d	
12	MIPI_CAM1_CLKOUT _M0	HDMI_RX_HPDOUT_ M2	3.3V
		SPDIF0_TX_M0	
		PCIE30X2_WAKEN_ M3	
		MIPI_CAM1_CLKOUT _M0	
		I2C5_SCL_M3	
		UART1_TX_M1	
		GPIO1_B6_u	
13	HDMITX0_HPDIN_M0	SPI2_MOSI_M0	3.3V
		HDMI_TX0_HPD_M0	

		GPIO1_A5_d	
14	I2C8_SCL_M2	HDMI_RX_SCL_M2	3.3V
		PWM14_M2	
		MIPI_CAM3_CLKOUT_M0	
		I2C8_SCL_M2	
		UART1_RTSM_M1	
		GPIO1_D6_u	
15	PWM1_M2	PWM1_M2	3.3V
		SPI4_CS0_M2	
		HDMI_TX1_SDA_M2	
		I2C4_SCL_M3	
		UART6_CTSN_M1	
		GPIO1_A3_d	
16	I2C8_SDA_M2	HDMI_RX_SDA_M2	3.3V
		PWM15_IR_M3	
		PCIE30X2_CLKREQN_M3	
		MIPI_CAM4_CLKOUT_M0	
		I2C8_SDA_M2	
		UART1_CTSN_M1	
		GPIO1_D7_u	
17	TP_INT_L_GPIO1_B0	SPI2_CS1_M0	3.3V
		PCIE30X4_CLKREQN_M3	
		PDM1_SDI1_M1	

		GPIO1_B0_u	
18	MIPI_CAM2_CLKOUT_M0	SATA2_ACT_LED_M1	3.3V
		HDMI_RX_CEC_M2	
		PWM13_M2	
		SPDIF1_TX_M0	
		PCIE30X2_PERSTN_M3	
		MIPI_CAM2_CLKOUT_M0	
		I2C5_SDA_M3	
		UART1_RX_M1	
		GPIO1_B7_u	
20	UART4_TX_M2	SATA0_ACT_LED_M1	3.3V
		SPI0_CLK_M2	
		PCIE30X1_0_WAKEN_M2	
		PDM1_CLK1_M1	
		UART4_TX_M2	
		GPIO1_B3_d	
19	4G_PERSTn_H_GPIO1_C6	PWM15_IR_M2	1.8V
		I2C4_SDA_M4	
		PDM0_CLK0_M0	
		GPIO1_C6_d	
21	I2S0_LRCK	UART4_RTSN	1.8V
		I2C2_SCL_M3	
		I2S0_LRCK	

		GPIO1_C5_d	
22	I2C7_SCL_M0_CODE C	SPI1_MISO_M2	1.8V
		UART6_TX_M2	
		I2C7_SCL_M0	
		I2S0_SDO1	
		GPIO1_D0_d	
23	I2S0_SDO0	UART4_CTSN	1.8V
		I2C4_SCL_M4	
		I2S0_SDO0	
		GPIO1_C7_d	
24	I2C7_SDA_M0_CODE C	SPI1_MOSI_M2	1.8V
		UART6_RX_M2	
		I2C7_SDA_M0	
		PDM0_SDI1_M0	
		I2S0_SDO2	
		I2S0_SDI3	
		GPIO1_D1_d	
25	I2S0_SCLK	SPI4_CS0_M0	1.8V
		UART3_CTSN	
		PWM7_IR_M2	
		I2C6_SCL_M1	
		I2S0_SCLK	
		GPIO1_C3_d	
26	I2C1_SCL_M4_MIPI	SPI1_CLK_M2	1.8V
		UART4_TX_M0	

		PWM0_M1	
		I2C1_SCL_M4	
		PDM0_SDI2_M0	
		I2S0_SDO3	
		I2S0_SDI2	
		GPIO1_D2_d	
27	LCM_VIO_EN_H_GPIO1_C4	SPI4_CS1_M0	1.8V
		PWM11_IR_M2	
		I2C2_SDA_M3	
		PDM0_CLK1_M0	
		GPIO1_C4_d	
28	I2C1_SDA_M4_MIPI	SPI1_CS0_M2	1.8V
		UART4_RX_M0	
		PWM1_M1	
		I2C1_SDA_M4	
		PDM0_SDI3_M0	
		I2S0_SDI1	
		GPIO1_D3_d	
29	I2S0_MCLK	SPI4_CLK_M0	1.8V
		UART3_RTSEN	
		PWM3_IR_M2	
		I2C6_SDA_M1	
		I2S0_MCLK	
		GPIO1_C2_d	
30	I2S0_SDI0	I2S0_SDI0	1.8V

		GPIO1_D4_d	
31	I2C3_SDA_M0_MIPI	SPI4_MISO_M0	1.8V
		UART3_RX_M0	
		I2C3_SDA_M0	
		GPIO1_C0_z	
33	I2C3_SCL_M0_MIPI	SPI4_MOSI_M0	1.8V
		UART3_TX_M0	
		I2C3_SCL_M0	
		GPIO1_C1_z	
35	HDMIIRX_DET_L_GPIO1_D5	SPI1_CS1_M2	1.8V
		PDM0_SDI0_M0	
		GPIO1_D5_d	
37	GND	GND	GND
39	PCIE30_PORT0_TX1N	PCIE30_PORT0_TX1N	
41	PCIE30_PORT0_TX1P	PCIE30_PORT0_TX1P	
43	PCIE30_PORT0_TX0N	PCIE30_PORT0_TX0N	
45	PCIE30_PORT0_TX0P	PCIE30_PORT0_TX0P	
47	PCIE30_PORT0_REFCLKN_IN	PCIE30_PORT0_REFCLKN_IN	
49	PCIE30_PORT0_REFCLKP_IN	PCIE30_PORT0_REFCLKP_IN	
51	PCIE30_PORT0_RX1N	PCIE30_PORT0_RX1N	

53	PCIE30_PORT0_RX1 P	PCIE30_PORT0_RX1 P	
55	PCIE30_PORT0_RX0 N	PCIE30_PORT0_RX0 N	
57	PCIE30_PORT0_RX0 P	PCIE30_PORT0_RX0 P	
59	GND	GND	GND
32	GND	GND	GND
34	PCIE30_PORT1_REF CLKP_IN	PCIE30_PORT1_REF CLKP_IN	
36	PCIE30_PORT1_REF CLKN_IN	PCIE30_PORT1_REF CLKN_IN	
38	PCIE30_PORT1_TX3 N	PCIE30_PORT1_TX3 N	
40	PCIE30_PORT1_TX3 P	PCIE30_PORT1_TX3 P	
42	PCIE30_PORT1_TX2 N	PCIE30_PORT1_TX2 N	
44	PCIE30_PORT1_TX2 P	PCIE30_PORT1_TX2 P	
46	PCIE30_PORT1_RX3 N	PCIE30_PORT1_RX3 N	
48	PCIE30_PORT1_RX3 P	PCIE30_PORT1_RX3 P	
50	PCIE30_PORT1_RX2 N	PCIE30_PORT1_RX2 N	
52	PCIE30_PORT1_RX2 P	PCIE30_PORT1_RX2 P	
54	GND	GND	GND

61	PCIE20_0_REFCLKP	PCIE20_0_REFCLKP	
63	PCIE20_0_REFCLKN	PCIE20_0_REFCLKN	
65	PCIE20_0_TXP	PCIE20_0_TXP	
		SATA30_0_TXP	
67	PCIE20_0_TXN	PCIE20_0_TXN	
		SATA30_0_TXN	
69	PCIE20_0_RXP	PCIE20_0_RXP	
		SATA30_0_RXP	
71	PCIE20_0_RXN	PCIE20_0_RXN	
		SATA30_0_RXN	
68	PCIE20_1_REFCLKP	PCIE20_1_REFCLKP	
70	PCIE20_1_REFCLKN	PCIE20_1_REFCLKN	
72	PCIE20_1_TXP	PCIE20_1_TXP	
		SATA30_1_TXP	
74	PCIE20_1_TXN	PCIE20_1_TXN	
		SATA30_1_TXN	
76	PCIE20_1_RXP	PCIE20_1_RXP	
		SATA30_1_RXP	
78	PCIE20_1_RXN	PCIE20_1_RXN	
		SATA30_1_RXN	
56	PCIE20_2_REFCLKP	PCIE20_2_REFCLKP	
58	PCIE20_2_REFCLKN	PCIE20_2_REFCLKN	
60	USB30_2_SSTXP	PCIE20_2_TXP	
		SATA30_2_TXP	
		USB30_2_SSTXP	

62	USB30_2_SSTXN	PCIE20_2_TXN	
		SATA30_2_TXN	
		USB30_2_SSTXN	
64	USB30_2_SSRXP	PCIE20_2_RXP	
		SATA30_2_RXP	
		USB30_2_SSRXP	
66	USB30_2_SSRXN	PCIE20_2_RXN	
		SATA30_2_RXN	
		USB30_2_SSRXN	
73	RESET_L	RESET_L	1.8V
75	VCC_1V8_S3	VCC_1V8_S3	1.8V/output
77	PMIC_EXT_EN_OUT	PMIC_EXT_EN_OUT	4.0V
79	PWRON_L	PWRON_L	4.0V
80	LED_GPIO0_A0	REFCLK_OUT	1.8V
		PMUIO1_GPIO0_A0_d	