

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

版本	修订内容	修订	审核	日期
V1.0	创建文档			2022/09/6
V1.1	B TO B连接器封装优化，PCB版本号更新为IDO-SOM3588-V1B			2023/05/25

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：

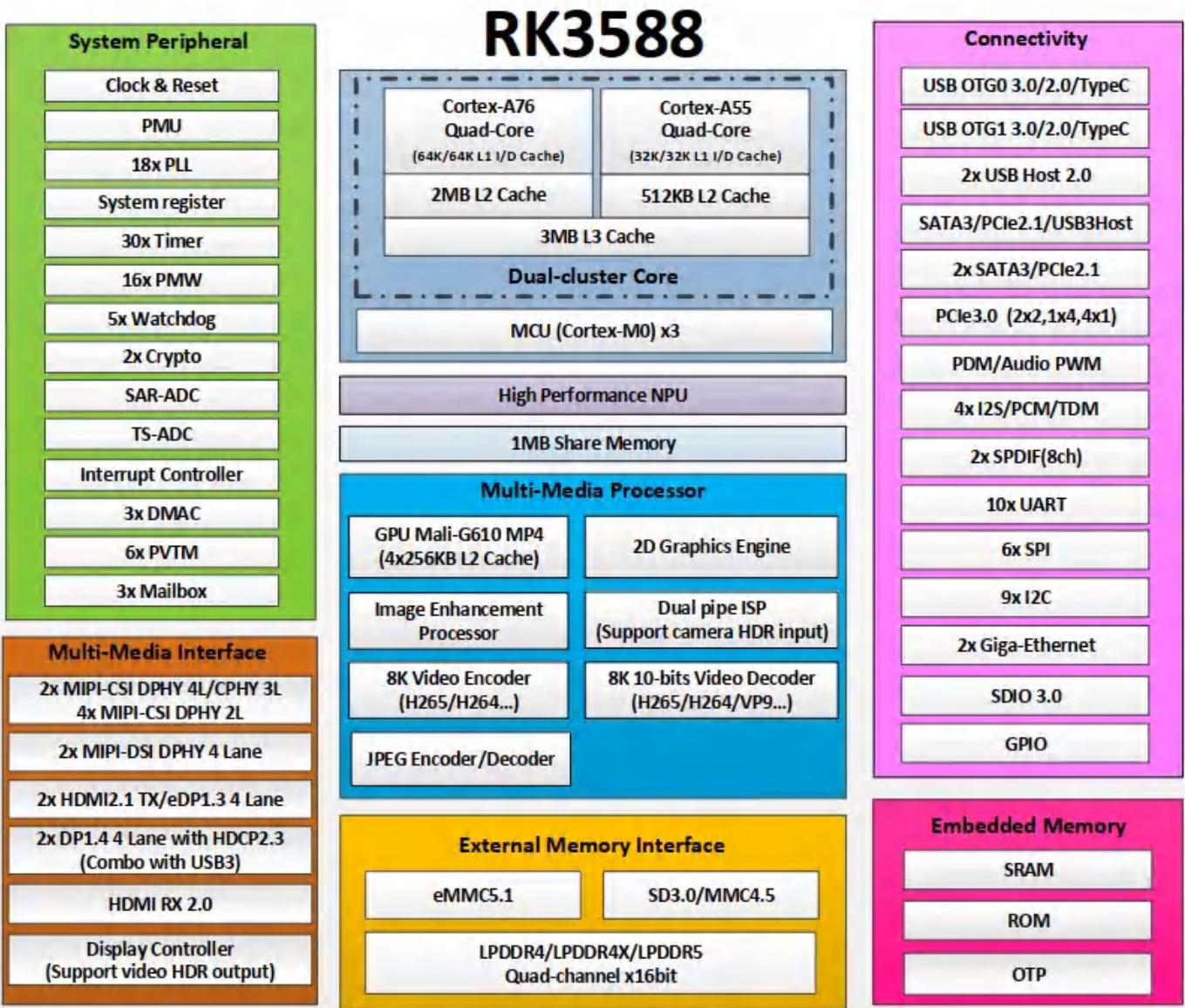


图1. RK3588 SoC框图

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

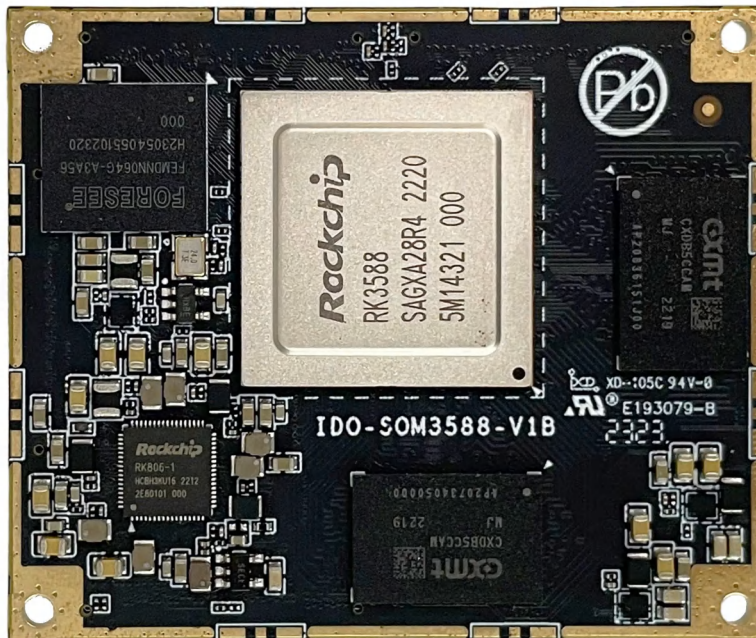


图3. IDO-SOM3588-V1核心板正面

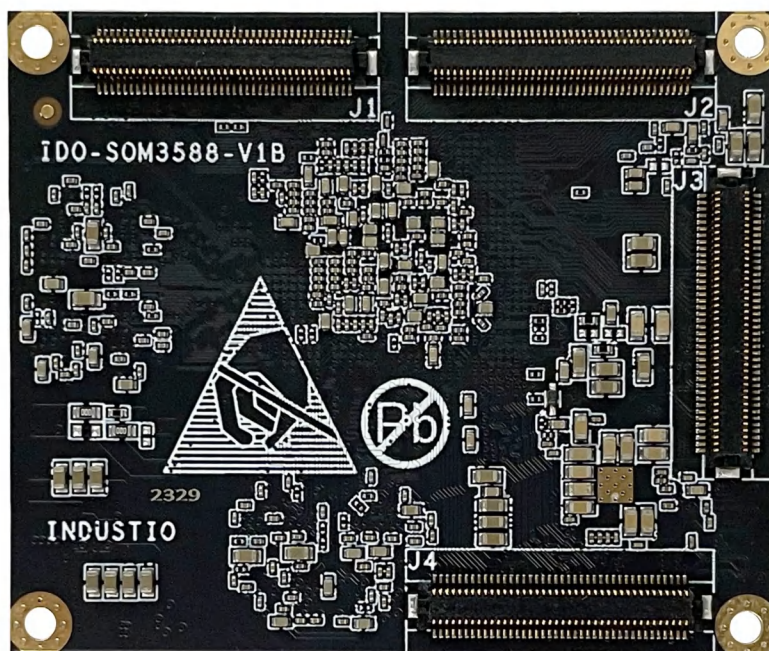


图4. IDO-SOM3588-V1核心板背面

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	• 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	视频解码 • 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.) 视频编码 • H.265/H.264, 8K@30fps • Multi-channel encoder in parallel for less resolution (1080p/720p etc.) Muti-format 视频解码 • 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	视频输出: • 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 视频输入: • 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) 最多可支持4屏异显输出
音频	2 × 8 通道I2C 2 × 8 通道I2S 2 × SPDIF 2 × 8 通道PDM

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℃[商规型号]； -40~85℃ [工规型号]
存储温度	-40℃~85℃
存储湿度	10%~80%

2.3 系统支持

序号	操作系统	支持	说明
----	------	----	----

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

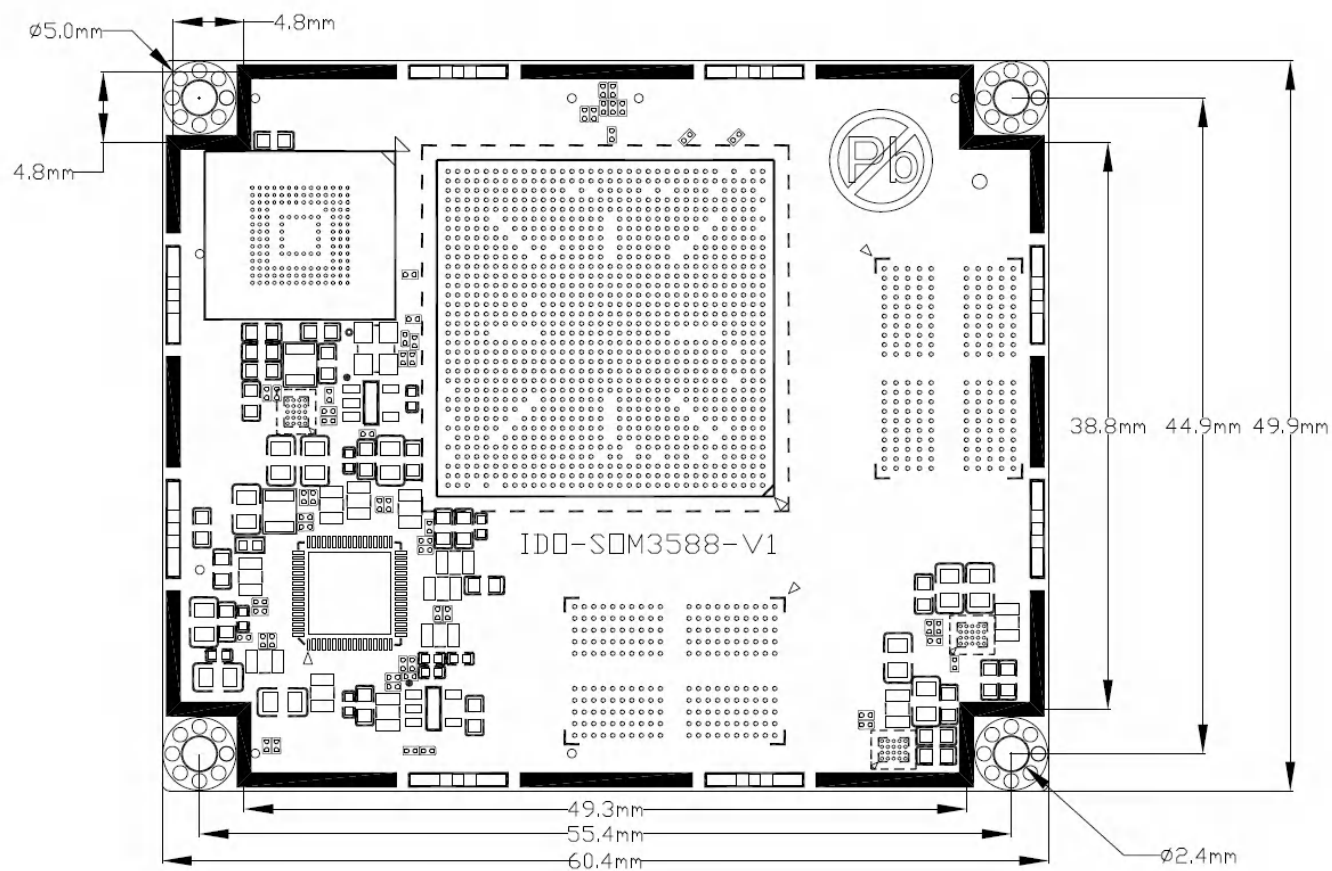


图5. ID0-SOM3588-V1核心板正面尺寸

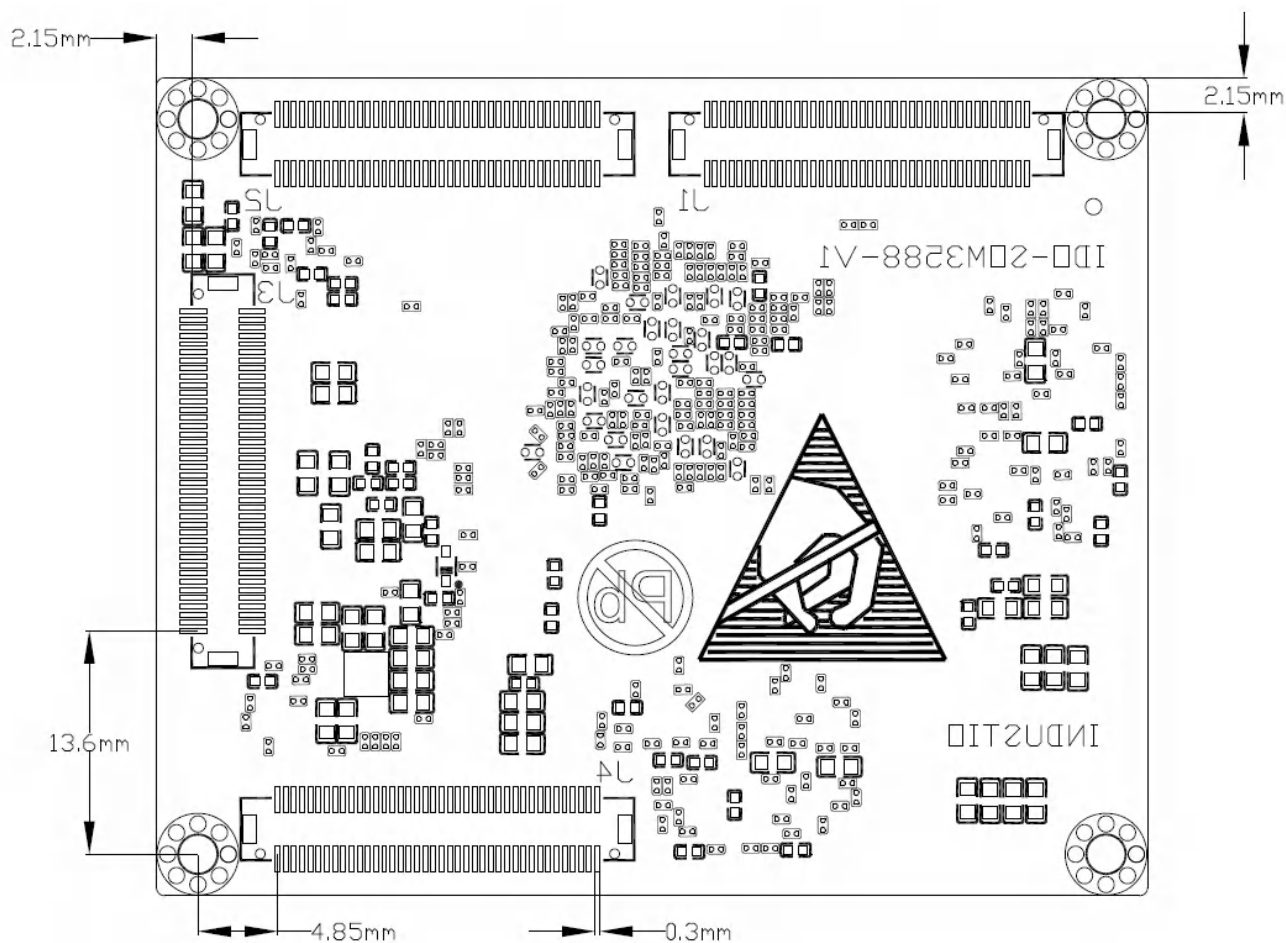


图6. IDO-SOM3588-V1核心板背面尺寸

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
------------	-------	------	-------	-------

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℃
IDO-SOM3588-V1-D4E64	4GB	64GB	0~70℃
IDO-SOM3588-V1-D8E64	8GB	64GB	0~70℃
IDO-SOM3588-V1-D8E128	8GB	128GB	0~70℃
IDO-SOM3588J-V1-D4E64	4GB	64GB	-40~85℃
IDO-SOM3588J-V1-D8E64	8GB	64GB	-40~85℃
IDO-SOM3588J-V1-D8E128	8GB	128GB	-40~85℃

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：

广瀚（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：

广瀚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瀚型号；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

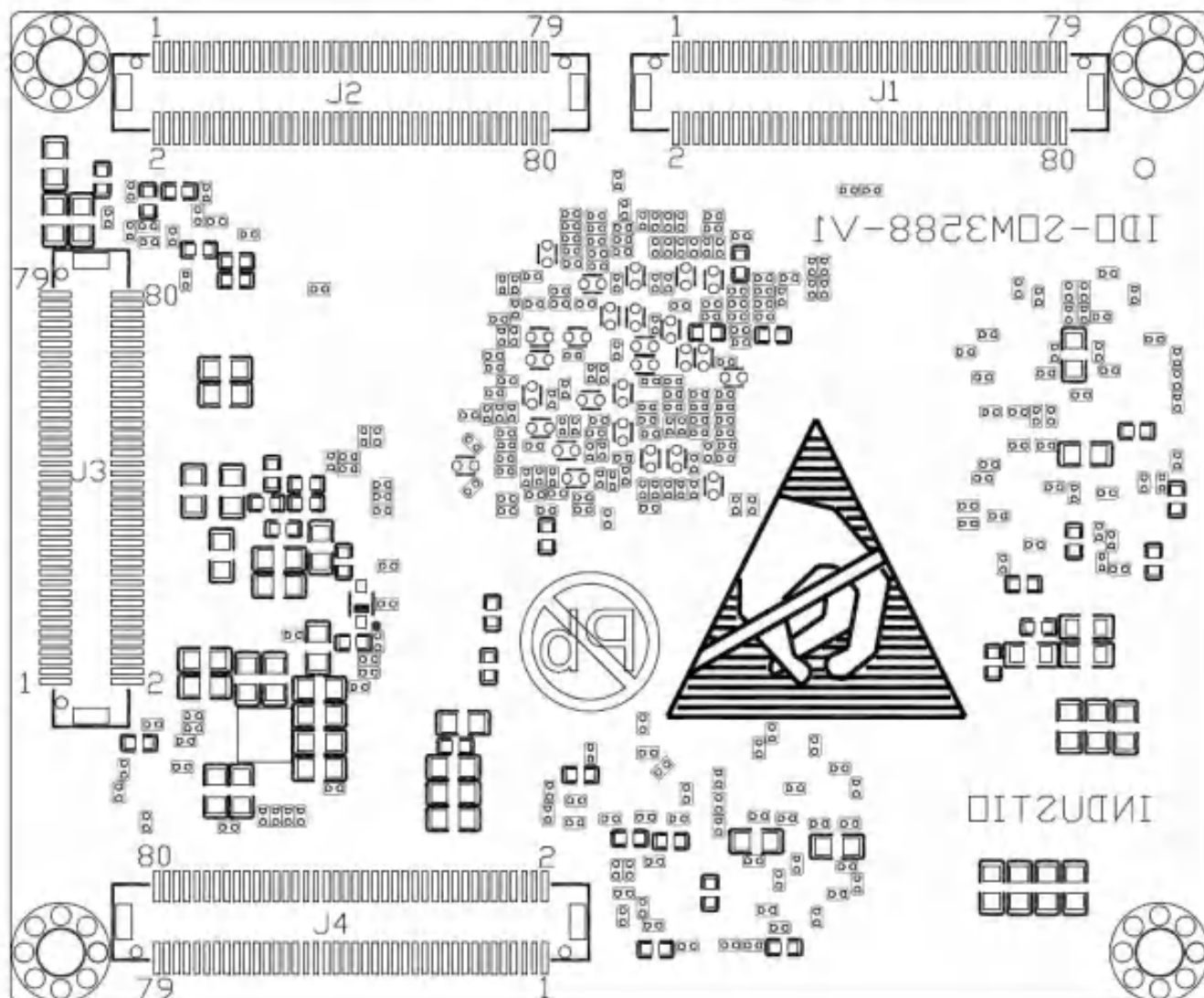


图7. IDO-SOM3588-V1核心板BTB连接器TOP VIEW

J1A

PMUIO1	PMUIO1_GPIO0_B2_u	A2
1.8V	SDMMC_DET/PMUIO1_GPIO0_A4_u	A4
SARADC	SARADC_VIN3_HP_HOOK	A6
1.8V	SARADC_VIN2	A8
12-bit 1MS/s	SARADC_VIN1_KEY/RECOVERY	A10
	BOOT_SARADC_IN0	A12
USB3.0 OTG/DP1.4 Alt of TYPEC0	GND_A1	A1
USB:U3/Gen1----Controller0	TYPEC0_SSTX2N/DP0_TX3N	A3
DP:PBR/HBR/HBR2/HBR3	TYPEC0_SSTX2P/DP0_TX3P	A5
	TYPEC0_SSRX2P/DP0_TX2P	A7
	TYPEC0_SSRX2N/DP0_TX2N	A9
	TYPEC0_SSTX1N/DP0_TX1N	A11
	TYPEC0_SSTX1P/DP0_TX1P	A13
	TYPEC0_SSRX1P/DP0_TX0P	A15
	TYPEC0_SSRX1N/DP0_TX0N	A17
USB2.0 of TYPEC0 (OTG/HOST/DEVICE)	TYPEC0_SBU2/DP0_AUXN	A16
HS/FS/LS	TYPEC0_SBU1/DP0_AUXP	A18
	TYPEC0_OTG_DP	A20
	TYPEC0_OTG_DM	A22
	GND_A2	A14
Download Port	TYPEC0_USB20_VBUSDET	A24
	TYPEC0_USB20_OTG_ID	A26
	GND_A3	A28
USB3.0 OTG/DP1.4 Alt of TYPEC1	TYPEC1_SSTX2N/DP1_TX3N	A19
USB:U3/Gen1----Controller1	TYPEC1_SSTX2P/DP1_TX3P	A21
DP:PBR/HBR/HBR2/HBR3	TYPEC1_SSRX2P/DP1_TX2P	A23
	TYPEC1_SSRX2N/DP1_TX2N	A25
	TYPEC1_SSTX1N/DP1_TX1N	A27
	TYPEC1_SSTX1P/DP1_TX1P	A29
	TYPEC1_SSRX1P/DP1_TX0P	A31
	TYPEC1_SSRX1N/DP1_TX0N	A33
USB2.0 of TYPEC1 (OTG/HOST/DEVICE)	TYPEC1_SBU2/DP1_AUXN	A30
HS/FS/LS	TYPEC1_SBU1/DP1_AUXP	A32
	TYPEC1_OTG_DP	A34
	TYPEC1_OTG_DM	A36
	TYPEC1_USB20_VBUSDET	A38
	TYPEC1_USB20_OTG_ID	A40
USB2.0 HOST	USB20_HOST1_DM	A42
HS/FS/LS	USB20_HOST1_DP	A44
	USB20_HOST0_DM	A46
	USB20_HOST0_DP	A48
HDMI TX/eDP MUX Port1	GND_A4	A35
HDMI:V2.1 12Gbps	HDMI1_TX2P_PORT/eDP1_TX_D2P	A37
eDP: V1.3 5.4Gbps	HDMI1_TX2N_PORT/eDP1_TX_D2N	A39
	HDMI1_TX1P_PORT/eDP1_TX_D1P	A41
	HDMI1_TX1N_PORT/eDP1_TX_D1N	A43
	HDMI1_TX0P_PORT/eDP1_TX_D0P	A45
	HDMI1_TX0N_PORT/eDP1_TX_D0N	A47
	HDMI1_TX3P_PORT/eDP1_TX_D3P	A49
	HDMI1_TX3N_PORT/eDP1_TX_D3N	A51
	HDMI1_TX_SBDP/eDP1_TX_AUXP	A53
	HDMI1_TX_SBDN/eDP1_TX_AUXN	A55
HDMI TX/eDP MUX Port0	GND_A5	A57
HDMI:V2.1 12Gbps	HDMI0_TX2P_PORT/eDP0_TX_D2P	A59
eDP: V1.3 5.4Gbps	HDMI0_TX2N_PORT/eDP0_TX_D2N	A61
	HDMI0_TX1P_PORT/eDP0_TX_D1P	A63
	HDMI0_TX1N_PORT/eDP0_TX_D1N	A65
	HDMI0_TX0P_PORT/eDP0_TX_D0P	A67
	HDMI0_TX0N_PORT/eDP0_TX_D0N	A69
	HDMI0_TX3P_PORT/eDP0_TX_D3P	A71
	HDMI0_TX3N_PORT/eDP0_TX_D3N	A73
	HDMI0_TX_SBDP/eDP0_TX_AUXP	A75
	HDMI0_TX_SBDN/eDP0_TX_AUXN	A77
	GND_A8	A79
HDMI_RX	GND_A5	A50
HDMI:V2.0	HDMI_RX_D2P	A52
	HDMI_RX_D2N	A54
	HDMI_RX_D1P	A56
	HDMI_RX_D1N	A58
	HDMI_RX_D0P	A60
	HDMI_RX_D0N	A62
	HDMI_RX_CLKP	A64
	HDMI_RX_CLKN	A66
	GND_A7	A68
VCCIO2 Domain	I2C8_SCL_M0/PDM1_SDI1_M0/JTAG_TCK_M0/UART5_CTSN_M0/SDMMC0_D2/GPIO4_D2	A70
VCCIO_SD_S0	PWM10_M1/I2C8_SDA_M0/PDM1_SDI0_M0/JTAG_TMS_M0/UART5_RTSN_M0/SDMMC0_D3/GPIO4_D3	A72
PLDO5	PWM7_IR_M1/CAN0_TX_M1/PDM1_CLK0_M0/MCU_JTAG_TCK_M0/UART5_RX_M0/SDMMC0_CMD/GPIO4_D4	A74
	TEST_CLKOUT_M0/CAN0_RX_M1/PDM1_CLK0_M0/MCU_JTAG_TMS_M0/UART5_TX_M0/SDMMC0_CLK/GPIO4_D5	A76
	PWM8_M1/I2C3_SCL_M4/PDM1_SDI3_M0/JTAG_TCK_M1/UART2_TX_M1/SDMMC0_D0/GPIO4_D6	A78
	PWM9_M1/I2C3_SDA_M4/PDM1_SDI2_M0/JTAG_TMS_M1/UART2_RX_M1/SDMMC0_D1/GPIO4_D1	A80
	PAD_A1	A81
	PAD_A2	A82
	NTH_A1	A83
	NTH_A2	A84

ILSOM3588-300D

图8. IDO-SOM3588-V1核心板J1连接器引脚定义图

U2B SATA2_ACT_LED_M0/SPDIF1_TX_M1/SPI0_CS1_M1/UART8_RX_M0/I2C6_SCL_M3/I2S1_SDO0_M0/PCIE30X1_0_BUTTON_RSTN/MIPI_CAMERAD_CLK_M0/GPIO4_B1 SPI2_CS1_M1/UART8_TX_M0/I2C6_SDA_M3/I2S1_SDI3_M0/PCIE30X2_PERSTN_M1/BT1120_CLKOUT/CI_F_CLKIN/GPIO4_B0 SPI2_CS0_M1/I2C5_SDA_M2/I2S1_SDI2_M0/PCIE30X2_WAKEN_M1/BT1120_D7/CI_F_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/CI_F_HREF/GPIO4_B2 SPI2_CLK_M1/UART3_RX_M2/I2C5_SCL_M2/I2S1_SDI1_M0/PCIE30X2_CLKREQN_M1/BT1120_D6/CI_F_D6/GPIO4_A6 SPI0_CLK_M1/I2S1_LRCK_M0/PCIE30X1_1_PERSTN_M1/BT1120_D2/CI_F_D2/GPIO4_A2 SPI2_MOSI_M1/UART3_TX_M2/I2C3_SDA_M2/I2S1_SDI0_M0/PCIE30X1_0_PERSTN_M1/BT1120_D5/CI_F_D5/GPIO4_A5 SPI0_MOSI_M1/UART9_CTSN_M1/I2S1_SCLK_M0/PCIE30X1_1_WAKEN_M1/BT1120_D1/CI_F_D1/GPIO4_A1 SPI2_MISO_M1/UART0_RX_M2/I2C3_SCL_M2/PCIE30X1_0_WAKEN_M1/BT1120_D4/CI_F_D4/GPIO4_A4 SPI0_MISO_M1/UART9_RTSN_M1/I2S1_MCLK_M0/PCIE30X1_1_CLKREQN_M1/BT1120_D0/CI_F_D0/GPIO4_A0	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 B36 B37 B38 B39 B40 B41 B42 B43 B44 B45 B46 B47 B48 B49 B50 B51 B52 B53 B54 B55 B56 B57 B58 B59 B60 B61 B62 B63 B64 B65 B66 B67 B68 B69 B70 B71 B72 B73 B74 B75 B76 B77 B78 B79 B80 B81 B82 B83 B84 B85 B86 B87 B88 B89 B90 B91 B92 B93 B94 B95 B96 B97 B98 B99 B100 B101 B102 B103 B104 B105 B106 B107 B108 B109 B110 B111 B112 B113 B114 B115 B116 B117 B118 B119 B120 B121 B122 B123 B124 B125 B126 B127 B128 B129 B130 B131 B132 B133 B134 B135 B136 B137 B138 B139 B140 B141 B142 B143 B144 B145 B146 B147 B148 B149 B150 B151 B152 B153 B154 B155 B156 B157 B158 B159 B160 B161 B162 B163 B164 B165 B166 B167 B168 B169 B170 B171 B172 B173 B174 B175 B176 B177 B178 B179 B180 B181 B182 B183 B184 B185 B186 B187 B188 B189 B190 B191 B192 B193 B194 B195 B196 B197 B198 B199 B200 B201 B202 B203 B204 B205 B206 B207 B208 B209 B210 B211 B212 B213 B214 B215 B216 B217 B218 B219 B220 B221 B222 B223 B224 B225 B226 B227 B228 B229 B230 B231 B232 B233 B234 B235 B236 B237 B238 B239 B240 B241 B242 B243 B244 B245 B246 B247 B248 B249 B250 B251 B252 B253 B254 B255 B256 B257 B258 B259 B260 B261 B262 B263 B264 B265 B266 B267 B268 B269 B270 B271 B272 B273 B274 B275 B276 B277 B278 B279 B280 B281 B282 B283 B284 B285 B286 B287 B288 B289 B290 B291 B292 B293 B294 B295 B296 B297 B298 B299 B300 B301 B302 B303 B304 B305 B306 B307 B308 B309 B310 B311 B312 B313 B314 B315 B316 B317 B318 B319 B320 B321 B322 B323 B324 B325 B326 B327 B328 B329 B330 B331 B332 B333 B334 B335 B336 B337 B338 B339 B340 B341 B342 B343 B344 B345 B346 B347 B348 B349 B350 B351 B352 B353 B354 B355 B356 B357 B358 B359 B360 B361 B362 B363 B364 B365 B366 B367 B368 B369 B370 B371 B372 B373 B374 B375 B376 B377 B378 B379 B380 B381 B382 B383 B384 B385 B386 B387 B388 B389 B390 B391 B392 B393 B394 B395 B396 B397 B398 B399 B400 B401 B402 B403 B404 B405 B406 B407 B408 B409 B410 B411 B412 B413 B414 B415 B416 B417 B418 B419 B420 B421 B422 B423 B424 B425 B426 B427 B428 B429 B430 B431 B432 B433 B434 B435 B436 B437 B438 B439 B440 B441 B442 B443 B444 B445 B446 B447 B448 B449 B450 B451 B452 B453 B454 B455 B456 B457 B458 B459 B460 B461 B462 B463 B464 B465 B466 B467 B468 B469 B470 B471 B472 B473 B474 B475 B476 B477 B478 B479 B480 B481 B482 B483 B484 B485 B486 B487 B488 B489 B490 B491 B492 B493 B494 B495 B496 B497 B498 B499 B500 B501 B502 B503 B504 B505 B506 B507 B508 B509 B510 B511 B512 B513 B514 B515 B516 B517 B518 B519 B520 B521 B522 B523 B524 B525 B526 B527 B528 B529 B530 B531 B532 B533 B534 B535 B536 B537 B538 B539 B540 B541 B542 B543 B544 B545 B546 B547 B548 B549 B550 B551 B552 B553 B554 B555 B556 B557 B558 B559 B560 B561 B562 B563 B564 B565 B566 B567 B568 B569 B570 B571 B572 B573 B574 B575 B576 B577 B578 B579 B580 B581 B582 B583 B584 B585 B586 B587 B588 B589 B590 B591 B592 B593 B594 B595 B596 B597 B598 B599 B600 B601 B602 B603 B604 B605 B606 B607 B608 B609 B610 B611 B612 B613 B614 B615 B616 B617 B618 B619 B620 B621 B622 B623 B624 B625 B626 B627 B628 B629 B630 B631 B632 B633 B634 B635 B636 B637 B638 B639 B640 B641 B642 B643 B644 B645 B646 B647 B648 B649 B650 B651 B652 B653 B654 B655 B656 B657 B658 B659 B660 B661 B662 B663 B664 B665 B666 B667 B668 B669 B670 B671 B672 B673 B674 B675 B676 B677 B678 B679 B680 B681 B682 B683 B684 B685 B686 B687 B688 B689 B690 B691 B692 B693 B694 B695 B696 B697 B698 B699 B700 B701 B702 B703 B704 B705 B706 B707 B708 B709 B710 B711 B712 B713 B714 B715 B716 B717 B718 B719 B720 B721 B722 B723 B724 B725 B726 B727 B728 B729 B730 B731 B732 B733 B734 B735 B736 B737 B738 B739 B740 B741 B742 B743 B744 B745 B746 B747 B748 B749 B750 B751 B752 B753 B754 B755 B756 B757 B758 B759 B760 B761 B762 B763 B764 B765 B766 B767 B768 B769 B770 B771 B772 B773 B774 B775 B776 B777 B778 B779 B780 B781 B782 B783 B784 B785 B786 B787 B788 B789 B790 B791 B792 B793 B794 B795 B796 B797 B798 B799 B800 B801 B802 B803 B804 B805 B806 B807 B808 B809 B810 B811 B812 B813 B814 B815 B816 B817 B818 B819 B820 B821 B822 B823 B824 B825 B826 B827 B828 B829 B830 B831 B832 B833 B834 B835 B836 B837 B838 B839 B840 B841 B842 B843 B844 B845 B846 B847 B848 B849 B850 B851 B852 B853 B854 B855 B856 B857 B858 B859 B860 B861 B862 B863 B864 B865 B866 B867 B868 B869 B870 B871 B872 B873 B874 B875 B876 B877 B878 B879 B880 B881 B882 B883 B884 B885 B886 B887 B888 B889 B890 B891 B892 B893 B894 B895 B896 B897 B898 B899 B900 B901 B902 B903 B904 B905 B906 B907 B908 B909 B910 B911 B912 B913 B914 B915 B916 B917 B918 B919 B920 B921 B922 B923 B924 B925 B926 B927 B928 B929 B930 B931 B932 B933 B934 B935 B936 B937 B938 B939 B940 B941 B942 B943 B944 B945 B946 B947 B948 B949 B950 B951 B952 B953 B954 B955 B956 B957 B958 B959 B960 B961 B962 B963 B964 B965 B966 B967 B968 B969 B970 B971 B972 B973 B974 B975 B976 B977 B978 B979 B980 B981 B982 B983 B984 B985 B986 B987 B988 B989 B990 B991 B992 B993 B994 B995 B996 B997 B998 B999 B1000
VCCIO6 Domain 3.3V	
MIPI_CSI0_RX MIPI V1.2/2.5Gbps	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
MIPI_CSI1_RX MIPI V1.2/2.5Gbps	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 GND_B4
MIPI D/C-PHY DSI_TX Port0 D-PHY:V2.0 4.5Gbps/Lane C-PHY:V1.1 5.7Gbps/Trio	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
MIPI D/C-PHY DSI_TX Port1 D-PHY:V2.0 4.5Gbps/Lane C-PHY:V1.1 5.7Gbps/Trio	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
MIPI D/C-PHY CSI_RX Port0 D-PHY:V2.0 4.5Gbps/Lane C-PHY:V1.1 5.7Gbps/Trio	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
MIPI D/C-PHY CSI_RX Port1 D-PHY:V2.0 4.5Gbps/Lane C-PHY:V1.1 5.7Gbps/Trio	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
	PAD_B1 PAD_B2 NTH_B1 NTH_B2

U-SOM3588-320P

图9. IDO-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/12S1_MCLK_M1/PCIE30X1_1_CLKREQN_M0/I2C1_SCL_M0/JTAG_TCK_M2/GPIO0_B5	C9
	UART2_RX_M0_DEBUG/12S1_SCLK_M1/PCIE30X1_1_WAKEN_M0/I2C1_SDA_M0/JTAG_TMS_M2/GPIO0_B6	C11
	PWM4_M0/UART0_TX_M0/DP1_HPDIN_M1/I2S1_SDI0_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_MOSI_M0/I2C2_SDA_M0/PWM1_M0/GPIO0_C0	C19
	PDM0_SDI0_M1/I2S1_SDI2_M1/PCIE30X4_WAKEN_M0/SPI0_MISO_M0/I2C6_SDA_M0/PWM6_M0/GPIO0_C7	C21
	PDM0_SDI1_M1/I2S1_SDI3_M1/PCIE30X4_PERSTN_M0/SPI3_MISO_M2/I2C6_SCL_M0/PWM7_IR_M0/GPIO0_D0	C23
	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/GPIO0_B6	C29
	I2C0_SCL_M1/UART9_CTSN_M0/SPI2_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
	TEST_CLKOUT_M1/UART9_RX_M0/SPI1_CS1_M0/HDMI_TX1_CEC_M0/GMAC0_PPCLK/GPIO2_C4	C35
	I2C6_SCL_M2/SPI1_CS0_M0/I2S2_SDI0_M0/ETH0_REFCLK0_25M/GPIO2_C3	C37
	I2C2_SDA_M1/UART1_RTSN_M0/SPI1_CLK_M0/I2S2_LRCK_M0/GMAC0_TXEN/GPIO2_C0	C39
	I2C6_SDA_M4/UART1_TX_M0/I2S2_SCLK_M0/GMAC0_TX1/GPIO2_B7	C41
	I2C0_SDA_M1/UART7_CTSN_M0/SPI3_CLK_M0/PWM7_IR_M3/GMAC0_TXER/GPIO4_C6	C43
	I2C7_SCL_M1/PWM4_M1/SPI3_CS1_M0/I2S2_SDO_M0/GMAC0_MCLKINOUT/GPIO4_C3	C45
	I2C5_SCL_M4/UART1_RX_M0/I2S2_MCLK_M0/GMAC0_TX0/GPIO2_B6	C47
	I2C2_SCL_M1/UART1_CTSN_M0/SPI1_MISO_M0/GMAC0_RX0/GPIO2_C1	C49
	I2C6_SDA_M2/UART9_TX_M0/SPI1_MOSI_M0/GMAC0_RX1/GPIO2_C2	C51
	UART7_RTSN_M0/SPI3_CS0_M0/PWM2_M2/GMAC0_RXDV_CRS/GPIO4_C2	C53
	CLK32K_OUT1/GPIO2_C5	C55
	GND_C7	C57
	I2C3_SDA_M3/FSPI_CLK_M1/SDIO_CLK_M0/GMAC0_TXCLK/GPIO2_B3	C59
	I2C3_SCL_M3/SDIO_CMD_M0/GMAC0_TXD3/GPIO2_B2	C61
	I2C6_SDA_M1/UART6_CTSN_M0/FSPI_D3_M1/SDIO_D3_M0/GMAC0_TXD2/GPIO2_B1	C63
	I2C8_SCL_M1/UART6_RTSN_M0/FSPI_D2_M1/SDIO_D2_M0/GMAC0_RXCLK/GPIO2_B0	C65
	UART6_TX_M0/FSPI_D1_M1/SDIO_D1_M0/GMAC0_RXD3/GPIO2_A7	C67
	UART6_RX_M0/FSPI_D0_M1/SDIO_D0_M0/GMAC0_RXD2/GPIO2_A6	C69
	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_SCLK/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_SDI0/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_A8	C30
	PWM3_IR_M1/UART2_RX_M2/I2S2_SDI0_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_SCLK_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_HPDOUT_M1/HDMI_TX0_HPD_M1/MCU_JTAG_TCK_M1/GPIO3_D4	C44
	PCIE30X2_BUTTON_RSTN/UART7_RX_M1/SPI1_CLK_M1/GMAC1_PPCLK/GPIO3_C1	C46
	UART7_TX_M1/I2C3_SDA_M1/SPI1_MISO_M1/GMAC1_PPSTRIG/GPIO3_C0	C48
	PWM15_IR_M0/UART7_CTSN_M1/I2C3_SDA_M4/SPI1_CS1_M1/MIPI_TE1/GMAC1_MDIO/GPIO3_C3	C50
	I2C3_SCL_M1/SPI1_MOSI_M1/HDMI_TX1_HPD_M1/GMAC1_PTP_REFCLK/GPIO3_B7	C52
	PWM14_M0/UART7_RTSN_M1/I2C8_SCL_M4/SPI1_CS0_M1/MIPI_TED/GMAC1_MDC/GPIO3_C2	C54
	PWM10_M2/PCIE30X2_WAKEN_M2/UART9_RTSN_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/HDMI_TX1_SCL_M1/CIF_D10/GPIO3_C8	C60
	CAN2_RX_M0/PCIE30X4_CLKREQN_M2/UART5_TX_M1/FSPI_CS0N_M2/SPI3_CS0_M3/HDMI_TX1_CEC_M2/CIF_D8/GPIO3_C4	C62
	CAN2_TX_M0/PCIE30X4_WAKEN_M2/UART5_RX_M1/FSPI_CS1N_M2/SPI3_CS1_M3/HDMI_TX1_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
	SATA0_ACT_LED_M0/PWM13_M1/SPI3_MOSI_M1/I2C5_SCL_M1/HDMI_RX_HPDOUT_M0/PCIE30X4_PERSTN_M1/BT1120_D12/GPIO4_B6	C76
	SATA1_ACT_LED_M0/PWM12_M1/SPI3_MISO_M1/UART9_RX_M1/HDMI_RX_CEC_M0/PCIE30X4_WAKEN_M1/BT1120_D11/GPIO4_B5	C78
	SPDIF0_TX_M1/PWM11_IR_M1/DP0_HPDIN_M0/UART9_TX_M1/I2S1_SDO3_M0/PCIE30X4_CLKREQN_M1/BT1120_D10/CIF_CLKOUT/GPIO4_B4	C80
	SPDIF1_TX_M2/PWM6_M1/SPI3_CS1_M1/I2C8_SDA_M3/HDMI_TX0_CEC_M0/PCIE20X1_2_PERSTN_M1/BT1120_D15/GPIO4_C1	C82
	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	C84
	SPI3_CLK_M1/I2C5_SDA_M1/HDMI_TX0_SCL_M0/PCIE20X1_2_CLKREQN_M1/BT1120_D13/GPIO4_B7	C86
	UART0_TX_M2/PCIE30X1_0_CLKREQN_M1/BT1120_D3/CIF_D3/GPIO4_A3	C88
	SPI3_CS0_M1/I2C8_SCL_M3/HDMI_TX0_SDA_M0/PCIE20X1_2_WAKEN_M1/BT1120_D14/GPIO4_C0	C90
VCCIO6 Domain 3.3V		

图10. IDO-SOM3588-V1核心板J3连接器引脚定义图

VCCIO4 Domain 3.3V			SPI2_CLK_M0/HDMI_TX1_HPD_M0/GPIO1_A6_0	D1	
			GND_D1	D2	
			PWM3_IR_M3/SPI2_CS0_M0/PCIE30X1_1_PERSTN_M2/PDM1_SDIO_M1/GPIO1_A7_0	D3	
			SPI0_CS0_M2/PCIE30X1_0_PERSTN_M2/PDM1_CLK0_M1/UART7_RX_M2/GPIO1_B4_0	D4	
			PWM0_M2/SPI4_CLK_M2/VOP_POST_EMPTY/I2C4_SDA_M3/UART6_RTSN_M1/GPIO1_A2_0	D5	
			UART6_RTSN_M1/PCIE30X4_WAKEN_M3/PDM1_SDIO_M1/GPIO1_B1_0	D6	
			SPI4_MISO_M2/PCIE30X1_1_CLKREQN_M2/DP0_HPDIN_M2/I2C2_SDA_M4/UART6_RX_M1/GPIO1_A0_0	D7	
			SPI0_MOSI_M2/PCIE30X4_PERSTN_M3/PDM1_SDIO_M1/UART4_RX_M2/GPIO1_B2_0	D8	
			SPI2_MISO_M0/HDMI_TX1_SCL_M2/GPIO1_A4_0	D9	
			SPI0_CS1_M2/PCIE30X1_0_CLKREQN_M2/UART7_TX_M2/GPIO1_B5_0	D10	
			SATA1_ACT_LED_M1/SPI4_MOSI_M2/PCIE30X1_1_WAKEN_M2/DP1_HPDIN_M2/I2C2_SCL_M4/UART6_TX_M1/GPIO1_A1_0	D11	
			HDMI_RX_HPDOUT_M2/SPDIF0_TX_M0/PCIE30X2_WAKEN_M3/MIPI_CAM1_CLKOUT_M0/I2C5_SCL_M3/UART1_TX_M1/GPIO1_B6_0	D12	
			SPI2_MOSI_M0/HDMI_TX0_HPD_M0/GPIO1_A5_0	D13	
			HDMI_RX_SCL_M2/PWM14_M2/MIPI_CAM3_CLKOUT_M0/I2C8_SCL_M2/UART1_RTSN_M1/GPIO1_D6_0	D14	
			PWM1_M2/SPI4_CS0_M2/HDMI_TX1_SDA_M2/I2C4_SCL_M3/UART6_CTSN_M1/GPIO1_A3_0	D15	
			HDMI_RX_SDA_M2/PWM15_IR_M3/PCIE30X2_CLKREQN_M3/MIPI_CAM4_CLKOUT_M0/I2C6_SDA_M2/UART1_CTSN_M1/GPIO1_D7_0	D16	
			SPI2_CS1_M0/PCIE30X4_CLKREQN_M3/PDM1_SDIO_M1/GPIO1_B0_0	D17	
			SATA2_ACT_LED_M1/HDMI_RX_CEC_M2/PWM13_M2/SPDIF1_TX_M0/PCIE30X2_PERSTN_M3/MIPI_CAM2_CLKOUT_M0/I2C5_SDA_M3/UART1_RX_M1/GPIO1_B7_0	D18	
			SATA0_ACT_LED_M1/SPI0_CLK_M2/PCIE30X1_0_WAKEN_M2/PDM1_CLK1_M1/UART4_TX_M2/GPIO1_B3_0	D19	
	VCCIO1 Domain 1.8V			PWM15_IR_M2/I2C4_SDA_M4/PDM0_CLK0_M0/GPIO1_C6_0	D21
		UART4_RTSN/I2C2_SCL_M3/I2S0_LRCK/GPIO1_C5_0	D22		
		SPI1_MISO_M2/UART6_TX_M2/I2C7_SCL_M0/I2S0_SDIO1/GPIO1_D0_0	D23		
		UART4_CTSN/I2C4_SCL_M0/I2S0_SDIO0/GPIO1_C7_0	D24		
		SPI1_MOSI_M2/UART6_RX_M2/I2C7_SDA_M0/PDM0_SDIO1_M0/I2S0_SDIO3/GPIO1_D1_0	D25		
		SPI4_CS0_M0/UART3_CTSN/PWM7_IR_M2/I2C6_SCL_M1/I2S0_SCL/GPIO1_C3_0	D26		
		SPI1_CLK_M2/UART4_TX_M0/PWM0_M1/I2C1_SCL_M4/PDM0_SDIO2_M0/I2S0_SDIO3/I2S0_SDIO2/GPIO1_D2_0	D27		
		SPI4_CS1_M0/PWM11_IR_M2/I2C2_SDA_M3/PDM0_CLK1_M0/GPIO1_C4_0	D28		
		SPI1_CS0_M2/UART4_RX_M0/PWM1_M1/I2C1_SDA_M4/PDM0_SDIO3_M0/I2S0_SDIO1/GPIO1_D3_0	D29		
		SPI4_CLK_M0/UART3_RTSN/PWM3_IR_M2/I2C6_SDA_M1/I2S0_MCLK/GPIO1_C2_0	D30		
		I2S0_SDIO0/GPIO1_D4_0	D31		
		SPI4_MISO_M0/UART3_RX_M0/I2C3_SDA_M0/GPIO1_C0_0	D32		
		SPI4_MOSI_M0/UART3_TX_M0/I2C3_SCL_M0/GPIO1_C1_0	D33		
		SPI1_CS1_M2/PDM0_SDIO_M0/GPIO1_D5_0	D35		
PCIE30X4		PCIE30: PCIE1.1 (2.5Gbps) PCIE2.1 (5Gbps) PCIE3.0 (8Gbps)	PCIE30 PORT0	GND_D3	D37
				PCIE30_PORT0_TX1N	D39
				PCIE30_PORT0_TX1P	D41
	PCIE30_PORT0_TX0N			D43	
	PCIE30_PORT0_TX0P			D45	
	PCIE30_PORT0_REFCLKP_IN			D47	
	PCIE30_PORT0_REFCLKP_IN			D49	
	PCIE30_PORT0_RX1N			D51	
	PCIE30_PORT0_RX1P			D53	
	PCIE30_PORT0_RX0N			D55	
	PCIE30_PORT0_RX0P			D57	
				GND_D5	D59
	PCIE30 PORT1			GND_D2	D32
				PCIE30_PORT1_REFCLKP_IN	D34
				PCIE30_PORT1_REFCLKP_IN	D36
				PCIE30_PORT1_TX3N	D38
				PCIE30_PORT1_TX3P	D40
				PCIE30_PORT1_TX2N	D42
				PCIE30_PORT1_TX2P	D44
				PCIE30_PORT1_RX3N	D46
				PCIE30_PORT1_RX3P	D48
				PCIE30_PORT1_RX2N	D50
				PCIE30_PORT1_RX2P	D52
PCIE20/SATA30 Mux0				GND_D4	D54
				PCIE20_0_REFCLKP	D61
				PCIE20_0_REFCLKN	D63
				PCIE20_0_TXP/SATA30_0_TXP	D65
				PCIE20_0_TXN/SATA30_0_TXN	D67
				PCIE20_0_RXP/SATA30_0_RXP	D69
				PCIE20_0_RXN/SATA30_0_RXN	D71
PCIE20/SATA30 Mux1				PCIE20_1_REFCLKP	D68
				PCIE20_1_REFCLKN	D70
				PCIE20_1_TXP/SATA30_1_TXP	D72
				PCIE20_1_TXN/SATA30_1_TXN	D74
				PCIE20_1_RXP/SATA30_1_RXP	D76
				PCIE20_1_RXN/SATA30_1_RXN	D78
PCIE20/SATA30/USB30 HOST Mux2				PCIE20_2_REFCLKP	D56
				PCIE20_2_REFCLKN	D58
				PCIE20_2_TXP/SATA30_2_TXP/USB30_2_SSTXP	D60
				PCIE20_2_TXN/SATA30_2_TXN/USB30_2_SSTXN	D62
				PCIE20_2_RXP/SATA30_2_RXP/USB30_2_SSRXP	D64
				PCIE20_2_RXN/SATA30_2_RXN/USB30_2_SSRXN	D66
PMIC				RESET_L	D73
				VCC_IV8_S3	D75
				PMIC_EXT_EN_OUT	D77
				PWRON_L	D79
PMUIO1 Domain 1.8V				REFCLK_OUT/PMUIO1_GPIO0_A0_d	D80
				PAD_D1	D81
				PAD_D2	D82
				NTH_D1	D83

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_GPIO0_B2	PMUIO1_GPIO0_B2_u	1.8V
4	SDMMC_DET_L_GPIO0_A4	SDMMC_DET	1.8V
		PMUIO1_GPIO0_A4_u	
6	SARADC_VIN3_HP_HOOK	SARADC_VIN3	1.8V
8		SARADC_VIN2	1.8V
10	SARADC_VIN1_KEY/RECOVERY	SARADC_VIN1_RECOVERY	1.8V
12	BOOT_SARADC_IN0	SARADC_IN0_BOOT	1.8V
1	GND	GND	GND
3	TYPEC0_SSTX2N	TYPEC0_SSTX2N	
		DP0_TX3N	
5	TYPEC0_SSTX2P	TYPEC0_SSTX2P	
		DP0_TX3P	
7	TYPEC0_SSRX2P	TYPEC0_SSRX2P	
		DP0_TX2P	
9	TYPEC0_SSRX2N	TYPEC0_SSRX2N	
		DP0_TX2N	
11	TYPEC0_SSTX1N	TYPEC0_SSTX1N	
		DP0_TX1N	
13	TYPEC0_SSTX1P	TYPEC0_SSTX1P	
		DP0_TX1P	
15	TYPEC0_SSRX1P	TYPEC0_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_M0	3.3V
		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_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	TYPEC0_SBU2_DC	CAN1_RX_M1	3.3V
		PWM14_M1	
		SPI0_CS0_M1	
		UART8_RTSN_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_M1_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_PERSTN_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_CLKREQN_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_D2N	MIPI_DPHY0_RX_D2N	
		MIPI_CPHY0_RX_TRI02_A	
48	MIPI_DPHY0_RX_CLKP	MIPI_DPHY0_RX_CLKP	
		MIPI_CPHY0_RX_TRI01_C	
50	MIPI_DPHY0_RX_CLKN	MIPI_DPHY0_RX_CLKN	
		MIPI_CPHY0_RX_TRI01_B	
52	MIPI_DPHY0_RX_D1P	MIPI_DPHY0_RX_D1P	
		MIPI_CPHY0_RX_TRI01_A	
54	MIPI_DPHY0_RX_D1N	MIPI_DPHY0_RX_D1N	
		MIPI_CPHY0_RX_TRI00_C	
56	MIPI_DPHY0_RX_D0P	MIPI_DPHY0_RX_D0P	
		MIPI_CPHY0_RX_TRI00_B	
58	MIPI_DPHY0_RX_D0N	MIPI_DPHY0_RX_D0N	
		MIPI_CPHY0_RX_TRI00_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_SDIO_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	
		GPIO0_C7_d	
23	PWM7_IR_M0	PDM0_SDI1_M1	3.3V
		I2S1_SDI3_M1	
		PCIE30X4_PERSTN_ M0	
		SPI3_MISO_M2	
		I2C6_SCL_M0	
		PWM7_IR_M0	
		GPIO0_D0_d	
25	GND	GND	GND

27	WIFI_REG_ON_H_GPIO2_B4	I2C4_SDA_M1	1.8V
		UART7_RX_M0	
		FSPI_CS0N_M1	
		HDMI_TX1_SDA_M0	
		GMAC0_PTP_REFCLK	
		GPIO2_B4_u	
29	UART9_RTSn_M0_BT	I2C7_SDA_M1	1.8V
		UART9_RTSN_M0	
		SPI3_MISO_M0	
		PWM5_M2	
		GMAC0_MDC	
		GPIO4_C4_d	
31	UART9_CTSn_M0_BT	I2C0_SCL_M1	1.8V
		UART9_CTSN_M0	
		SPI3_MOSI_M0	
		PWM6_M2	
		GMAC0_MDIO	
		GPIO4_C5_d	
33	BT_REG_ON_H_GPIO2_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	1.8V
		SPI1_CS0_M0	
		I2S2_SDI_M0	
		ETH0_REFCLKO_25 M	
		GPIO2_C3_d	
39	TYPEC0_CC_INT_L_ GPIO2_C0	I2C2_SDA_M1	1.8V
		UART1_RTSN_M0	
		SPI1_CLK_M0	
		I2S2_LRCK_M0	
		GMAC0_TXEN	
		GPIO2_C0_d	
41	TYPEC0_5V_PWREN _H_GPIO2_B7	I2C5_SDA_M4	1.8V
		UART1_TX_M0	
		I2S2_SCLK_M0	
		GMAC0_TX1	
		GPIO2_B7_d	
43	PCA9539PW_RESET _L_GPIO4_C6	I2C0_SDA_M1	1.8V
		UART7_CTSN_M0	
		SPI3_CLK_M0	
		PWM7_IR_M3	

		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_MCLKINOUT	
		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_CRD	
		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_RTSN_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_HPDOUT_M1	PCIE30X2_PERSTN_M2	1.8V
		UART9_RX_M2	
		SPI0_CS0_M3	
		HDMI_RX_HPDOUT_M1	
		HDMI_TX0_HPD_M1	
		MCU_JTAG_TCK_M1	
46	MIPI_CAM2_PDN_L_GPIO2_B5	GPIO3_D4_d	1.8V
		PCIE30X2_BUTTON_RSTN	
		UART7_RX_M1	
		SPI1_CLK_M1	
		GMAC1_PPSCCLK	
48	MIPI_CAM2_RESET_L_GPIO2_B6	GPIO3_C1_d	1.8V
		UART7_TX_M1	
		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_HPDIN_M1	I2C3_SCL_M1	1.8V
		SPI1_MOSI_M1	
		HDMI_TX1_HPD_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	
68	SPK_CTL_H_GPIO3_D0	GPIO3_D1_d	1.8V
		PWM8_M2	
		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_CLKREQN_M0	1.8V
		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	
71	PCIE30X4_PERSTn_M1_L_GPIO4_B6	GPIO3_D5_d	3.3V
		SATA0_ACT_LED_M0	
		PWM13_M1	
		SPI3_MOSI_M1	
		I2C5_SCL_M1	
		HDMI_RX_HPDOUT_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	
76	HDMITX0_CEC_M0	GPIO4_B4_u	3.3V
		SPDIF1_TX_M2	
		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	TYPEC1_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_RTSN_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_MIP1	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	