

LCB3399-核心模块
产品手册
V2.0



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版本历史

版本	日期	说明
V1.0	2022/8/23	初始版本
V1.1	2020/11/05	修正 UART3 描述错误
V1.2	2020/12/23	修正 B2B 连接器型号描述
V1.3	2021/01/03	更新 J0101 部分 pin 脚信号及描述
V2.0	2024/2/1	产品手册优化

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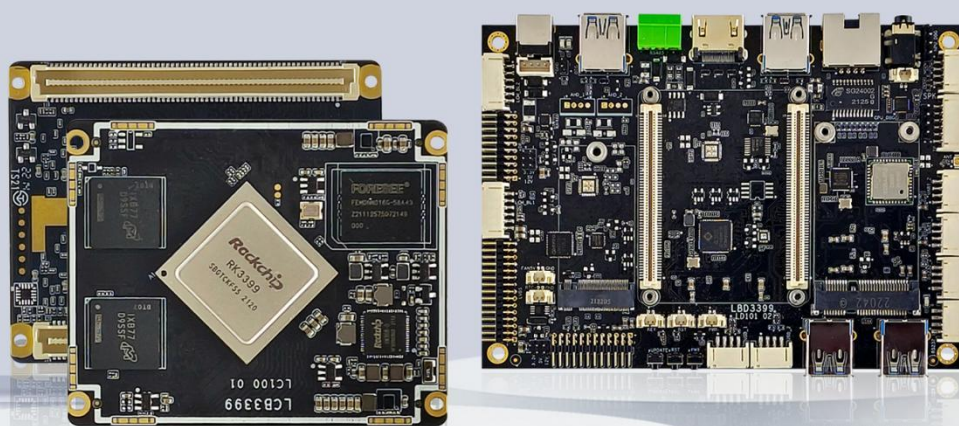
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1. 产品介绍

LCB3399 基于瑞芯微 RK3399 芯片平台精心设计的一款全功能核心模块，尺寸仅有 62mm*50mm。核心模块与底板的连接采用两颗 tyco/AMP 的 0.8mm pitch 双排 120Pin 板对板连接器，并通过 4 颗 M2 的螺丝固定，稳定可靠、易于安装和维护。

LCB3399 包含 CPU、DDR、eMMC 和 PMU 部分。CPU 为 RK3399；DDR 采用市场主流型号 LPDDR3，双通道 64bit 带宽，更低功耗更快频率，可选 2GB/4GB 配置；eMMC 采用高速 eMMC 5.1 标准，可选 4GB~128GB 多种容量配置；PMU 由 RK808 及多路 DC-DC 和 LDO 组成，CPU 核心电压均支持 DVFS 动态调压。

LCB3399 采用模块化的设计理念，将需求相同、要求严格的核心部分单独设计为一个全功能模块，并经过全面的测试和批量化验证。用户基于该模块开发产品，可节省项目开发周期，降低企业成本，提高公司效率。



2. 功能概述



高性能处理器

CPU	RK3399, 双 Cortex-A72+四 Cortex-A53 架构, 主频高达 1.8GHz, 高性能, 低功耗
GPU	ARM Mali-T860MP4 GPU, 支持 AFBC
NPU	3TOPS 算力
VPU	4K/1080P 视频编解码, 4K 显示输出
DDR	LPDDR4,可选 3/6GB
eMMC	eMMC 5.1,可选 16/64GB



操作系统

Android

Linux (Buildroot / Debian / Ubuntu)



开源资料

WIKI 资料 <http://www.neardi.com/cms/index/wiki.html>

快速入门

升级固件

Android 开发

Linux 开发

内核驱动

DEMO

系统定制

配件

常见问题

发布说明

硬件资料

芯片 Datasheet

核心板引脚定义

底板参考原理图

底板参考 PCB

关键物料清单

产品 2/3D 图

软件资料

烧写工具及驱动

Android 源码及镜像

uboot 及内核源码

Debian/Ubuntu/Buildroot 的系统文件

3.规格参数

基本参数

SOC	RK3399, 28 nm HKMG, Big cluster with dual-coreCortex-A72 + little cluster with quad-core Cortex-A53
GPU	Mali- T860 MP4, OpenGL ES1.1/2.0/3.0/3.1/3.2, OpenCL1.2, DirectX11.1
VPU	4K VP9 and 4K H265 up to 60fps video decoding 1080P@60fps multi-format video decoding (MVC, mpeg-1/2/4, VC-1) 1080P video encoding, with h.264, MVC and VP8 format supported Video anti-cross, de-noising, edge/detail/color optimization supported
DDR	LPDDR4/LPDDR4X, 可选 3GB/6GB
eMMC	eMMC 5.1, 可选 16GB/64GB
PMU	RK808
系统	Android / Ubuntu / Buildroot / Debian

硬件参数

Camera Interface	Two ISP built-in Dual MIPI-CSI 4 Lane of 1.5 Gbps/Lane ITU-R BT 601/656 compliant Maximum input resolution of one ISP is 14M pixels
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	Two VOP embedded
	Dual MIPI-DSI 4 Lane of 1.5 Gbps/Lane up to 2560x1600@60fps
Display Interface	eDP1.3 4 Lane of 2.7/1.62 Gbps/lane
	DP1.2 4 Lane with HDCP2.2 up to 4kx2k at 60Hz resolution
	HDMI2.0 3 Lane with HDCP2.2
	HOST*2, TYPE-C*1
	TYPE-C Interface
	Type-C PHY with Type-C V1.1 and USB PD2.0
USB Interface	Attach/detach detection and signaling as DFP, UFP and DRP
	Support USB3.0 Type-C and DisplayPort 1.2 Alt Mode
	Up to 5Gbps data rate for USB3.0
	Up to 5.4Gbps (HBR2) data rate for DP1.2
	Two I2S/PCM built-in up to 8 channels TX and 8 channels RX
	SPDIF supported
	Audio resolution from 16bits to 32bits
	Sample rate up to 192KHz
Audio Interface	Provides master and slave work mode, software configurable
	Support 3 I2S formats (normal, left-justified, right-justified)
	Support 4 PCM formats (early, late1, late2, late3)
	Support two 16-bit audio data store together in one 32-bit wide location
	Support 16, 20, 24 bits audio data transfer in linear PCM mode

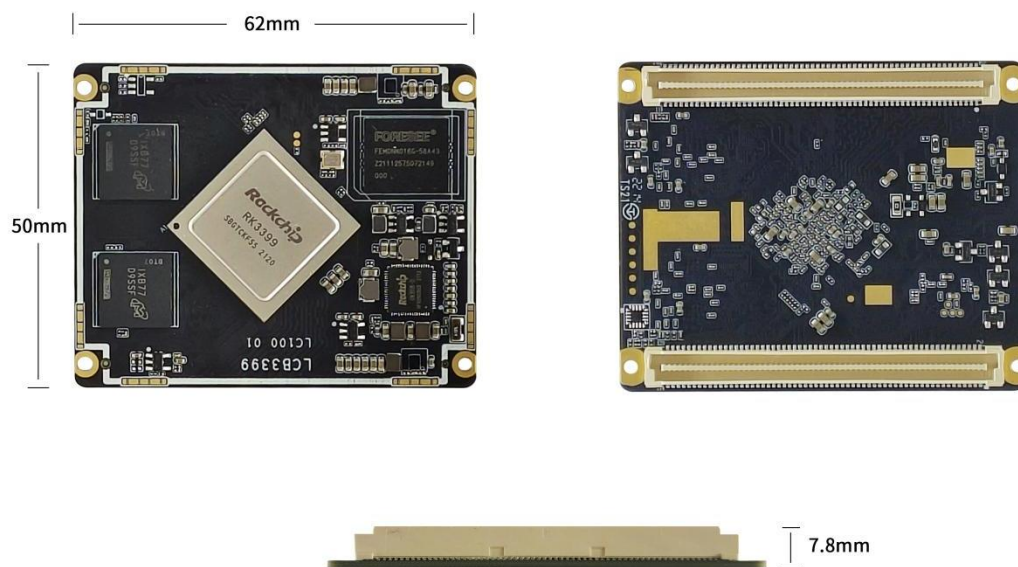
	Compatible with SDIO 3.0 protocol
	GMAC 10/100/1000M Ethernet Controller
	Six on-chip SPI controllers
Connectivity	Five on-chip UART controllers inside
	Eight on-chip I2C controllers
	Five groups of GPIO (GPIO0~GPIO4), totally have 100+ GPIOs
	Five-channel single-ended 10-bit SAR-ADC up to 1MS/s sampling rate

其他参数

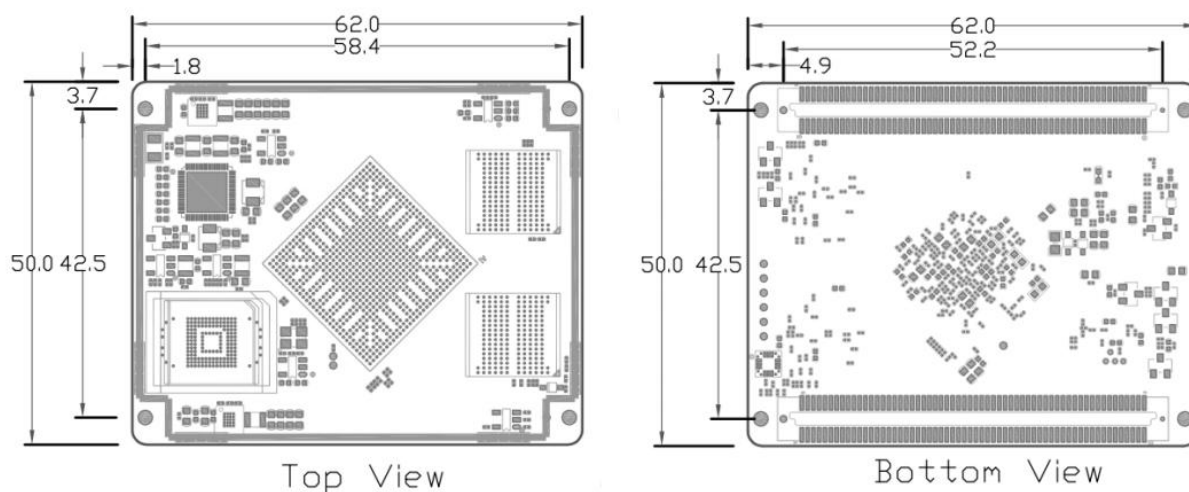
Operating temperature	企业级: -20°C ~ 70°C 工业级: -40°C ~ 85°C
PCB interface	B2B(240 Pin 0.8mm Pitch)
PCB size	L*W*H(mm): 62 * 50 * 7.8 (PCB 板厚 1.2mm)

4. 外观和尺寸结构

4.1 外观



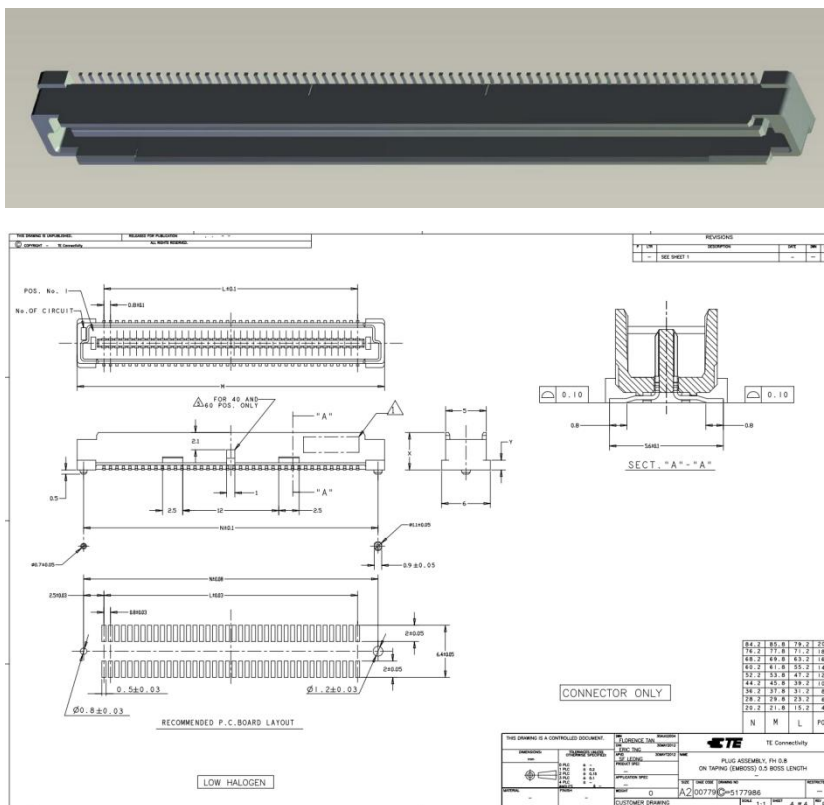
4.2 尺寸



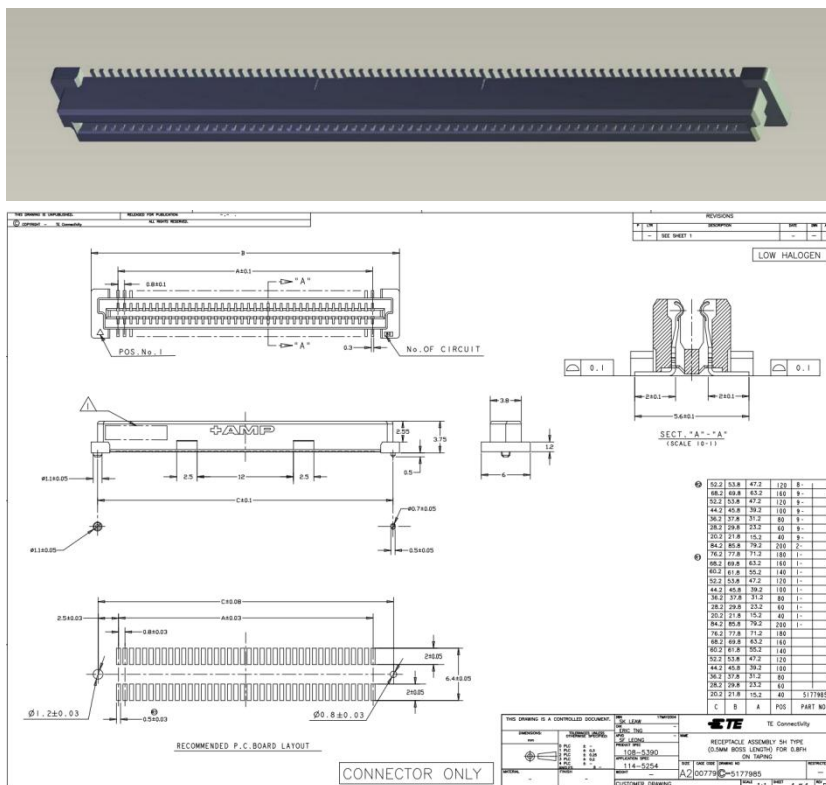
4.3 结构

LCB3399 采用 2 颗 tyco Electronics/AMP 的 B2B 连接器, 该连接器为 0.8mmPitch 2*60Pin

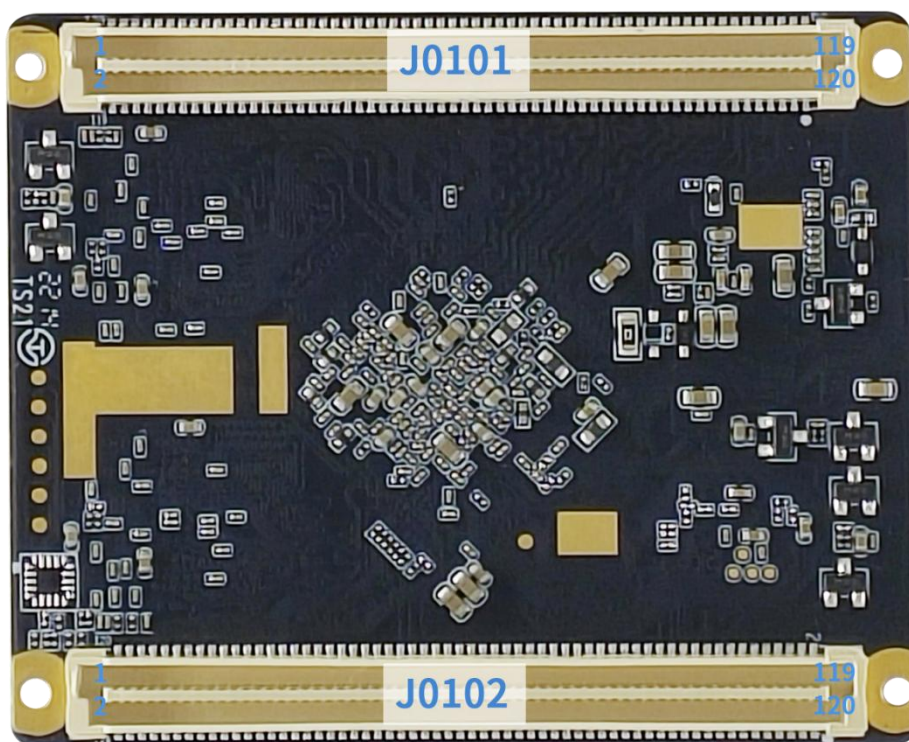
的公座，型号：5177986-5，如下图所示。



底板上应选择对应的连接器母座型号，常规合高为：5mm，型号为：5177985-5，如下图所示。



5.接口定义



J0101

Pin No	Pin Name	Pin Type	I/O Def	I/O Pull	Pull Resistor	Description	Power domain	Tablet/VR REF	Excavator/BOX
1	VCC_SYS	P	N/A	N/A	N/A	Power input 5V/3A	N/A	Main power supply	Main power supply
2	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
3	VCC_SYS	P	N/A	N/A	N/A	Power input 5V/3A	N/A	Main power supply	Main power supply
4	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
5	VCC_SYS	P	N/A	N/A	N/A	Power input 5V/3A	N/A	Main power supply	Main power supply
6	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
7	VCC_SYS	P	N/A	N/A	N/A	Power input 5V/3A	N/A	Main power supply	Main power supply
8	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
9	VCC_SYS	P	N/A	N/A	N/A	Power input 5V/3A	N/A	Main power supply	Main power supply
10	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
11	VCC_SYS	P	N/A	N/A	N/A	Power input 5V/3A	N/A	Main power supply	Main power supply
12	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND

13	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
14	VCC3V3_SYS	P	N/A	N/A	N/A	Power input 3.3V/2A	N/A	3.3V power supply	3.3V power supply
15	PCIE_RX_1P	A	N/A	N/A	-	PCIE differential lane 1 positive input	-	PCIE_RX_1P	PCIE_RX_1P
16	VCC3V3_SYS	P	N/A	N/A	N/A	Power input 3.3V/2A	N/A	3.3V power supply	3.3V power supply
17	PCIE_RX_1N	A	N/A	N/A	-	PCIE differential lane 1 negative input	-	PCIE_RX_1N	PCIE_RX_1N
18	VCC3V3_S3	P	N/A	N/A	N/A	Power output 3.3V/0.5A	N/A	For external devices used	For AVCC/DVCC of ethernet phy
19	PCIE_TX_1P	A	N/A	N/A	-	PCIE differential lane 1 positive output	-	PCIE_TX_1P	PCIE_TX_1P
20	VCC3V3_S3	P	N/A	N/A	N/A	Power output 3.3V/0.5A	N/A	AVCC/DVCC of ethernet phy	AVCC/DVCC of ethernet phy
21	PCIE_TX_1N	A	N/A	N/A	-	PCIE differential lane 1 negative output	-	PCIE_TX_1N	PCIE_TX_1N
22	VCC1V8_S3	P	N/A	N/A	N/A	Power output 1.8V/0.5A	N/A	IOVCC of LCM/MIPI-CAM /sensor	IOVCC of LCM/CAM/sensor
23	PCIE_RX_0P	A	N/A	N/A	-	PCIE differential lane 0 positive input	-	PCIE_RX_0P	PCIE_RX_0P
24	TYPECO_U2VBUSDET	A	N/A	N/A	-	TYPECO connected/vbus power detect for USB2.0	-	TYPECO_U2VBU SDET	TYPECO_U2VBUSDET
25	PCIE_RX_0N	A	N/A	N/A	-	PCIE differential lane 0 negative input	-	PCIE_RX_0N	PCIE_RX_0N
26	TYPECO_ID	A	N/A	N/A	-	TYPECO ID detect input,200kohm internal pull-up to USB_AVDD_1V8	-	TYPECO_ID	TYPECO_ID
27	PCIE_TX_0P	A	N/A	N/A	-	PCIE differential lane 0 positive output	-	PCIE_TX_0P	PCIE_TX_0P
28	ADC_IN3	A	N/A	N/A	-	DRAM ID detect input	1.8V	-	RAM_ID
29	PCIE_TX_0N	A	N/A	N/A	-	PCIE differential lane 0 negative output	-	PCIE_TX_0N	PCIE_TX_0N
30	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
31	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
32	HOST0_DM	A	N/A	N/A	-	USB HOST0 Data Minus port	-	HOST0_DM	HOST0_DM
33	PCIE_RCLK_100M_N	A	N/A	N/A	-	PCIE 100MHz reference clock as input to PLL	-	PCIE_RCLK_100 M_N	PCIE_RCLK_100M_N
34	HOST0_DP	A	N/A	N/A	-	USB HOST0 Data Plus port	-	HOST0_DP	HOST0_DP

35	PCIE_RCLK_100M_P	A	N/A	N/A	-	PCIE 100MHz reference clock as input to PLL	-	PCIE_RCLK_100M_P	PCIE_RCLK_100M_P
36	HOST1_DM	A	N/A	N/A	-	USB HOST1 Data Minus port	-	HOST1_DM	HOST1_DM
37	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
38	HOST1_DP	A	N/A	N/A	-	USB HOST1 Data Plus port	-	HOST1_DP	HOST1_DP
39	GPIO4_A5/I2S1_LRCK_TX	I/O	I	down	34k-93k	HDMI input interrupt input I2S 1 port, for BT module	1.8V	HDMIIN_INT	I2S1_LRCK_TX_BT_PCM
40	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
41	GPIO3_D4/I2S0_SDI1SDO3	I/O	I	down	34k-93k	I2S 0 port, for audio codec	1.8V	I2S0_SDI1	I2S0_SDI1
42	GPIO0_B2	I/O	I	down	55k-176k	WIFI module power enable	1.8V	WIFI_REG_ON_H	WIFI_REG_ON_H
43	GPIO3_D5/I2S0_SDI2SDO2	I/O	I	down	34k-93k	I2S 0 port, for audio codec	1.8V	I2S0_SDO2	I2S0_SDI2
44	GPIO0_B1/PMUIO2_1833_V OLSEL	I/O	I	down	55k-176k	BT module power enable	1.8V	BT_REG_ON_H	BT_REG_ON_H
45	GPIO3_D6/I2S0_SDI3SDO1	I/O	I	down	34k-93k	I2S 0 port, for audio codec	1.8V	I2S0_SDO1	I2S0_SDI3
46	GPIO0_A3/SDIO0_WRPT	I/O	I	down	55k-176k	WIFI module wake up AP	1.8V	WIFI_HOST_WA KE_L	WIFI_HOST_WAKE_L
47	GPIO0_B5/TCPD_VBUS_SO URCE3/TCPD_VBUS_FDIS	I/O	I	down	55k-176k	Type-C1 discharge control Hall Sensor interrupt input	1.8V	DNP	HALL_INT_L
48	GPIO0_B3	I/O	I	down	55k-176k	Speaker PA power enable	1.8V	SPK_CTL_H	SPK_CTL_H
49	GPIO1_A4/ISP_PRELIGHT_T RIG	I/O	I	down	34k-93k	ISP_PRELIGHT_TRIG	1.8V	DNP	ISP_PRELIGHT_TRIG
50	GPIO0_A4/SDIO0_INTn	I/O	I	down	55k-176k	BT module wake up AP	1.8V	BT_HOST_WAKE _L	BT_HOST_WAKE_L
51	GPIO1_C6/DFTJTAG_TDI/T CPD_VBUS_SOURCE0	I/O	I	down	34k-93k	G-sensor interrupt input	1.8V	GSENSOR_INT_L	GSENSOR_INT_L
52	GPIO1_B4/I2C4_SCL	I/O	I	up	33k-88k	I2C serial port 4, for MEMS need external pull-up	1.8V	I2C4_SCL	I2C_SCL_MEMS
53	GPIO1_D0/DFTJTAG_CLK/ TCPD_VBUS_SOURCE2	I/O	I	down	34k-93k	Gyroscope interrupt input FUSB302 interrupt input for Type-C1	1.8V	GYR_INT_L	GYR_INT_L
54	GPIO1_B3/I2C4_SDA	I/O	I	up	33k-88k	I2C serial port 4, for MEMS need external pull-up	1.8V	I2C4_SDA	I2C_SDA_MEMS

55	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
56	GPIO0_A2/WIFI_26MHZ	I/O	I	down	55k-17 6k	26MHz clock output	1.8V	RK3399_26M_O UT	RK3399_26M_OUT
57	GPIO4_B2/SDMMC0_D2/AP JTAG_TCK	I/O	I	up	33k-88 k	SDMMC0 data port JTAG_TMS	1.8V/3.0V auto	SDMMC0_D2 APJTAG_TCK	SDMMC0_D2 APJTAG_TCK
58	GPIO1_C2/SPI3_CS0	I/O	I	up	33k-88 k	Gas gauge interrupt input Motor power enable CC controller over current flag	1.8V	ALRT_H	Motor_PWR
59	GPIO4_B0/SDMMC0_D0/U ART2DBG_RX	I/O	I	up	33k-88 k	SDMMC0 data port	1.8V/3.0V auto	SDMMC0_D0	SDMMC0_D0
60	GPIO1_C7/DFTJTAG_TDO/T CPD_VBUS_SOURCE1	I/O	I	down	34k-93 k	Adapter insert detect input	1.8V	CHARG_OK_H	DC_DET_H
61	GPIO4_B1/SDMMC0_D1/U ART2DBG_TX	I/O	I	up	33k-88 k	SDMMC0 data port	1.8V/3.0V auto	SDMMC0_D1	SDMMC0_D1
62	GPIO0_A1/DDRIO_PWROF F/TCPD_CCDB_EN	I/O	I	up	54k-12 0k	SDMMC0 power control output	1.8V	SDMMC0_PWR_ H	SDMMC0_PWR_H
63	GPIO4_B5/SDMMC0_CMD/ MCUJTAG_TMS	I/O	I	up	33k-88 k	SDMMC0 command output JTAG TMS for MCU	1.8V/3.0V auto	SDMMC0_CMD MCUJTAG_TMS	SDMMC0_CMD MCUJTAG_TMS
64	GPIO1_B2/SPI1_CSNO/PMC U_JTAG_TMS	I/O	I	up	33k-88 k	SPI bus port 1, for FW boot JTAG TMS for PMCU	1.8V	SPI1_CSn0	SPI1_CSn0
65	GPIO0_A7/SDMMC0_DET	I/O	I	up	54k-12 0k	SDMMC0 detect input	1.8V	SDMMC0_DET_L	SDMMC0_DET_L
66	GPIO1_B1/SPI1_CLK/PMCU _JTAG_TCK	I/O	I	up	33k-88 k	SPI bus port 1, for FW boot JTAG TCK for PMCU	1.8V	SPI1_CLK	SPI1_CLK
67	GPIO4_B4/SDMMC0_CLKO UT/MCUJTAG_TCK	I/O	I	down	34k-93 k	SDMMC0 clock output JTAG TCK for MCU	1.8V/3.0V auto	SDMMC0_CLKO MCUJTAG_TCK	SDMMC0_CLKO MCUJTAG_TCK
68	GPIO1_A7/SPI1_RXD/PMCU _UART4DBG_RX	I/O	I	up	33k-88 k	SPI bus port 1, for FW boot Uart4 serial port data output,for PMCU debug	1.8V	SPI1_RXD	SPI1_RXD
69	GPIO4_B3/SDMMC0_D3/AP JTAG_TMS	I/O	I	up	33k-88 k	SDMMC0 data port JTAG_TMS	1.8V/3.0V auto	SDMMC0_D3 APJTAG_TMS	SDMMC0_D3 APJTAG_TMS
70	VCC1V8_DVP	P	N/A	N/A	N/A	Power output 1.8V/0.1A	N/A	IOVCC of CIFI-CAM	IOVCC of CIFI-CAM
71	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
72	GPIO3_C0/MAC_COL/UART 3_CTSN	I/O	I	up	26k-71 k	MAC collision detect	3.3V	-	MAC_COL
73	GPIO1_B0/SPI1_TXD/PMCU _UART4DBG_TX	I/O	I	up	33k-88 k	SPI bus port 1, for FW boot Uart4 serial port data output,for PMCU debug	1.8V	SPI1_TXD	SPI1_TXD

74	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
75	GPIO0_B4/TCPD_VBUS_BDI S	I/O	I	down	55k-17 6k	Type-C0 discharge control	1.8V	TYPE_C0_DISCH ARGE	DNP
76	EDP_TX3N	A	N/A	N/A	-	eDP differential lane 3 negative output	-	EDP_TX3N	EDP_TX3N
77	GPIO2_B0/VOP_CLK/CIF_VS YNC/I2C7_SCL	I/O	I	up	33k-88 k	Camera vsync input	1.8V	CIF_VSYNC	GPIO2_B0/CIF_VSYNC/I2C7_SCL
78	EDP_TX3P	A	N/A	N/A	-	eDP differential lane 3 positive output	-	EDP_TX3P	EDP_TX3P
79	GPIO2_A0/VOP_D0/CIF_D0/ I2C2_SDA	I/O	I	up	33k-88 k	Camera data port	1.8V	CIF_D0	GPIO2_A0/CIF_D0/I2C2_SDA
80	EDP_TX2N	A	N/A	N/A	-	eDP differential lane 2 negative output	-	EDP_TX2N	EDP_TX2N
81	GPIO1_B5	I/O	I	down	34k-93 k	LCD panel power enable	1.8V	LCD_EN_H	LCD_EN_H
82	EDP_TX2P	A	N/A	N/A	-	eDP differential lane 2 positive output	-	EDP_TX2P	EDP_TX2P
83	GPIO2_B3/SPI2_CLK/VOP_D EN/CIF_CLKOUT	I/O	I	up	33k-88 k	Camera clock output	1.8V	CIF_CLKO	GPIO2_B3/CIF_CLKO /SPI2_CLK
84	EDP_TX1P	A	N/A	N/A	-	eDP differential lane 1 positive output	-	EDP_TX1P	EDP_TX1P
85	GPIO2_A1/VOP_D1/CIF_D1 LOGIC/CENTERLOG	I/O	I	up	33k-88 k	Camera data port	1.8V	CIF_D1	GPIO2_A1/CIF_D1 /I2C2_SCL
86	EDP_TX1N	A	N/A	N/A	-	eDP differential lane 1 negative output	-	EDP_TX1N	EDP_TX1N
87	GPIO1_C3/PWM2	I/O	I	down	34k-93 k	Power dynamic voltage scaling control for LOGIC/CENTERLOG	1.8V	LOG_DVS_PWM	LOG_DVS_PWM
88	EDP_TX0P	A	N/A	N/A	-	eDP differential lane 0 positive output	-	EDP_TX0P	EDP_TX0P
89	RESET_L	I	I	up	10K	manual reset signal of RK3399	1.8V	manual reset signal of RK3399	manual reset signal of RK3399
90	EDP_TX0N	A	N/A	N/A	-	eDP differential lane 0 negative output	-	EDP_TX0N	EDP_TX0N
91	GPIO0_B0/SDMMC0_WRPT /TEST_CLKOUT2	I/O	I	up	54k-12 0k	DVP power enable	1.8V	DNP	DVP_PWR_H
92	EDP_AUXP	A	N/A	N/A	-	eDP differential AUX channel negative output	-	EDP_AUXP	EDP_AUXP
93	GPIO2_A7/VOP_D7/CIF_D7/ I2C7_SDA	I/O	I	up	33k-88 k	Camera data port	1.8V	CIF_D7	GPIO2_A7/CIF_D7/I2C7_SDA
94	EDP_AUXN	A	N/A	N/A	-	eDP differential AUX channel positive output	-	EDP_AUXN	EDP_AUXN

95	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
96	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
97	GPIO3_B5/MAC_MDIO/UAR T1_TX	I/O	I	up	26k-71 k	MAC management command and data PCIE reset input	3.3V	TOUCH_INT_L	MAC_MDIO
98	GPIO2_B2/SPI2_TXD/CIF_CL KIN/I2C6_SCL	I/O	I	up	33k-88 k	Camera clock input I2C serial port 6,for battery,need external pull-up	1.8V	CIF_CLKI	GPIO2_B2/CIF_CLKI /I2C6_SCL/SPI2_TXD
99	GPIO3_C1/MAC_TXCLK/UA RT3_RTSN	I/O	I	up	26k-71 k	MAC transmit clock	3.3V	-	MAC_TXCLK
100	GPIO2_B1/SPI2_RXD/CIF_H REF/I2C6_SDA	I/O	I	up	33k-88 k	Camera href input I2C serial port 6,for battery,need external pull-up	1.8V	CIF_HREF	GPIO2_B1/CIF_HREF/I2C6_SDA/SPI2_R XD
101	GPIO3_B0/MAC_MDC/SPI0_ CSN1	I/O	I	up	26k-71 k	MAC management clock	3.3V	-	MAC_MDC
102	GPIO2_B4/SPI2_CSN0	I/O	I	up	33k-88 k	Camera power down control output for front	1.8V	DVP_PDN0_H	GPIO2_B4/DVP_PDN0_H/SPI2_CSN
103	GPIO3_A2/MAC_RXD2/SPI4 _CLK	I/O	I	up	26k-71 k	MAC receive data	3.3V	-	MAC_RXD2
104	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
105	GPIO3_A7/MAC_RXD1/SPI0 _CSN0	I/O	I	up	26k-71 k	MAC receive data	3.3V	-	MAC_RXD1
106	GPIO3_B3/MAC_CLK/I2C5_ SCL	I/O	I	up	26k-71 k	MAC reference clock output I2C serial port 4,need external pull-up	3.3V	I2C_SCL_TP	MAC_MCLK
107	GPIO3_B6/MAC_RXCLK/UA RT3_RX	I/O	I	up	26k-71 k	MAC receive clock	3.3V	-	MAC_RXCLK
108	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
109	GPIO3_B1/MAC_RXDV	I/O	I	down	27k-10 2k	MAC receive data valid	3.3V	-	MAC_RXDV
110	GPIO3_A4/MAC_TXD0/SPI0 _RXD	I/O	I	down	27k-10 2k	MAC transmit data	3.3V	LCD_RST	MAC_TXD0
111	GPIO3_B7/MAC_CRS/UART 3_TX	I/O	I	up	26k-71 k	MAC carrier sense detect	3.3V	-	MAC_CRS
112	GPIO3_A0/MAC_TXD2/SPI4 _RXD	I/O	I	down	27k-10 2k	MAC transmit data	3.3V	-	MAC_TXD2
113	GPIO3_A6/MAC_RXD0/SPI0 _CLK	I/O	I	up	26k-71 k	MAC receive data	3.3V	-	MAC_RXD0
114	GPIO3_A1/MAC_TXD3/SPI4 _TXD	I/O	I	down	27k-10 2k	MAC transmit data	3.3V	CABC_EN	MAC_TXD3
115	GPIO3_A3/MAC_RXD3/SPI4	I/O	I	up	26k-71	MAC receive data	3.3V	-	MAC_RXD3

	_CSN0				k				
116	GPIO3_B2/MAC_RXER/I2C5_SDA	I/O	I	up	26k-71k	MAC receive error I2C serial port 4, need external pull-up	3.3V	I2C_SDA_TP	MAC_RXER
117	GPIO1_A2/ISP_FLASHTRIG_IN/TCPD_CC1_VCONN_EN	I/O	I	down	34k-93k	Charge and cc controller interrupt input	1.8V	CHG_CC_INT_L	CHG_CC_INT_L
118	GPIO3_A5/MAC_TXD1/SPI0_TXD	I/O	I	down	27k-102k	MAC transmit data	3.3V	-	MAC_TXD1
119	GPIO0_A5/EMMC_PWRON	I/O	I	up	54k-120k	Power key detect input	1.8V	PWR_KEY_L	PWR_KEY_L
120	GPIO3_B4/MAC_TXEN/UAR_T1_RX	I/O	I	up	26k-71k	MAC transmit enable AP wake up PCIE	3.3V	TOUCH_RST_L	MAC_TXEN

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Pin No	Pin Name	Pin Type	I/O Def	I/O Pull	Pull Resistor	Description	Power domain	Tablet/VR REF	Excavator/BOX
1	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
2	VCC_1V8	P	N/A	N/A	N/A	Power output 1.8V/0.5A	N/A	VDDIO of WIFI/Btsensor	VDDIO of WIFI/Btsensor
3	RTC_CLKO_WIFI	O	O	up	10K	32768HZ clock out	1.8V	RTC CLK of WIFI/BT	RTC CLK of WIFI/BT
4	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
5	POWER_KEY	I	I	up	10K	Power on signal of PMU	VCCA	System power key	System power key
6	TYPEC0_DP	A	N/A	N/A	-	TYPEC0 Data Plus port	-	TYPEC0_DP	TYPEC0_DP
7	ADC_IN1	A	N/A	N/A	-	AD keyboard input	1.8V	ADKEY_IN	ADKEY_IN
8	TYPEC0_DM	A	N/A	N/A	-	TYPEC0 Data Minus port	-	TYPEC0_DM	TYPEC0_DM
9	ADC_IN2	A	N/A	N/A	-	Headphone	1.8V	HP_HOOK	HP_HOOK
10	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
11	PMIC_EXT_EN	O	O	down	N/A	EXT_EN of PMU	VCCA	Output enable signal for external power path	Output enable signal for external power path
12	TYPEC1_DP	A	N/A	N/A	-	TYPEC1 Data Plus port	-	TYPEC1_DP	TYPEC1_DP
13	HDMI_HPD	A	N/A	N/A	-	HDMI Hot Plug Detection interrupt with 5V tolerance	-	HDMI_HPD	HDMI_HPD
14	TYPEC1_DM	A	N/A	N/A	-	TYPEC1 Data Minus port	-	TYPEC1_DM	TYPEC1_DM
15	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
16	TYPEC1_TX1P	A	N/A	N/A	-	TYPEC1 positive half of first SuperSpeed RX differential pair.	-	TYPEC1_TX1P	TYPEC1_TX1P
17	HDMI_TX2N	A	N/A	N/A	-	HDMI channel 2 differential serial data	-	HDMI_TX2N	HDMI_TX2N

						positive		
18	TYPEC1_TX1M	A	N/A	N/A	-	TYPEC1 negative half of first SuperSpeed RX differential pair.	-	TYPEC1_TX1M TYPEC1_TX1M
19	HDMI_TX2P	A	N/A	N/A	-	HDMI channel 2 differential serial data positive	-	HDMI_TX2P HDMI_TX2P
20	TYPEC1_RX1M	A	N/A	N/A	-	TYPEC1 negative half of first SuperSpeed RX differential pair.	-	TYPEC1_RX1M TYPEC1_RX1M
21	HDMI_TX1N	A	N/A	N/A	-	HDMI channel 1 differential serial data positive	-	HDMI_TX1N HDMI_TX1N
22	TYPEC1_RX1P	A	N/A	N/A	-	TYPEC1 positive half of first SuperSpeed RX differential pair.	-	TYPEC1_RX1P TYPEC1_RX1P
23	HDMI_TX1P	A	N/A	N/A	-	HDMI channel 1 differential serial data positive	-	HDMI_TX1P HDMI_TX1P
24	TYPEC0_TX2P	A	N/A	N/A	-	TYPEC0 positive half of second SuperSpeed RX differential pair.	-	TYPEC0_TX2P TYPEC0_TX2P
25	HDMI_TX0N	A	N/A	N/A	-	HDMI channel 0 differential serial data positive	-	HDMI_TX0N HDMI_TX0N
26	TYPEC0_TX2M	A	N/A	N/A	-	TYPEC0 negative half of second SuperSpeed RX differential pair.	-	TYPEC0_TX2M TYPEC0_TX2M
27	HDMI_TX0P	A	N/A	N/A	-	HDMI channel 0 differential serial data positive	-	HDMI_TX0P HDMI_TX0P
28	TYPEC0_RX2M	A	N/A	N/A	-	TYPEC0 negative half of second SuperSpeed RX differential pair.	-	TYPEC0_RX2M TYPEC0_RX2M
29	HDMI_TCN	A	N/A	N/A	-	HDMI differential pixel clock negative	-	HDMI_TCN HDMI_TCN
30	TYPEC0_RX2P	A	N/A	N/A	-	TYPEC0 positive half of second SuperSpeed RX differential pair.	-	TYPEC0_RX2P TYPEC0_RX2P
31	HDMI_TCP	A	N/A	N/A	-	HDMI differential pixel clock positive	-	HDMI_TCP HDMI_TCP
32	TYPEC0_TX1P	A	N/A	N/A	-	TYPEC0 positive half of first SuperSpeed RX differential pair.	-	TYPEC0_TX1P TYPEC0_TX1P

33	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
34	TYPECO_TX1M	A	N/A	N/A	-	TYPECO negative half of first SuperSpeed RX differential pair.	-	TYPECO_TX1M	TYPECO_TX1M
35	MIPI_TX0_D0P	P	N/A	N/A	-	MIPI-DSIO differential lane 0 positive	-	MIPI_TX0_D0P	MIPI_TX0_D0P
36	TYPECO_RX1M	A	N/A	N/A	-	TYPECO negative half of first SuperSpeed RX differential pair.	-	TYPECO_RX1M	TYPECO_RX1M
37	MIPI_TX0_D0N	A	N/A	N/A	-	MIPI-DSIO differential lane 0 negative	-	MIPI_TX0_D0N	MIPI_TX0_D0N
38	TYPECO_RX1P	A	N/A	N/A	-	TYPECO positive half of first SuperSpeed RX differential pair.	-	TYPECO_RX1P	TYPECO_RX1P
39	MIPI_TX0_D1P	A	N/A	N/A	-	MIPI-DSIO differential lane 1 positive	-	MIPI_TX0_D1P	MIPI_TX0_D1P
40	TYPECO_AUXM	A	N/A	N/A	-	TYPECO AUX differential TX/RX serial data.	-	TYPECO_AUXM	TYPECO_AUXM
41	MIPI_TX0_D1N	A	N/A	N/A	-	MIPI-DSIO differential lane 1 negative	-	MIPI_TX0_D1N	MIPI_TX0_D1N
42	TYPECO_AUXP	A	N/A	N/A	-	TYPECO AUX differential TX/RX serial data.	-	TYPECO_AUXP	TYPECO_AUXP
43	MIPI_TX0_CLKP	A	N/A	N/A	-	MIPI-DSIO differential clock lane positive	-	MIPI_TX0_CLKP	MIPI_TX0_CLKP
44	TYPECO_AUXP_PD_PU	A	N/A	N/A	-	TYPECO AUX pull-up/pull-down polarity reversal pins.	-	TYPECO_AUXP_PD_PU	TYPECO_AUXP_PD_PU
45	MIPI_TX0_CLKN	A	N/A	N/A	-	MIPI-DSIO differential clock lane negative	-	MIPI_TX0_CLKN	MIPI_TX0_CLKN
46	TYPECO_AUXM_PU_PD	A	N/A	N/A	-	TYPECO AUX pull-up/pull-down polarity reversal pins.	-	TYPECO_AUXM_PU_PD	TYPECO_AUXM_PU_PD
47	MIPI_TX0_D2P	A	N/A	N/A	-	MIPI-DSIO differential lane 2 positive	-	MIPI_TX0_D2P	MIPI_TX0_D2P
48	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
49	MIPI_TX0_D2N	A	N/A	N/A	-	MIPI-DSIO differential lane 2 negative	-	MIPI_TX0_D2N	MIPI_TX0_D2N
50	MIPI_RX0_D0N	P	N/A	N/A	-	MIPI-CSIO differential lane 0 negative	-	MIPI_RX0_D0N	MIPI_RX0_D0N
51	MIPI_TX0_D3P	A	N/A	N/A	-	MIPI-DSIO differential lane 3 positive	-	MIPI_TX0_D3P	MIPI_TX0_D3P
52	MIPI_RX0_D0P	A	N/A	N/A	-	MIPI-CSIO differential lane 0 positive	-	MIPI_RX0_D0P	MIPI_RX0_D0P

53	MIPI_TX0_D3N	A	N/A	N/A	-	MIPI-DSIO differential lane 3 negative	-	MIPI_TX0_D3N	MIPI_TX0_D3N
54	MIPI_RX0_D1N	A	N/A	N/A	-	MIPI-CSIO differential lane 1 negative	-	MIPI_RX0_D1N	MIPI_RX0_D1N
55	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
56	MIPI_RX0_D1P	A	N/A	N/A	-	MIPI-CSIO differential lane 1 positive	-	MIPI_RX0_D1P	MIPI_RX0_D1P
57	GPIO2_C4/SDIO0_D0/SPI5_RXD	I/O	I	up	54k-12 4k	SDIO0 data port ,for WIFI module	1.8V	SDIO0_D0	SDIO0_D0
58	MIPI_RX0_CLKN	A	N/A	N/A	-	MIPI-CSIO differential clock lane negative	-	MIPI_RX0_CLKN	MIPI_RX0_CLKN
59	GPIO2_C7/SDIO0_D3/SPI5_CSN0	I/O	I	up	54k-12 7k	SDIO0 data port ,for WIFI module	1.8V	SDIO0_D3	SDIO0_D3
60	MIPI_RX0_CLKP	A	N/A	N/A	-	MIPI-CSIO differential clock lane positive	-	MIPI_RX0_CLKP	MIPI_RX0_CLKP
61	GPIO2_D0/SDIO0_CMD	I/O	I	up	54k-12 8k	SDIO0 command output,for WIFI module	1.8V	SDIO0_CMD	SDIO0_CMD
62	MIPI_RX0_D2N	A	N/A	N/A	-	MIPI-CSIO differential lane 2 negative	-	MIPI_RX0_D2N	MIPI_RX0_D2N
63	GPIO2_C6/SDIO0_D2/SPI5_CLK	I/O	I	up	54k-12 6k	SDIO0 data port ,for WIFI module	1.8V	SDIO0_D2	SDIO0_D2
64	MIPI_RX0_D2P	A	N/A	N/A	-	MIPI-CSIO differential lane 2 positive	-	MIPI_RX0_D2P	MIPI_RX0_D2P
65	GPIO2_C5/SDIO0_D1/SPI5_TXD	I/O	I	up	54k-12 5k	SDIO0 data port ,for WIFI module	1.8V	SDIO0_D1	SDIO0_D1
66	MIPI_RX0_D3N	A	N/A	N/A	-	MIPI-CSIO differential lane 3 negative	-	MIPI_RX0_D3N	MIPI_RX0_D3N
67	GPIO2_D1/SDIO0_CLKOUT /TEST_CLKOUT1	I/O	I	up	54k-12 9k	SDIO0 clock output,for WIFI module	1.8V	SDIO0_CLK	SDIO0_CLK
68	MIPI_RX0_D3P	A	N/A	N/A	-	MIPI-CSIO differential lane 3 positive	-	MIPI_RX0_D3P	MIPI_RX0_D3P
69	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
70	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
71	GPIO4_C4/UART2DBG_TX	I/O	I	up	33k-89 k	Uart2 serial port data output,for AP debug	3.0V	UART2_TXD	UART2_TXD
72	MIPI_TX1/RX1_D3N	A	N/A	N/A	-	MIPI-DSI1/CSI1 differential lane 3 positive	-	MIPI_TX1/RX1_D3N	MIPI_TX1/RX1_D3N
73	GPIO4_C0/I2C3_SDA_HDMI I/UART2DBG_RX	I/O	I	up	33k-89 k	I2C serial port 3,for HDMI,need external pull-up	3.0V	I2C_SDA_HDMI	I2C_SDA_HDMI
74	MIPI_TX1/RX1_D3P	A	N/A	N/A	-	MIPI-DSI1/CSI1 differential lane 3 positive	-	MIPI_TX1/RX1_D3P	MIPI_TX1/RX1_D3P
75	GPIO4_C1/I2C3_SCL_HDMI	I/O	I	up	33k-89	I2C serial port 3,for	3.0V	I2C_SCL_HDMI	I2C_SCL_HDMI

	/UART2DBG_TX				k	HDMI,need external pull-up			
76	MIPI_TX1/RX1_D2N	A	N/A	N/A	-	MIPI-DSI1/CSI1 differential lane 2 positive	-	MIPI_TX1/RX1_D2N	MIPI_TX1/RX1_D2N
77	GPIO4_A6/I2S1_SDI0	I/O	I	down	34k-93k	HDMI input standby enable I2S 1 port, for BT module	1.8V	HDMIIN_STBY	I2S1_SDI0_BT_PCM
78	MIPI_TX1/RX1_D2P	A	N/A	N/A	-	MIPI-DSI1/CSI1 differential lane 2 positive	-	MIPI_TX1/RX1_D2P	MIPI_TX1/RX1_D2P
79	GPIO4_D0/PCIE_CLKREQN	I/O	I	up	33k-89k	ALS sensor interrupt input	3.0V	LIGHT_INT_L	LIGHT_INT_L
80	MIPI_TX1/RX1_CLKN	A	N/A	N/A	-	MIPI-DSI1/CSI1 differential clock lane positive	-	MIPI_TX1/RX1_CLKN	MIPI_TX1/RX1_CLKN
81	GPIO4_C2/PWM0/VOP1_PWM_CABC	I/O	I	down	34k-95k	LCD panel backlight brightness control output	3.0V	LCD_BL_PWM	LCD_BL_PWM
82	MIPI_TX1/RX1_CLKP	A	N/A	N/A	-	MIPI-DSI1/CSI1 differential clock lane positive	-	MIPI_TX1/RX1_CLKP	MIPI_TX1/RX1_CLKP
83	GPIO4_A0/I2S_CLK	I/O	I	down	34k-93k	I2S MCLK, for both I2S0 and I2S1	1.8V	I2S_MCLK	I2S_MCLK
84	MIPI_TX1/RX1_D1N	A	N/A	N/A	-	MIPI-DSI1/CSI1 differential lane 1 negative	-	MIPI_TX1/RX1_D1N	MIPI_TX1/RX1_D1N
85	GPIO4_A3/I2S1_SCLK	I/O	I	down	34k-93k	HDMI input power enable for VCC1V8 I2S 1 port, for BT module	1.8V	HDMIIN_PWRE_N18	I2S1_SCLK_BT_PCM
86	MIPI_TX1/RX1_D1P	A	N/A	N/A	-	MIPI-DSI1/CSI1 differential lane 1 positive	-	MIPI_TX1/RX1_D1P	MIPI_TX1/RX1_D1P
87	GPIO3_D1/I2S0_LRCK_RX	I/O	I	down	34k-93k	I2S 0 port, for audio codec	1.8V	I2S0_LRCK_RX	I2S0_LRCK_RX
88	MIPI_TX1/RX1_D0N	A	N/A	N/A	-	MIPI-DSI1/CSI1 differential lane 0 negative	-	MIPI_TX1/RX1_D0N	MIPI_TX1/RX1_D0N
89	GPIO4_A7/I2S1_SDO0	I/O	I	down	34k-93k	I2S 1 port, for BT module	1.8V	HDMIIN_PWRE_N33	I2S1_SDO0_BT_PCM
90	MIPI_TX1/RX1_D0P	P	N/A	N/A	-	MIPI-DSI1/CSI1 differential lane 0 positive	-	MIPI_TX1/RX1_D0P	MIPI_TX1/RX1_D0P
91	VCCA1V8_CODECC	P	N/A	N/A	N/A	Power output 1.8V/0.2A	N/A	VDDIO of Audio Codec	VDDIO of Audio Codec
92	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
93	GPIO3_D3/I2S0_SDI0	I/O	I	down	34k-93k	I2S 0 port, for audio codec	1.8V	I2S0_SDI0	I2S0_SDI0
94	GPIO2_C3/UART0_RTSN	I/O	I	up	54k-123k	UART0 serial port, for BT module	1.8V	UART0_RTS	UART0_RTS

95	GPIO4_A4/I2S1_LRCK_RX	I/O	I	down	34k-93 k	HDMI input reset output I2S 1 port, for BT module	1.8V	HDMIIN_RST	I2S1_LRCK_RX_BT_PCM
96	GPIO4_D4	I/O	I	down	34k-95 k	Headphone insert detect input	3.0V	HP_DET_H	HP_DET_H
97	GPIO4_A1/I2C1_SDA	I/O	I	up	33k-88 k	I2C serial port 1, for Audio, need external pull-up	1.8V	I2C1_SDA	I2C_SDA_AUDIO
98	GPIO2_D2/SDIO0_DETNP/PC IE_CLKREQN	I/O	I	up	54k-13 0k	AP wake up BT module	1.8V	BT_WAKE_L	BT_WAKE_L
99	GPIO4_A2/I2C1_SCL	I/O	I	up	33k-88 k	I2C serial port 1, for Audio, need external pull-up	1.8V	I2C1_SCL	I2C_SCL_AUDIO
100	GPIO4_D1/DP_HOTPLUG	I/O	I	down	34k-95 k	USB HOST power control output	3.0V	VCC5V0_HOST_ EN	VCC5V0_HOST_EN
101	GPIO4_C5/SPDIF_TX	I/O	I	down	34k-95 k	HDMI digital audio optical output	3.0V	-	SPDIF_TX
102	GPIO4_C6/PWM1	I/O	I	down	34k-95 k	Touch panel reset input	3.0V	-	TOUCH_RST_L
103	GPIO4_C3/UART2DBG_RX	I/O	I	up	33k-89 k	Uart2 serial port data input, for AP debug	3.0V	UART2_RXD	UART2_RXD
104	GPIO2_C0/UART0_RX	I/O	I	up	54k-12 0k	UART0 serial port, for BT module	1.8V	UART0_RXD	UART0_RXD
105	GPIO3_D2/I2S0_LRCK_TX	I/O	I	down	34k-93 k	I2S 0 port, for audio codec	1.8V	I2S0_LRCK_TX	I2S0_LRCK_TX
106	GPIO2_D3/SDIO0_PWREN	I/O	I	down	55k-17 6k	MIPI camera reset output MEMSI interrupt input	1.8V	Camera_RST_L	DNP
107	GPIO4_D5	I/O	I	down	34k-95 k	LCD panel CABC enable LCD panel reset output	3.0V	-	CABC_EN
108	GPIO2_C2/UART0_CTSN	I/O	I	up	54k-12 2k	UART0 serial port, for BT module	1.8V	UART0_CTS	UART0_CTS
109	GPIO4_C7/HDMI_CECIN UT/EDP_HOTPLUG	I/O	I	up	33k-89 k	HDMI CEC communication	3.0V	HDMI_CEC	HDMI_CEC
110	GPIO2_D4/SDIO0_BKPWR	I/O	I	down	55k-17 6k	Camera power down control output for rear	1.8V	DVP_PDN1_H	DVP_PDN1_H
111	GPIO3_D7/I2S0_SDO0	I/O	I	down	34k-93 k	I2S 0 port, for audio codec	1.8V	I2S0_SDO0	I2S0_SDO0
112	PWR_EN	I	I	down	N/A	Adapter voltage detect input	3.3V~12V	system power on signal by adapter plug in	system power on signal by adapter plug in
113	GPIO3_D0/I2S0_SCLK	I/O	I	down	34k-93 k	I2S 0 port, for audio codec	1.8V	I2S0_SCLK	I2S0_SCLK
114	GND	G	N/A	N/A	N/A	power ground	N/A	GND	GND
115	GPIO2_C1/UART0_TX	I/O	I	up	54k-12 1k	UART0 serial port, for BT module	1.8V	UART0_TXD	UART0_TXD

116	VCC2V8_DVP	P	N/A	N/A	N/A	Power output 2.8V/0.15A	N/A	AVDD of Camera	AVDD of Camera
117	VCC_3V0	P	N/A	N/A	N/A	Power output 3.0V/0.25A	N/A	VDD pull up of APIO4	VDD pull up of APIO4
118	VCC3V3_S0	P	N/A	N/A	N/A	Power output 3.3V/0.15A	N/A	VCCIO of display panel	VCCIO of display panel
119	VCCA	P	N/A	N/A	N/A	Power input 3.3V~5V/0.1A	N/A	VCC_RTC/VCCA of PMU	VCC_RTC/VCCA of PMU
120	VCCA3V0_CODEC	P	N/A	N/A	N/A	Power output 3.0V/0.3A	N/A	AVDD of Audio IC	AVDD of Audio IC

Notes:

①:Pin Type: I = input, O = output, I/O = input/output (bidirectional), P=power supply, A = Analog input

②:I/O Pull: u=default pull-up, d=default pull-down, Z=default high-Z, fix up=default pull-up and can't be configured to pull-down

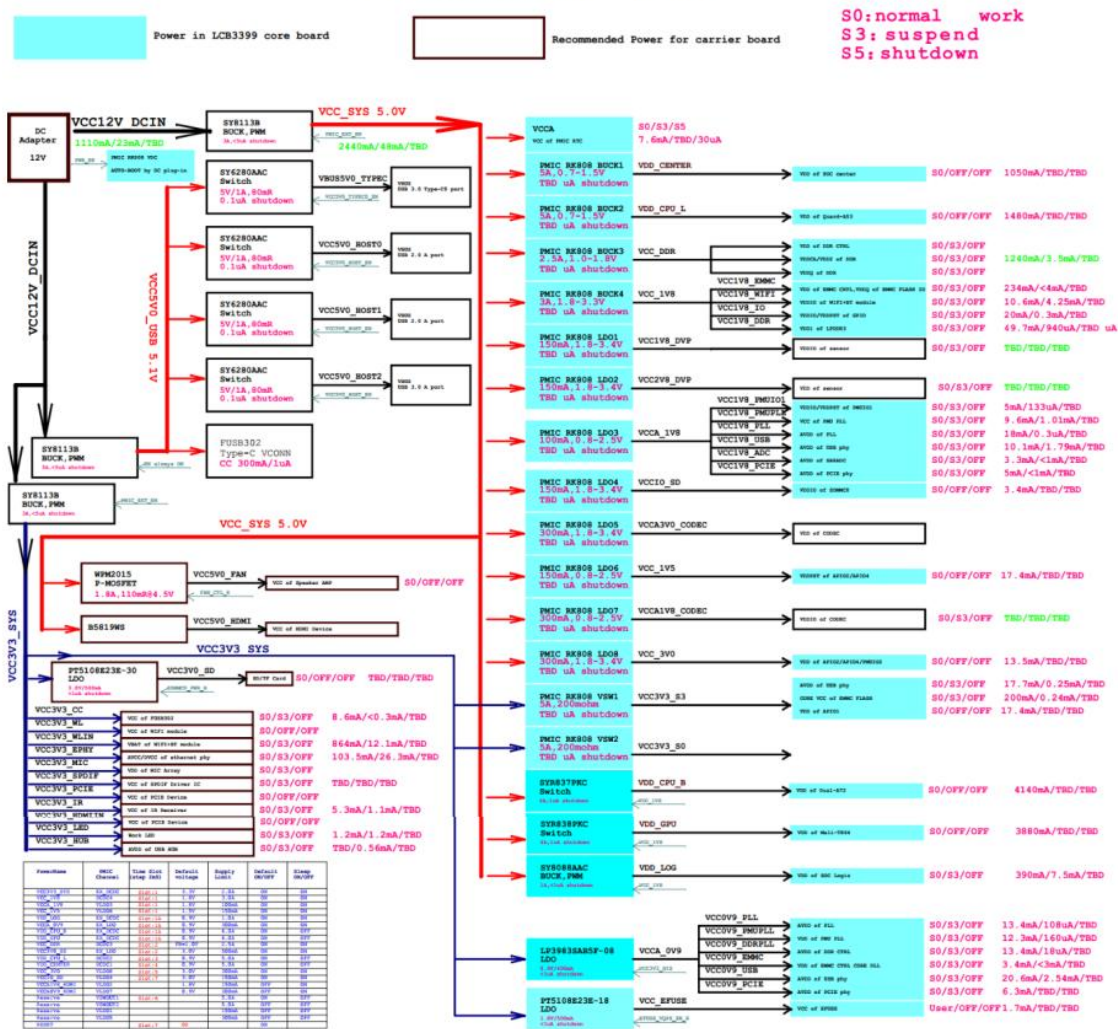
③:Output Drive Unit is mA, only Digital IO has driver strength value;

电压参数

Symbol	Parameter	Current Typ	Voltage		
			Min (V)	Typ (V)	Max (V)
VCC_SYS	Main power input for LCB3399	3A	3.5	5	5.5
VCCA	Backup voltage input for RTC and power on detect	60uA	VCC_SYS-0.5	VCC_SYS	5.5
VCC3V3_SYS	3.3V power input for LCB3399	2A	3.2	3.3	3.4
VCC3V3_S3	3.3V output for carrier board use	0.5A	3.2	3.3	3.4
VCC_3V0	3.0V output for carrier board use	0.25A	2.9	3	3.1
VCC_1V8	1.8V output for carrier board use	0.5A	1.7	1.8	1.9
VCC1V8_S3	1.8V output for carrier board use	0.5A	1.7	1.8	1.9
VCC1V8_DVP	1.8V output for carrier board use	0.1A	1.7	1.8	1.9
VCC2V8_DVP	2.8V output for carrier board use	0.15A	2.7	2.8	2.9
VCCA1V8_CODEC	1.8V output for carrier board use	0.2A	1.7	1.8	1.9
VCCA3V0_CODEC	3.0V output for carrier board use	0.3A	2.9	3	3.1
PMIC_EXT_EN	Output enable for external BUCK	-	0	VCCA	VCCA+0.3
PWR_EN (threshold)	System Power on signal input	-	3	5	12

电源供电拓扑图

Power Diagram and Sequence



6.应用场景



人工智能



机器视觉



工业控制



能源电力



智慧平板



虚拟现实 VR



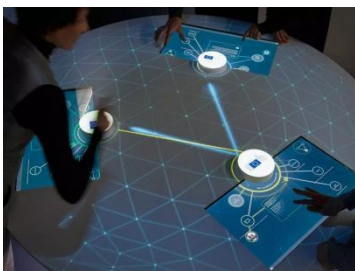
智慧物流



新零售



智慧商显



物体识别



车载终端



门禁监控

7. 订购型号

产品型号	状态	CPU 型号	DDR 容量	eMMC 容量	工作温度
LC10121600	ACTIVE	RK3399	2GB	16GB	-10°C - 70°C
LC10141600	ACTIVE	RK3399	4GB	16GB	-10°C - 70°C
LC10146400	ACTIVE	RK3399	4GB	64GB	-10°C - 70°C

*非标定制请邮件咨询 sales@neardi.com

8.关于临滴

上海临滴科技有限公司成立于 2014 年，国家级高新技术企业，瑞芯微战略合作伙伴，黑芝麻智能授权代理商。专注于企业级开源硬件平台的研发和生产，为客户提供核心模块、行业板、开发板、触控平板和工控主机等产品。公司坚持技术创新和专业服务的核心理念，以临滴科技的技术优势和行业经验，帮助合作伙伴实现产品快速量产。



公众号



淘宝店铺



B 站

Rockchip-产品线

核心模块



LCB3588/J



LCB3568/J



LCB3566



LCB3399Pro



LCB3399

开发板/行业板



LKD3588/J



LKD3568/J



LKD3566



LKD3399Pro



LKD3399

嵌入式智能计算机



LPB3588



LPM3588



LPC3588



LPB3568



LPB3399Pro

BST 黑芝麻-产品线



SOM-A-A1000



SOM-π-A1000



SOM-B-A1000



SOM-A1000 开发者套件

车载终端-产品线



LPA3588



LPA3568



LPA3399Pro



LPS3399Pro

WIFI 模块-产品线



FD7352S



FD7352P



FD7352M



FD7155U



FD7256S