neardi

LCB3568/J/M System On Module

Datasheet

V1.0

Shanghai Neardi Technology Co., Ltd.

www.neardi.com

Notes: All contengs only for explanatory and descriptive purposes. Please refer to the actual product. We strive to ensure consistency with the actual product. This document is provided for customers as a reference for product design and end application. It is better for you confirm the specifications and parameters carefully, provided in the document to ensure they meet the design or application requirements of the product. Whatsmore, it is strongly recommended that customers conduct detailed tests based on our actual products in the actual application scenario to ensure they meet the final usage requirements. Neardi Technology does not assume any responsibility for any damage suffered due to the use of the document, materials, and product functions.

Due to product version upgrades or other needs, our company may update the manual. If you need the latest version of the manual, please contact our company. We always adhere to the principle of customer first and provide customers with fast and efficient support services. If you have any needs, please feel free to contact our company at any time. Contact information is as follows:

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Version History

Version	Date	Description
V1.0	2022/8/23	Initial version

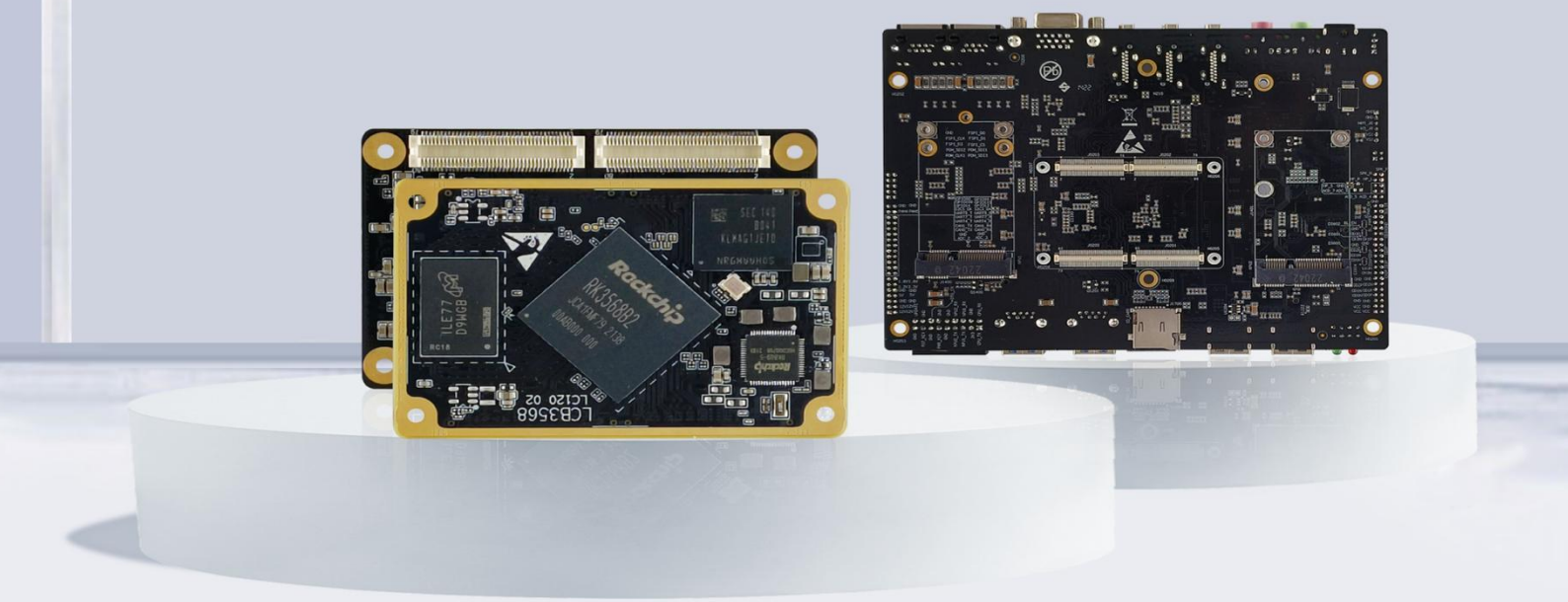
Contents

1.Product Introductio

The LCB3568 is a full-featured core module exquisitely designed based on the Rockchip RK3568 series [including RK3568 and RK3568J] chip platform, with dimensions of only 60mm by 40mm. The connection between the core module and the baseboard uses four dual-slot 0.5mm pitch 80Pin board-to-board connectors, secured with four M2 screws, ensuring stability, reliability, ease of installation, and maintenance.

The LCB3568 includes CPU, DDR, eMMC, and PMU components. The CPU is either the RK3568 or the RK3568J; DDR uses the market mainstream LPDDR4, with lower power consumption and higher frequency, available in 1GB/2GB/4GB configurations; eMMC adopts the high-speed eMMC 5.1 standard, with various capacity configurations from 4GB to 128GB; the PMU consists of the RK809 and multiple DC-DC and LDO components, with CPU core voltages supporting DVFS (Dynamic Voltage and Frequency Scaling).

The LCB3568 adopts a modular design concept, designing the core part, which has the same requirements and strict standards, as a full-function module. It brings out all the functional pins of the CPU and has undergone comprehensive testing and mass verification. Users can develop products based on this module, saving project development time, reducing corporate costs, and improving company efficiency.



2. Function Overview

High-Performance Processor

CPU	RK3568, 22nm process, quad-core 64-bit Cortex-A55, with a maximum clock speed of up to 2.0GHz.
GPU	ARM G52 2EE, with integrated high-performance 2D acceleration hardware
NPU	1TOPS
VPU	4K video decoding, 1080P video encoding
DDR	LPDDR4 memory, with options for 1GB, 1GB, 4GB or 8GB capacities.
eMMC	eMMC 5.1 storage, with options for 8GB,16GB,32GB,64GB,or128GB capacities.

Operating System

Android

Linux （Buildroot / Debian / Ubuntu）

Open Source Materials

WIKI Documentation http://www.neardi.com/cms/en/wiki.html

Quick Start

Firmware Upgrade

Android Development

Linux Development

Kernel Drivers

DEMO

System Customization

Accessories

Frequently Asked Questions (FAQ)

Release Notes

Hardware Materials

Chip Datesheet

Product 2D/3D Drawings

Core Board Pin Definitions

Baseboard Reference Schematic

Baseboard Reference PCB

Key Bill of Materials (BOM)

Software Materials

Firmware Tools and Drivers

Android Source Code and Images

U-Boot and Kernel Source Code

Debian/Ubuntu/Buildroot System Files

3. Technical Specifications

Basic Parameters	
SOC	RK3568, 22nm process, quad-core 64-bit Cortex-A55, with a maximum clock speed of 2.0GHz.
GPU	ARM G52 2EE, supports OpenGL ES 1.1/2.0/3.2, OpenCL 2.0, Vulkan 1.1, and has a high-quality 2D graphics engine built-in..
NPU	Offers up to 1 TOPS of computational power; supports hybrid operations of INT8/INT16/FP16/BFP16 MAC; compatible with deep-learning frameworks such as TensorFlow, TF-lite, Pytorch, Caffe, ONNX, MXNet, Keras, and Darknet.
VPU	Capable of 4K VP9 and 4K H265 video decoding at up to 60fps. Capable of 1080P H265/H264 video encoding at up to 100fps. Equipped with an 8M ISP with HDR capabilities.
DDR	LPDDR4 RAM, with options for 1GB/2GB/4GB/8GB (Optional).
eMMC	eMMC 5.1 storage, with options for 8GB/16GB/32GB/64GB/128GB (Optional).
PMU	RK806
OS	Android / Ubuntu / Buildroot / Debian

Hardware Specifications	
Camera Interface	Compatible with the MIPI Alliance Interface specification v1.2
	Up to 4 data lanes, 2.5Gbps maximum data rate per lane
	One interface with 1 clock lane and 4 data lanes

	Two interface, each with 1 clock lane and 2 data lanes
	Support up to 16bit DVP interface (digital parallel input)
	Support ISP block(Image Signal Processor)
Display Interface	RGB/ BT656/BT1120/ MIPI_DSI_V1.2/ LVDS/ HDMI2.0/Edp1.3/ EBC
	Support three simultaneous displays
	HDR10/HDR HLG/ HDR2SDR/SDR2HDR
	3D-LUT/P2I/CSC/BCSH/DITHER/CABC/GAMMA/COLORBAR
USB Interface	1 x USB3.0 HOST, 1 x USB3.0 OTG, 2 x USB2.0 HOST
PCIe3.0 PHY Interface	Support PCIe3.1(8Gbps) protocol and backward compatible with the PCIe2.1 and PCIe1.1 protocol
	Support two lane
	Support two PCIe controller with x1 mode or one PCIe controller with x2 mode
	Dual operation mode: Root Complex(RC)and End Point(EP)
Multi-PHY Interface	Support three multi-PHYs with PCIe2.1/SATA3.0/USB3.0/QSGMII controller
	USB3 Host controller + USB3 OTG controller
	PCIe2.1 controller / three SATA controller
Audio Interface	I2S0 with 8 channel TX and RX
	I2S1 with 8 channel TX and RX
	I2S2/I2S3 with 2 channel TX and RX
	PDM with 8channel
	TDM supports up to 8 channels for TX and 8 channels RX path
Connectivity	Compatible with SDIO 3.0 protocol

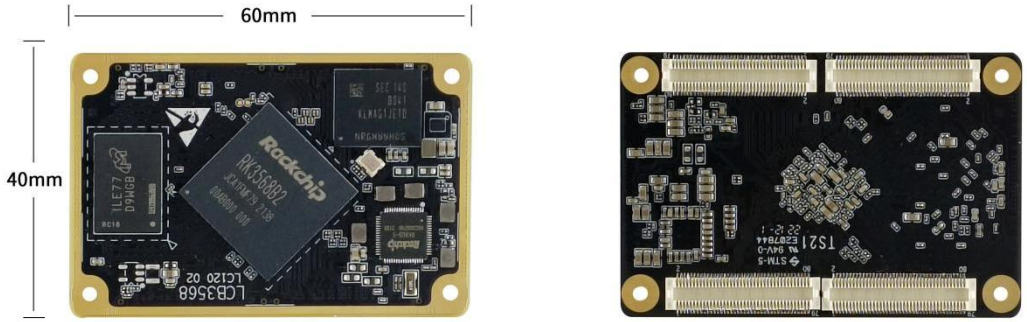
	GMAC 10/100/1000M Ethernet Controller
	Four on-chip SPI controllers
	Ten on-chip UART controllers inside
	Six on-chip I2C controllers
	Smart Card with ISO-7816
	Sixteen on-chip PWMs(PWM0~PWM15) with interrupt-based operation
	Multiple groups of GPIO
	8 single-ended input channels SARADC with 10bits resolution up to 1MS/s sampling rate

Other Parameters

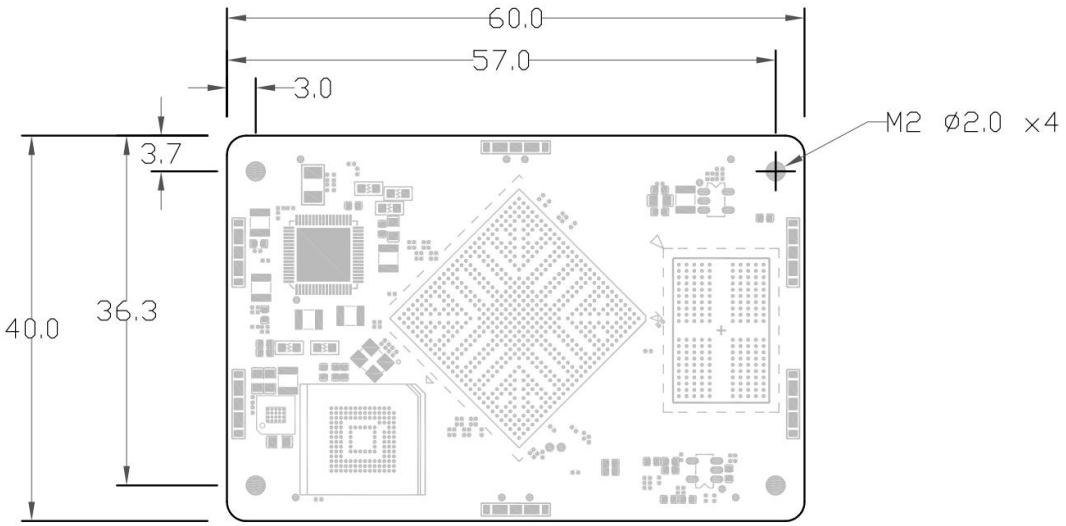
Operating temperature	Enterprise Grade: -20°C to 70°C Industrial Grade: -40°C to 85°C
PCB interface	B2B，320Pin
PCB layers	10 layers
PCB size	L* W *H(mm)：：60 *40 * 7.8（PCB thickness 1.6mm）

4. Appearance and Dimensions

4.1 Appearance

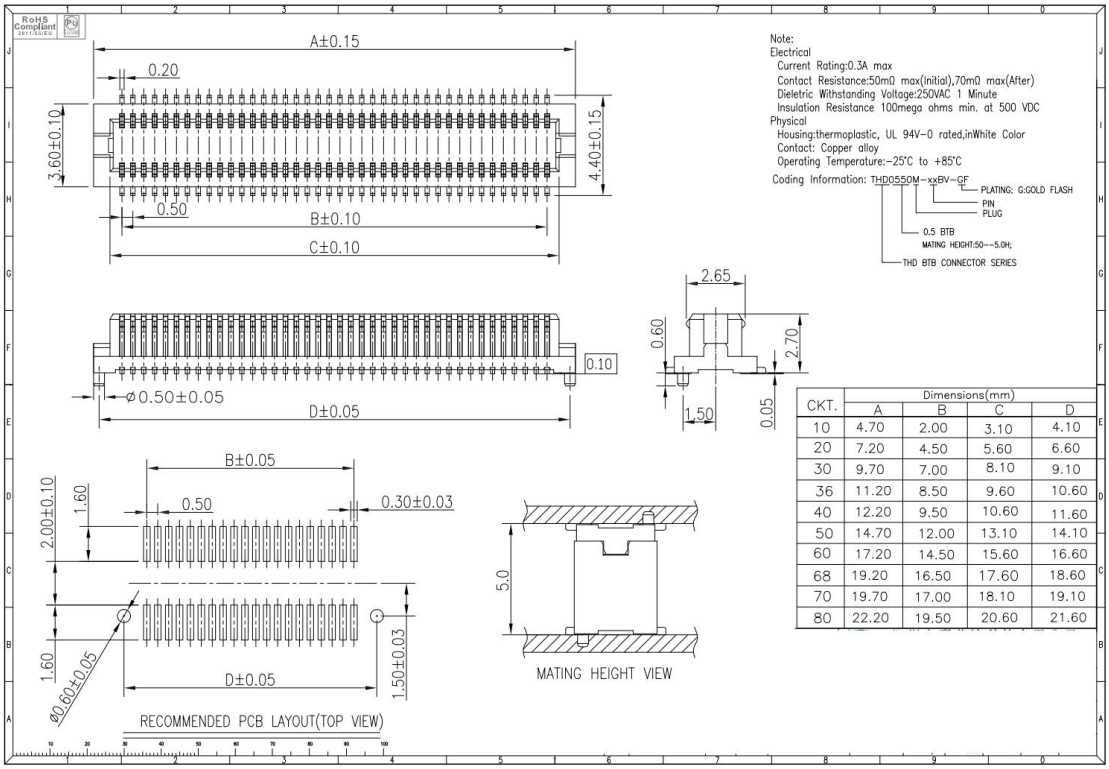


4.2 Dimensions



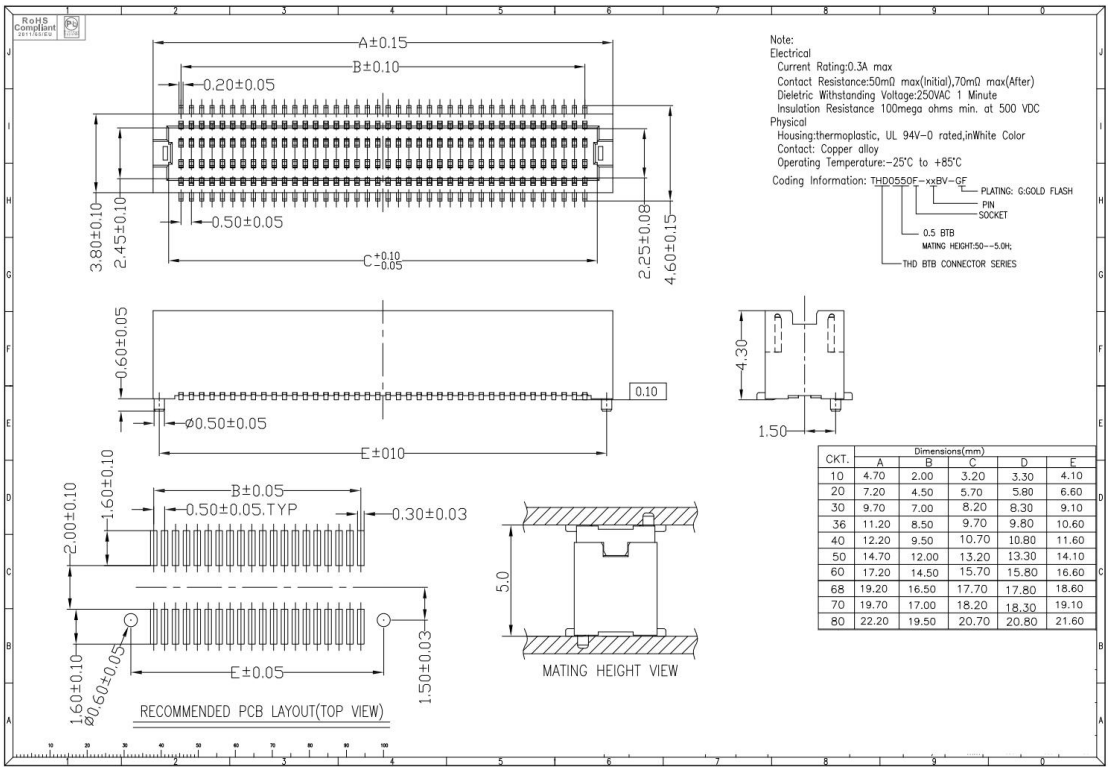
4.3 Structure

The LCB3568 utilizes four 80Pin board-to-board connector male headers with a 0.5mm pitch, with a standard combined height of 5mm. The dimensions of this connector are shown in the figure below:



CKT.	Dimensions(mm)			
	A	B	C	D
10	4.70	2.00	3.10	4.10
20	7.20	4.50	5.60	6.60
30	9.70	7.00	8.10	9.10
36	11.20	8.50	9.60	10.60
40	12.20	9.50	10.60	11.60
50	14.70	12.00	13.10	14.10
60	17.20	14.50	15.60	16.60
68	19.20	16.50	17.60	18.60
70	19.70	17.00	18.10	19.10
80	22.20	19.50	20.60	21.60

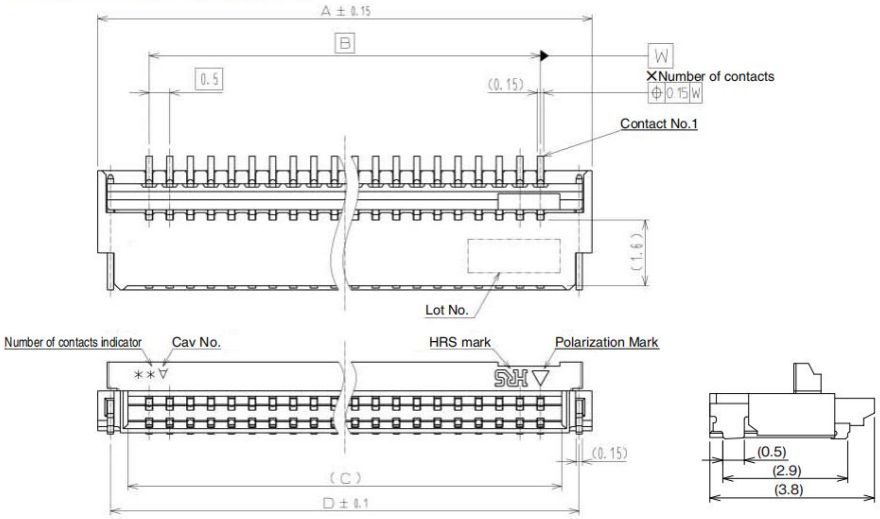
The baseboard should select the corresponding female connector with a standard combined height of 5mm. The relevant specifications are shown in the figure below:



CKT.	Dimensions(mm)				
	A	B	C	D	E
10	4.70	2.00	3.20	3.30	4.10
20	7.20	4.50	5.70	5.80	6.60
30	9.70	7.00	8.20	8.30	9.10
36	11.20	8.50	9.70	9.80	10.60
40	12.20	9.50	10.70	10.80	11.60
50	14.70	12.00	13.20	13.30	14.10
60	17.20	14.50	15.70	15.80	16.60
68	19.20	16.50	17.70	17.80	18.60
70	19.70	17.00	18.20	18.30	19.10
80	22.20	19.50	20.70	20.80	21.60

The four FPC connectors are all of the HRS model: FH34SRJ-30S-0.5SH. The relevant specifications are shown in the figure below:

■Connector Dimensions



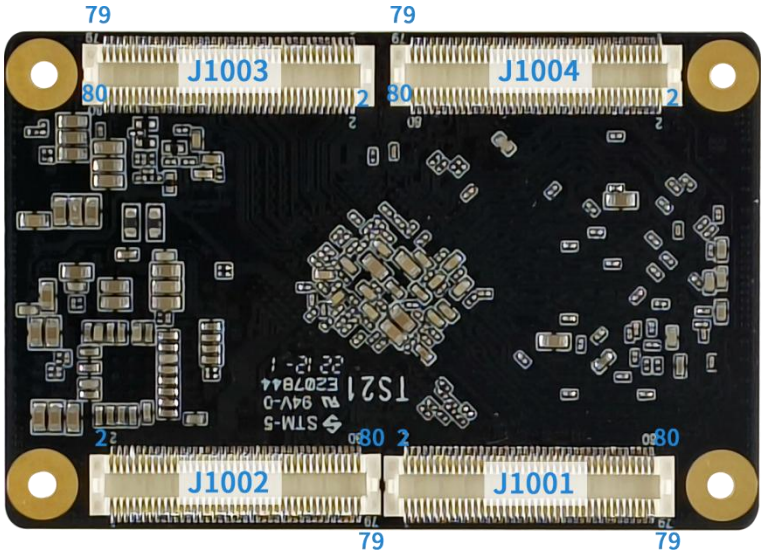
Note 1 : The coplanarity of each terminal lead within specified dimension is 0.1mm Max.
Note 2 : Packaged on tape and reel only. Check packaging specification.
Note 3 : Slight variations in color of the plastic compounds do not affect form, fit or function of the connector.
Note 4 : After reflow, the terminal plating may change color, however this does not represent a quality issue.

Unit : mm

Part No.	HRS No.	No. of Contacts	A	B	C	D
FH34SRJ-4S-0.5SH(50)	580-1238-7 50	4	4	1.5	2.53	3.38
FH34SRJ-5S-0.5SH(50)	580-1264-7 50	5	4.5	2	3.03	3.88
FH34SRJ-6S-0.5SH(50)	580-1236-1 50	6	5	2.5	3.53	4.38
FH34SRJ-7S-0.5SH(50)	580-1200-0 50	7	5.5	3	4.03	4.88
FH34SRJ-8S-0.5SH(50)	580-1231-8 50	8	6	3.5	4.53	5.38
FH34SRJ-9S-0.5SH(50)	580-1262-1 50	9	6.5	4	5.03	5.88
FH34SRJ-10S-0.5SH(50)	580-1251-5 50	10	7	4.5	5.53	6.38
FH34SRJ-11S-0.5SH(50)	580-1258-4 50	11	7.5	5	6.03	6.88
FH34SRJ-12S-0.5SH(50)	580-1253-0 50	12	8	5.5	6.53	7.38
FH34SRJ-14S-0.5SH(50)	580-1252-8 50	14	9	6.5	7.53	8.38
FH34SRJ-16S-0.5SH(50)	580-1259-7 50	16	10	7.5	8.57	9.38
FH34SRJ-18S-0.5SH(50)	580-1248-0 50	18	11	8.5	9.57	10.38
FH34SRJ-20S-0.5SH(50)	580-1256-9 50	20	12	9.5	10.57	11.38
FH34SRJ-22S-0.5SH(50)	580-1254-3 50	22	13	10.5	11.57	12.38
FH34SRJ-24S-0.5SH(50)	580-1255-6 50	24	14	11.5	12.57	13.38
FH34SRJ-26S-0.5SH(50)	580-1247-8 50	26	15	12.5	13.57	14.38
FH34SRJ-30S-0.5SH(50)	580-1232-0 50	30	17	14.5	15.57	16.38
FH34SRJ-34S-0.5SH(50)	580-1261-9 50	34	19	16.5	17.53	18.38
FH34SRJ-40S-0.5SH(50)	580-1260-6 50	40	22	19.5	20.53	21.38
FH34SRJ-45S-0.5SH(50)	580-1265-0 50	45	24.5	22	23.03	23.88
FH34SRJ-50S-0.5SH(50)	580-1266-2 50	50	27	24.5	25.53	26.38

Tape and reel packaging.
Order by number of reels.

5.Interface Definition



J1001

Pin Number	Pin Name
1	EDP_TX_D0P
2	EDP_TX_AUXN
3	EDP_TX_D0N
4	EDP_TX_AUXP
5	EDP_TX_D1P
6	GND7
7	EDP_TX_D1N
8	USB3_HOST1_DP
9	EDP_TX_D2P
10	USB3_HOST1_DM
11	EDP_TX_D2N

12	GND8
13	EDP_TX_D3P
14	USB3_OTG0_DP
15	EDP_TX_D3N
16	USB3_OTG0_DM
17	GND6
18	GND9
19	PCIE20_TXP
20	PCIE20_REFCLKP
21	PCIE20_TXN
22	PCIE20_REFCLKN
23	PCIE20_RXP
24	GND10
25	PCIE20_RXN
26	USB3_OTG0_SSRXP
27	GND5
28	USB3_OTG0_SSRXN
29	PCIE30_TX0P
30	USB3_OTG0_SSTXP
31	PCIE30_TX0N
32	USB3_OTG0_SSTXN
33	PCIE30_TX1P

34	GND11
35	PCIE30_TX1N
36	USB3_HOST1_SSRXP
37	PCIE30_RX0P
38	USB3_HOST1_SSRXN
39	PCIE30_RX0N
40	USB3_HOST1_SSTXP
41	PCIE30_RX1P
42	USB3_HOST1_SSTXN
43	PCIE30_RX1N
44	GND12
45	GND4
46	PCIE30_REFCLKP_IN
47	SDMMC0_DET_LGPIO0_A4u_3V3_PIO1
48	PCIE30_REFCLKN_IN
49	TP_RST_L_GPIO0_B6u_3V3_PMUIO2
50	GND13
51	PCIE_PWREN_H_GPIO0_D4d_1V8_PLLA
52	VGA_PWREN_H_GPIO0_D5d_1V8_PLLA
53	HDMIRX_PWREN_H_GPIO0_D6d_1V8_PLLA
54	DVP_PWREN0_H_GPIO0_B0u_3V3_PIO2
55	VGA_HPDIN_GPIO0_C0d_3V3_PIO2

56	4G_PWREN_H_GPIO0_C6d_3V3_PIO2
57	I2C1_SDA_TPGPIO0_B4u_3V3_PIO2
58	Working_LEDEN_H_GPIO0_B7d_3V3_pio2
59	I2C1_SCL_TP_GPIO0_B3u_3V3_PIO2
60	VCC3V3_SD_OUT_2A1
61	PWR_EN_RK809_VDC
62	EXT_EN_PMU
63	RK809_32KOUT
64	GND14
65	GND3
66	REFCLK_OUT_GPIO0_A0d_3V3_PIO1
67	GND2
68	GND15
69	VCC3V3_SYSIN_3
70	VCC3V3_SYSIN_4
71	VCC3V3_SYSIN_2
72	VCC3V3_SYSIN_5
73	VCC3V3_SYSIN_1
74	VCC3V3_SYSIN_6
75	GND1
76	GND16
77	VCC5V0_SYSIN_2

78	VCC5V0_SYSIN_3
79	VCC5V0_SYSIN_1
80	VCC5V0_SYSIN_4

J1002

Pin Number	Pin Name
1	GND1
2	GND17
3	VCC3V3_OUT1_2A1
4	VCC3V3_PMU_OUT2_0A4
5	VCC3V3_OUT2_2A1
6	VCC3V3_PMU_OUT1_0A4
7	VCC3V3_OUT3_2A1
8	VCCA1V8_PMU_OUT2_0A4
9	VCC1V8_OUT1_2A5
10	VCCA1V8_PMU_OUT1_0A4
11	VCC1V8_OUT2_2A5
12	GND16
13	VCC1V8_OUT3_2A5
14	VCCIO_ACODEC_OUT_0A4
15	GND2
16	GND15
17	SARADC_VIN6

18	I2C3_SCL_M0_GPIO1_A1u_3V3_IO1
19	SARADC_VIN7
20	I2C3_SDA_M0_GPIO1_A0u_3V3_IO1
21	GND3
22	VCCA1V8_IMAGE_OUT_0A4
23	BT_REG_ON_H_GPIO2_B7d_IO4
24	LCD0_PWREN_H_GPIO0_C7d_3V3_PIO2
25	SDMMC0_D2_GPIO1_D7u_SDIO
26	USB_OTG_PWREN_H_GPIO0_A5d_3V3_PIO1
27	SDMMC0_D3_GPIO2_A0u_SDIO
28	PWM3_IR_GPIO0_C2d_3V3_PIO2
29	GND4
30	GND14
31	USB3_OTG0_ID
32	SARADC_VIN4
33	USB3_OTG0_VBUSDET
34	SARADC_VIN5
35	GND5
36	SARADC_VIN3_BOM_ID
37	SDMMC0_D1_GPIO1_D6u_SDIO
38	SARADC_VIN0_KEY/RECOVERY
39	SDMMC0_D0_GPIO1_D5u_SDIO

40	GND13
41	SDMMC0_CLK_GPIO2_A2d_SDIO
42	FSPI_CLK/FLASH_ALE_GPIO1_D0d_1V8_IO2
43	SDMMC0_CMD_GPIO2_A1u_SDIO
44	FSPI_D3/FLASH_CS1n_GPIO1_D4u_1V8_IO2
45	GND6
46	SARADC_VIN1_HW_ID
47	UART1_RTSn_M0_GPIO2_B5u_IO4
48	GND12
49	UART1_TX_M0_GPIO2_B4u_IO4
50	VCCA_1V8OUT_0A4
51	UART1_RX_M0_GPIO2_B3u_IO4
52	GND11
53	UART1_CTSn_M0_GPIO2_B6u_IO4
54	SDMMC1_D2_GPIO2_A5u_IO4
55	SDMMC1_D1_GPIO2_A4u_IO4
56	SDMMC1_D3_GPIO2_A6u_IO4
57	SDMMC1_D0_GPIO2_A3u_IO4
58	SDMMC1_CMD_GPIO2_A7u_IO4
59	HOST_WAKE_BT_H_GPIO2_C1d_IO4
60	SDMMC1_CLK_GPIO2_B0d_IO4
61	WIFI_WAKE_HOST_H_GPIO2_B2u_IO4

62	GND10
63	WIFI_REG_ON_H_GPIO2_B1d_IO4
64	PDM_SDI1_M0_ADC_GPIO1_B2d_3V3_IO1
65	BT_WAKE_HOST_H_GPIO2_C0d_IO4
66	PDM_CLK1_M0_ADC_GPIO1_A4d_3V3_IO1
67	GND7
68	PDM_SDI2_M0_ADC_GPIO1_B1d_3V3_IO1
69	CLK32K_OUT1_WIFI_GPIO2_C6d_IO4
70	PDM_SDI3_M0_ADC_GPIO1_B0d_3V3_IO1
71	GND8
72	GND9
73	SOC_PCM_CLK_GPIO2_C2d_IO4
74	FSPI_CS0n/FLASH_CS0n_GPIO1_D3u_1V8_IO2
75	SOC_PCM_IN_GPIO2_C5d_IO4
76	FSPI_D1/FLASH_RDn_GPIO1_D2u_1V8_IO2
77	SOC_PCM_OUT_GPIO2_C4d_IO4
78	FSPI_D0/FLASH_RDY_GPIO1_D1u_1V8_IO2
79	SOC_PCM_SYNC_GPIO2_C3d_IO4
80	SARADC_VIN2_HP_HOOK

J1003

Pin Number	Pin Name
1	I2S3_SCLK_M0

2	UART9_TX_M1
3	I2S3_SDO_M0
4	PCIE30X2_WAKEN_M1
5	I2S3_SDI_M0
6	PCIE20_WAKEN_M1
7	RESETN
8	PCIE30X2_PERSTN_M1
9	UART4_TX_M1
10	I2S3_MCLK_M0
11	UART4_RX_M1
12	I2S3_LRCK_M0
13	GPIO3_B6
14	LCD_EN_H_GPIO3_C6
15	I2C5_SCL_3V3
16	GMAC0_RSTN_GPIO3_B7
17	I2C5_SDA_3V3
18	SPK_CTL_H_GPIO3_C3
19	RS485_DIR_GPIO3_B5
20	UART7_TX_M1
21	GMAC0_INT/PMEB_GPIO3_C0
22	CAN1_TX
23	PCIE20_PERSTN_M1

24	HP_DET_L_GPIO3_C2
25	UART7_RX_M1
26	MIPI_CAM0_PDN_L_GPIO3_D5
27	MIPI_CAM1_PDN_L_GPIO3_D3
28	GND
29	HDMIRX_DET_L_GPIO3_D0
30	GMAC1_TXD3_M1
31	MIPI_CAM0_RST_L_GPIO3_D4
32	GND
33	GND
34	GMAC1_TXCLK_M1
35	GMAC1_RXD2_M1
36	GND
37	GMAC1_TXD0_M1
38	GMAC1_TXD2_M1
39	GMAC1_TXD1_M1
40	GMAC1_TXEN_M1
41	GMAC1_RXCLK_M1
42	GMAC1_MDIO_M1
43	GMAC1_RXD0_M1
44	GMAC1_MDC_M1
45	GMAC1_RXDV_CRS_M1

46	GMAC1_RXD3_M1
47	GND
48	GMAC1_RXD1_M1
49	USB2_HOST3_DM
50	GND
51	USB2_HOST3_DP
52	PCIE30X1_WAKEN_M1
53	GND
54	PCIE30X1_CLKREQN_M1
55	USB2_HOST2_DM
56	PCIE30X1_PERSTN_M1
57	USB2_HOST2_DP
58	LCD_RST_L_GPIO3_C7
59	GND
60	MIPI_CAM1_RST_L_GPIO3_D2
61	GND
62	I2C2_SDA_1V8
63	GND
64	I2C2_SCL_1V8
65	HDMI_TX_HPDIN
66	I2C4_SDA_1V8
67	GMAC1_RSTN_GPIO3_B0

68	GND
69	GMAC1_INT/PMEB_GPIO3_A7
70	GMAC1_MCLKINOUT_M1
71	PCIE30X1_PRSNT_L_GPIO3_A0
72	GND
73	PCIE30X2_CLKREQN_M1
74	CIF_CLKOUT
75	PCIE30X2_PRSNT_L_GPIO2_D7
76	GND
77	PCIE20_CLKREQN_M1
78	I2C4_SCL_1V8
79	HDMITX_CEC_M0
80	GND

J1004

Pin Number	Pin Name
1	GND
2	VCC3V3_PMU_RTC
3	MIC1_INN
4	USB_HOST_PWREN_H_GPIO0_A6
5	MIC1_INP
6	LCD0_BL_PWM4
7	GND

8	WIFI_PWREN_L_GPIO0_C1
9	HPR_OUT
10	TP_INT_L_GPIO0_B5
11	HP_SNS
12	LCD1_PWREN_H_GPIO0_C5
13	HPL_OUT
14	LCD1_BL_PWM5
15	GND
16	UART2_TX_M0_DEBUG
17	SPKP_OUT
18	UART2_RX_M0_DEBUG
19	SPKN_OUT
20	RK809_PWRON
21	GND
22	GND
23	HDMI_TX2P_PORT
24	HDMI_TXCLKN_PORT
25	HDMI_TX2N_PORT
26	HDMI_TXCLKP_PORT
27	HDMI_TX0P_PORT
28	GND
29	HDMI_TX0N_PORT

30	HDMI_TX1N_PORT
31	GND
32	HDMI_TX1P_PORT
33	MIPI_DSI_TX0_D1N/LVDS_TX0_D1N
34	GND
35	MIPI_DSI_TX0_D1P/LVDS_TX0_D1P
36	MIPI_DSI_TX1_D0P
37	MIPI_DSI_TX0_D2N/LVDS_TX0_D2N
38	MIPI_DSI_TX1_D0N
39	MIPI_DSI_TX0_D2P/LVDS_TX0_D2P
40	MIPI_DSI_TX1_D1P
41	MIPI_DSI_TX0_D0N/LVDS_TX0_D0N
42	MIPI_DSI_TX1_D1N
43	MIPI_DSI_TX0_D0P/LVDS_TX0_D0P
44	MIPI_DSI_TX1_D3P
45	GND
46	MIPI_DSI_TX1_D3N
47	MIPI_DSI_TX0_CLKN/LVDS_TX0_CLKN
48	GND
49	MIPI_DSI_TX0_CLKP/LVDS_TX0_CLKP
50	MIPI_DSI_TX1_CLKP
51	GND

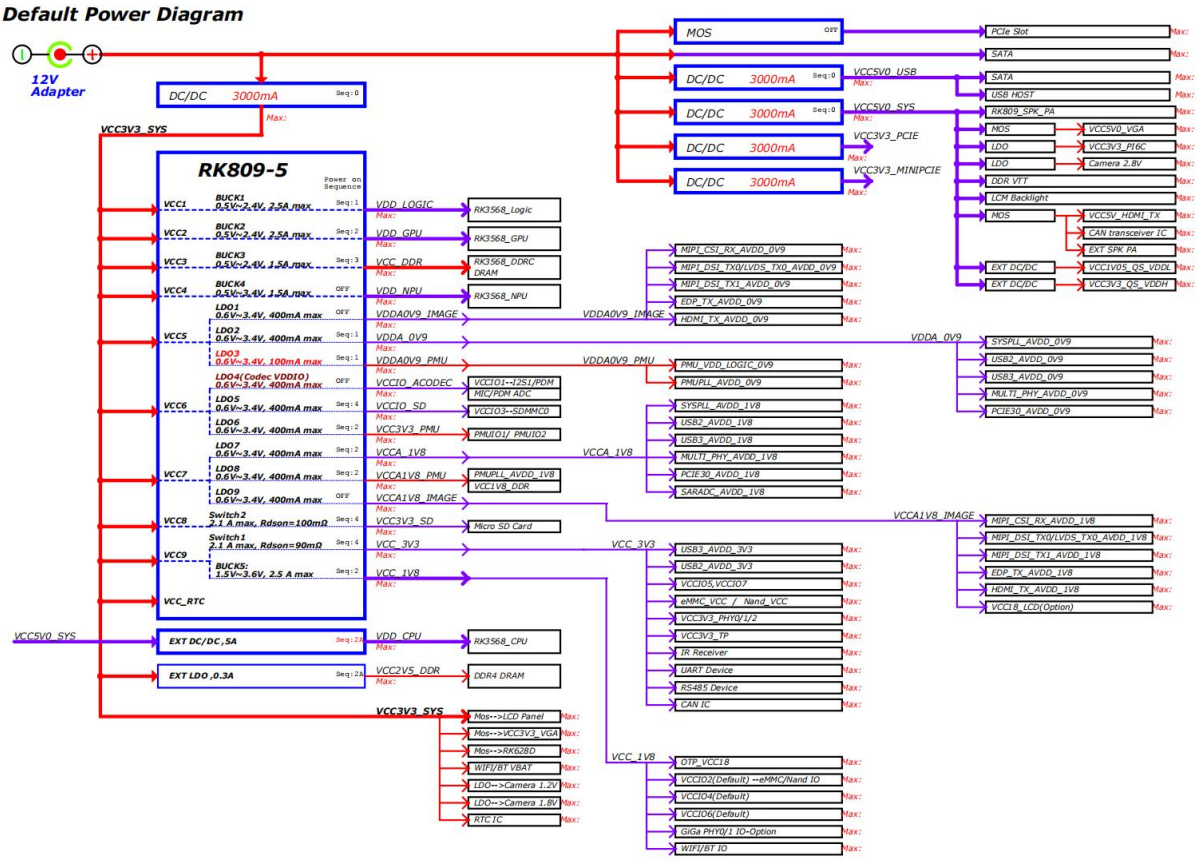
52	MIPI_DSI_TX1_CLKN
53	MIPI_DSI_TX0_D3N/LVDS_TX0_D3N
54	GND
55	MIPI_DSI_TX0_D3P/LVDS_TX0_D3P
56	MIPI_DSI_TX1_D2P
57	GND
58	MIPI_DSI_TX1_D2N
59	MIPI_CSI_RX_D1P
60	GND
61	MIPI_CSI_RX_D1N
62	MIPI_CSI_RX_D0N
63	GND
64	MIPI_CSI_RX_D0P
65	MIPI_CSI_RX_CLK0P
66	MIPI_CSI_RX_D2N
67	MIPI_CSI_RX_CLK0N
68	MIPI_CSI_RX_D2P
69	MIPI_CSI_RX_CLK1P
70	MIPI_CSI_RX_D3N
71	MIPI_CSI_RX_CLK1N
72	MIPI_CSI_RX_D3P
73	GND

74	GND
75	SATA2_ACT_LED
76	HDMIRX_RST_L_GPIO4_D2
77	HDMITX_SCL
78	CAN1_RX
79	HDMITX_SDA
80	UART9_RX_M1

Power Supply Voltage Parameters

Symbol	Parameter	Current Typ	Voltage(V)		
			Min	Typ	Max
VCC3V3_SYSIN_*	Main power input for LCB3568	3A	3.2	3.3	3.4
VCC5V0_SYSIN_*	Main power input for LCB3568	2A	4.9	5	5.2
VCC3V3_PMU_RTC	Backup voltage input for RTC and power on detect	0.01A	3.2	3.3	3.4
VCC3V3_OUT*_2A1	3.3V output for carrier board use	1.5A	3.2	3.3	3.4
VCC3V3_PMU_OUT*_0A4	3.3V output for carrier board use	0.3A	3.2	3.3	3.4
VCC1V8_OUT*_2A5	1.8V output for carrier board use	1.5A	1.7	1.8	1.9
VCCA1V8_PMU_OUT*_0A4	1.8V output for carrier board use	0.3A	1.7	1.8	1.9
VCCA_1V8OUT_0A4	1.8V output for carrier board use	0.3A	1.7	1.8	1.9
VCCIO_ACODEC_OUT_0A4	3.3V output for carrier board use	0.3A	3.2	3.3	3.4
VCCA1V8_IMAGE_OUT_0A4	1.8V output for carrier board use	0.3A	1.7	1.8	1.9
VCC3V3_SD_OUT_2A1	3.3V output for carrier board use	1.5A	3.2	3.3	3.4
EXT_EN_PMU	Output enable for external BUCK	-	0	3.3	3.4
PWR_EN_RK809_VDC(threshold)	System Power on signal input	2.8	3	3.3	12

Power Supply Topology Diagram



6.Application Scenarios

AI

Machine Vision

Industrial Control

Energy and Power

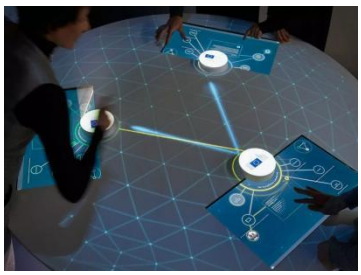
Smart Tablet

VR

Smart Logistics

New

Smart Commercial



Object Recognition

Vehicle terminal

Security Surveillance

7.Ordering Model

Product Model	Status	CPU	DDR	eMMC	Operating Temperature
LC120108T4	ACTIVE	RK3568	1GB	8GB	-20℃ - 70℃
LC120216T4	ACTIVE	RK3568	2GB	16GB	-20℃ - 70℃
LC120432T4	ACTIVE	RK3568	4GB	32GB	-20℃ - 70℃
LC120832T4	ACTIVE	RK3568	8GB	32GB	-20℃ - 70℃
LC121108T4	ACTIVE	RK3568J	1GB	8GB	-40℃ - 85℃
LC121216T4	ACTIVE	RK3568J	2GB	16GB	-40℃ - 85℃
LC121432T4	ACTIVE	RK3568J	4GB	32GB	-40℃ - 85℃

*For customized non-standard orders, please contact us via email at sales@neardi.com.

8.About Neardi

Shanghai Neardi Technology Co., Ltd., established in 2014, is a national-level high-tech enterprise, a strategic partner of Rockchip, and an authorized agent for Black Sesame Technologies. We focus on the research and development and production of enterprise-level open-source hardware platforms, offering customers core modules, industry-specific boards, development boards, touch panels, and industrial control hosts. Adhering to the core philosophy of technological innovation and professional service, leveraging Neardi Technology's technical strengths and industry experience, we assist our partners in achieving rapid mass production of their products.

Company Advantages

Software Design / Custom OS / Product ODM / Bulk Delivery

Products

Rockchip

System On Module


LCB3588/J


LCB3568/J


LCB3566


LCB3399Pro


LCB3399

Development Board


LKD3588/J


LKD3568/J


LKD3566


LKD3399Pro


LKD3399

Embedded Computer


LPB3588


LPM3588


LPC3588


LPB3568


LPB3399Pro

Black Sesame Technologies


SOM-A-A1000


SOM-π-A1000


SOM-B-A1000


SOM-A1000 开发者套件

Vehicle Terminal


LPA3588


LPA3568


LPA3399Pro


LPS3399Pro

WIFI Module

FD7352S

FD7352P

FD7352M

FD7155U

FD7256S