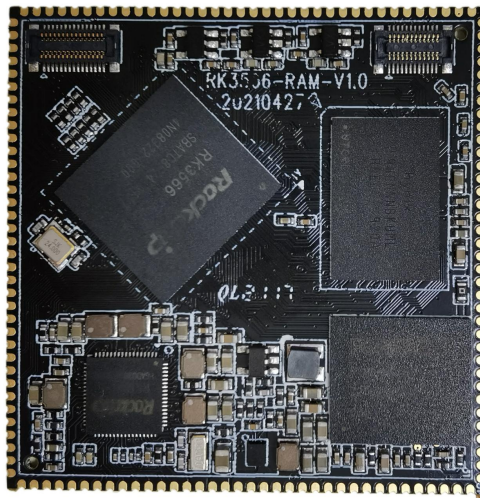


Document No.	Types	Version information	Release date	Secret level	
BST20220624	Datasheet	V2.0	2022-06-24	public	

64-bit Industrial-grade core board M66 V2.0



Version	Updated	Update Content
V1.0	2020-05-27	V1.0
V1.1	2021-09-13	Fixed some errors
V2.0	2022-06-24	Update the description for Product Introduction and Interface definition

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Company Profile

Shenzhen BesTom Electronics Co., Ltd. was founded in 2008, focusing on the research and development of smart terminal devices, smart homes, etc. With "smart" as the core, it has formed a focus on different industries, different scales, and different applications such as governments, enterprises, and media. The series of products and targeted solutions are the most influential smart technology provider in China.



"Innovation, transforming new technology into productivity" is the core competitiveness of BesTom Electronics Co., Ltd. With a deep understanding of the software and Internet industry, BesTom Electronics Co., Ltd. combines software technology with Internet applications, combines industry-leading product concepts and rich product development experience to provide users with simplicity, convenience, safety and practicality. Collaborative application software products and solutions help customers achieve low-cost, low-risk, fast-start, and high-efficiency informatization goals. The cordial, open, and rigorous company culture and scientific and standardized management gather a large number of outstanding talents. BesTom Electronics Co., Ltd. has a management team composed of outstanding professional managers and a technical team composed of senior IT experts. Tacit cooperation in product development, promotion and maintenance, a deep understanding of the meaning of "customer-centric", "service" runs through every detail of the company's operation and management, and wins extensive trust and support from customers.

"Create Better" is the philosophy of the BesTom team. We hope that through BesTom's high-quality technical services, the research and development of various technological products can become more efficient and simple, and creative products can be integrated into life more smoothly.

1. Product introduction

1.1 Overview

The M66 uses a high-performance low-power processor RK3566, with a quad-core 64-bit ARM Cortex-A55 CPU, the main frequency is up to 1.8GHz, and the efficiency is greatly improved; it adopts 22nm advanced technology and has the characteristics of low power consumption and high performance. It can be equipped with a memory capacity of up to 8GB, up to 32Bit wide; Supports full-link ECC, making data safer and more reliable, and meeting the requirements of large memory product application scenarios.

The core board adopts 8-layer wiring technology and immersion gold technology, with stable and reliable performance, suitable for different application environments.



1.2 RK3566 quad-core 64-bit processor

The RK3566 configured with a quad-core 64-bit Cortex-A55 processor, with 22nm lithography process, has frequency up to 1.8GHz, low power consumption and high performance delivering efficient and stable performance for data processing of back-end equipment.

1.3 Integrated co-processors — GPU, VPU, NPU

It is integrated with dual-core GPU, high-performance VPU and high-efficiency NPU. The GPU supports OpenGL ES3.2/2.0/1.1, Vulkan1.1. The VPU can achieve 4K@60fps H.265/H.264/VP9 video decoding and 1080P@100fps H.265/H.264 video encoding. The NPU supports one-click switching of mainstream frameworks like Caffe / TensorFlow, etc.

1.4 Various display interfaces

Support HDMI2.0, USB3.0, USB2.0, MIPI DSI, MIPI CSI, I2C, SPI, UART, ADC, PWM, GPIO, PCIe, I2S and other interfaces, it can be directly applied to external device control and expansion.

2. Specifications

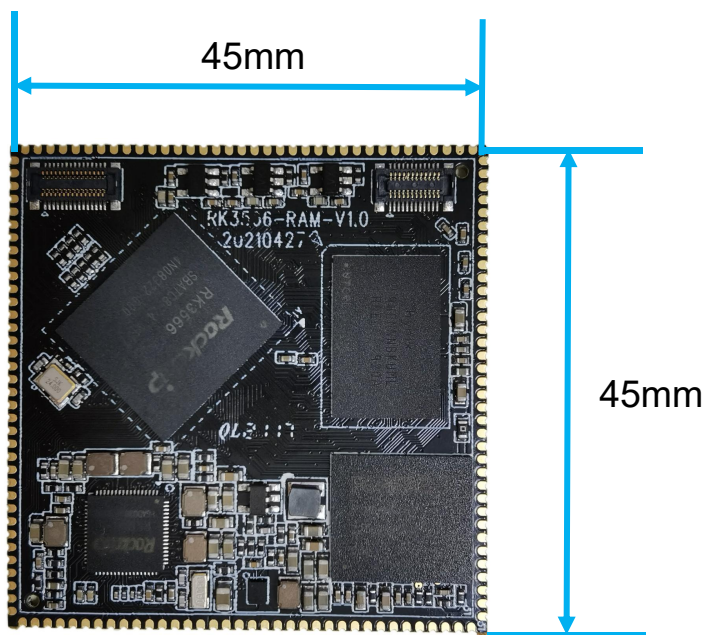
Parameters	
Master chip	Rockchip RK3566
Processor	Quad-core 64-bit ARM Cortex-A55 processor, 22nm advanced process with maximum main frequency of 1.8GHz
Graphics processor	Support ARM G52 2EE. Support for OpenGL ES 1.1/2.0/3.2, OpenCL 2.0, Vulkan 1.1 Inin high performance 2D acceleration hardware
NPU	0.8Tops@INT8 performance, integrated efficient AI Accelerator RKNN NPU Support the one-click transformation of Caffe/TensorFlow/TFLite/ONNX/PyTorch/Keras/Darknet mainstream architecture models
Video processor	Support 4k@60fps (H.265 / H.264 / VP9) video decoding Support 1080P@100fps H.265/H.264 video encoding Support 8M ISP
RAM	2GB/ 4GB/ 8GB LPDDR4 32Bit bandwidth, which supports the full-link ECC
Storage	16GB/32GB/64GB/128GB eMMC. Support for SATA 3.0 x 1 (extended 2.5 " SSD/HDD)
Hardware features	
Ethernet	Support Gigabit Ethernet (1000Mbps)
Wireless Network	Support for extension M.2 extension 5G Support for WiFi6 (802.11 AX) Support for BT5.0
Display	1 × HDMI2.0, support 4K@60fps 1 × LVDS/MIPI-DSI, supports 1920 * 1080@60fps output (MIPI and LVDS are reused) 1 × EDP1.3, support 2560x1600@60fps output
Audio	1 × HDMI audio output 1 × Speaker output 1 × headphone output 1 × Analog MIC input
USB	1 × USB 2.0 OTG 1 × USB 3.0 2 × USB 2.0 Host (which shares data feet with USB3.0)
Webcam	1 × MIPI CSI camera interface 1 × DVP camera interface
Extension ports	SPI、UART、I2C、I2S、SDIO、PWM、ADC、GPIO

System Software

OS Android 、 Linux

Appearance pecifications

Size



Exterior Stamp hole

Core board size 45mm*45mm

Pin pitch 1.2mm

Number of pins 144 PIN

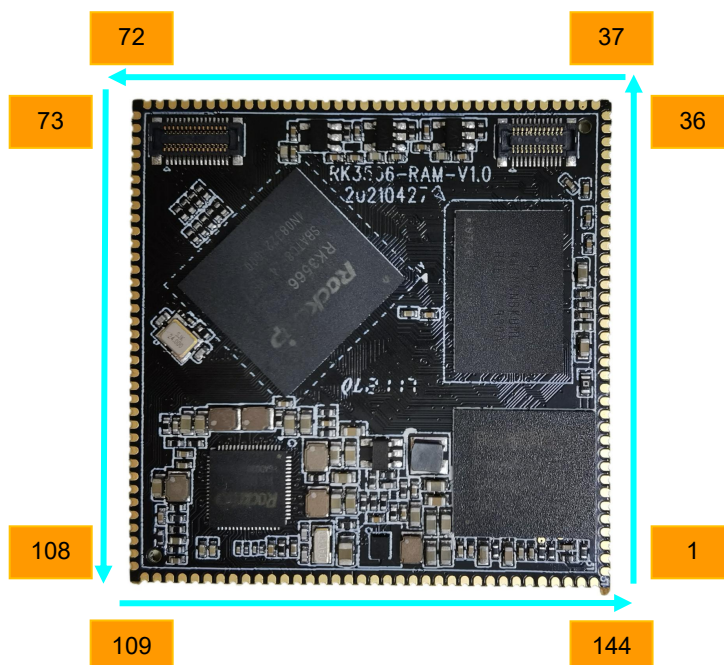
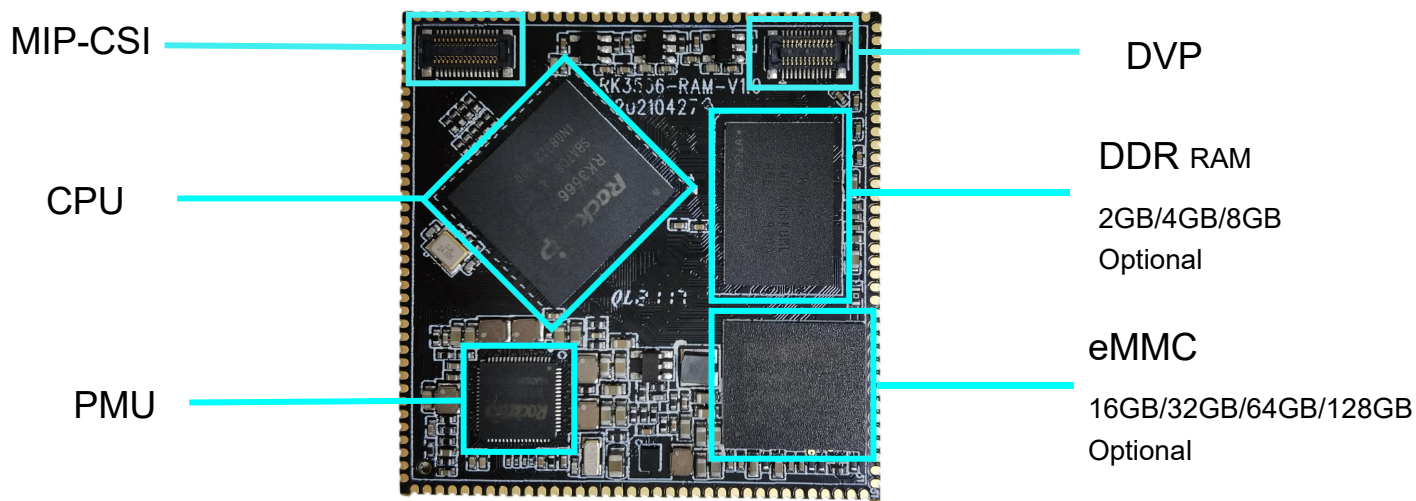
Power Supply 3.3V

Temperature Operating Temperature : -20°C ~ 60°C
 Storage Temperature: -20°C~70°C
 Storage Humidity :10% ~ 80 %

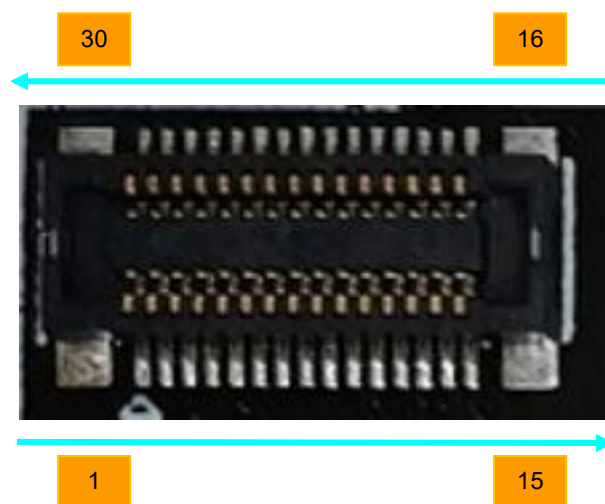
PCB specifications 8-laminate design

3. Interface Definition

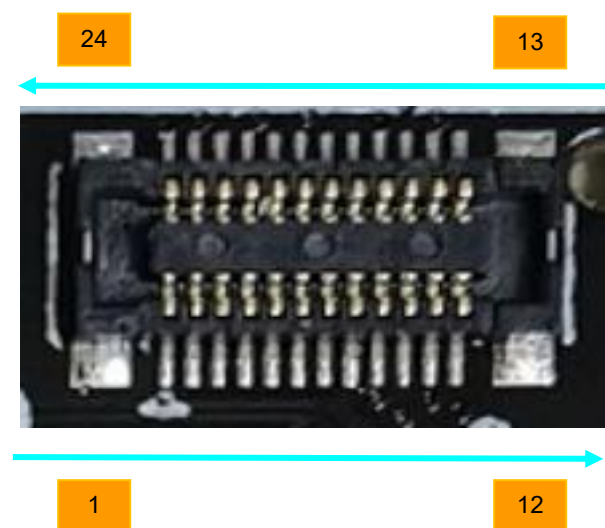
The M66 core board leads to all the pins of the chip, and the performance of data transmission and expansion is maximized. The pins of the immersion gold process are corrosion-resistant, firm and reliable.



Picture 3-1 Pin number



Picture 3-2 MISI-CSI pin number



Picture3-3 DVP pin number

Notes1: Pad types:

I = input, O = output, I/O = input/output (bidirectional) ,

G= ground, P = power supply, DOWN = Internal pull down , UP = Internal pull up,

L = low level, H = high level, AI=analog input, AO=analog output, AI/O=analog input/output

CON1 3566

PIN	Core board pin definition	Pad type	IO Pull	IO Power domain	Pin Number	Pin Name
1	UART1_TX_M0	I/O	UP	1.8V	F38	UART1_TX_M0/GPIO2_B4_u
2	UART1_RTSn_M0	I/O	UP	1.8V	F37	UART1_RTSn_M0/SPI1_CLK_M0/GPIO2_B5_u
3	WIFI_WAKE_HOST_H	I/O	DOWN	1.8V	D37	I2S2_SDI_M0/UART8_TX_M0/SPI2_CS1_M0/GPIO2_C5_d
4	BT_REG_ON_H	I/O	DOWN	1.8V	D38	I2S2_SCLK_RX_M0/UART6_RTSn_M0/SPI1_MOSI_M0/GPIO2_B7_d
5	TP1_INT_1V8	I/O	DOWN	1.8V	C37	I2S2_SCLK_TX_M0/UART7_CTSn_M0/SPI2_MISO_M0/GPIO2_C2_d
6	CLK32K_OUT1_WIFI	I/O	DOWN	1.8V	B38	CLK32K_OUT1/UART8_RX_M0/SPI1_CS1_M0/GPIO2_C6_d
7	GND	G				GND
8	POWER_KEY	P		3.3V		
9	PMIC_EXT_EN	/	/	/	/	PMIC_EXT_EN
10	RESET_KEY	I	UP			RESET_KEY
11	BT_WAKE_HOST_H	I/O	DOWN	1.8V	A37	I2S2_LRCK_RX_M0/UART6_CTSn_M0/SPI1_CS0_M0/GPIO2_C0_d
12	HOST_WAKE_BT_H	I/O	DOWN	1.8V	B36	I2S2_MCLK_M0/ETH0_REFCLKO_25M/UART7_RTSn_M0/SPI2_CLK_M0/GPIO2_C1_d
13	I2C4_SDA_M1/GPIO2_B1_D	I/O	DOWN	1.8V	A35	SDMMC1_PWREN/I2C4_SDA_M1/UART8_RTSn_M0/GPIO2_B1_d
14	I2C4_SCL_M1/GPIO2_B2_U	I/O	UP	1.8V	B34	SDMMC1_DET/I2C4_SCL_M1/UART8_CTSn_M0/GPIO2_B2_u
15	UART5_RX_M0	I/O	UP	3.3V	1E19	SDMMC0_CMD/PWM10_M1/UART5_RX_M0/GPIO2_A1_u
16	UART5_TX_M0	I/O	UP	3.3V	G38	SDMMC0_CLK/TEST_CLKOUT/UART5_TX_M0/GPIO2_A2_d
17	UART6_TX_M1	I/O	UP	3.3V	1E20	SDMMC0_D0/UART2_TX_M1/UART6_TX_M1/PWM8_M1/GPIO1_D5_u
18	UART6_RX_M1	I/O	UP	3.3V	1F19	SDMMC0_D1/UART2_RX_M1/UART6_RX_M1/PWM9_M1/GPIO1_D6_u
19	WIFI_REG_ON_H	I/O	DOWN	1.8V	1B20	I2S2_SDO_M0/UART9_CTSn_M0/SPI2_CS0_M0/GPIO2_C4_d
20	ADC2	AI		1.8V	1B18	SARADC_VIN2

21	ADC0	AI		1.8V	1D17	SARADC_VIN0
22	I2S1_MCLK_M0_RK809	I/O	UP	3.3V	A23	SCR_CLK/I2S1_MCLK_M0/UART3_RTSn_M0/ GPIO1_A2_D
23	I2C3_SDA_M0/UART3_RX_M0/AU DIOPWM_LOUT	I/O	UP	3.3V	A22	I2C3_SDA_M0/UART3_RX_M0/AUDIOPWM_L OUT_P/GPIO1_A0_u
24	I2C3_SCL_M0/UART3_TX_M0/AU DIOPWM_LOUT	I/O	UP	3.3V	B22	I2C3_SCL_M0/UART3_TX_M0/AUDIOPWM_L OUT_N/GPIO1_A1_u
25	GND	G				GND
26	TP1_RST_1V8	I/O	DOWN	1.8V	1D19	I2S2_LRCK_TX_M0/UART9_RTSn_M0/SPI2_M OSI_M0/GPIO2_C3_d
27	VCC_1V8	P		1.8V		
28	GND	G				GND
29	VCC_3V3	P		3.3V		
30	GPIO3_C2_D	I/O	DOWN	3.3V	AP3	VOP_BT1120_D14/SPI1_MISO_M1/UART5_TX _M1/I2S1_SDO3_M2/GPIO3_C2_d
31	GPIO3_C3_D	I/O	DOWN	3.3V	AR2	VOP_BT1120_D15/SPI1_CLK_M1/UART5_RX_ M1/I2S1_SCLK_RX_M2/GPIO3_C3_d
32	GND	G				GND
33	USB_HOST2_DM	AI/O		3.3V	V1	USB_HOST2_DM
34	USB_HOST2_DP	AI/O		3.3V	V2	USB_HOST2_DP
35	LCD0_RST_L_GPIO0_C2	I/O	DOWN	3.3V	AM37	PWM3_IR/EDP_HPDIN_M1/MCU_JTAG_TMS/ GPIO0_C2_d
36	TP_RST_3V3	I/O	UP	3.3V/2.2k	1R16	I2C2_SDA_M0/SPI0_MOSI_M0/PCIE20_PERS Tn_M0/PWM2_M1/GPIO0_B6_u
37	GND	G				GND
38	VCC3V3_SYS	P		3.3V		
39	GPIO3_C1_D	I/O	DOWN	3.3V	AP4	VOP_BT1120_D13/SPI1_MOSI_M1/PCIE20_P ERSTn_M1/I2S1_SDO2_M2/GPIO3_C1_d
40	GMAC1_MDC_M0	I/O	DOWN	3.3V	1P3	PWM14_M0/VOP_PWM_M1/GMAC1_MDC_M0 /UART7_TX_M1/PDM_CLK1_M2/GPIO3_C4_d
41	GMAC1_MDIO_M0	I/O	DOWN	3.3V	1P4	PWM15_IR_M0/SPDIF_TX_M1/GMAC1_MDIO_ M0/UART7_RX_M1/I2S1_LRCK_RX_M2/GPIO3 _C5_d
42	GMAC1_RSTN_GPIO3_C1_D	I/O	DOWN	3.3V	1T6	PWM13_M1/SPI3_CS0_M1/SATA0_ACT_LED/ UART9_RX_M1/I2S3_SDI_M1/GPIO4_C6_d
43	GMAC1_MCLKINOUT_M0	I/O	DOWN	3.3V	AR4	PWM13_M0/GMAC1_MCLKINOUT_M0/UART3 _RX_M1/PDM_SDI3_M2/GPIO3_C0_d
44	ETH1_REFCLKO_25M_M0	I/O	DOWN	3.3V	AR7	VOP_BT1120_D6/ETH1_REFCLKO_25M_M0/S DMMC2_PWREN_M1/GPIO3_B0_d
45	GMAC1_RXD3_M0	I/O	DOWN	3.3V	AP9	VOP_BT1120_D4/GMAC1_RXD3_M0/I2S3_SD O_M0/SDMMC2_CMD_M1/GPIO3_A5_d
46	GMAC1_RXD2_M0	I/O	DOWN	3.3V	AR9	VOP_BT1120_D3/GMAC1_RXD2_M0/I2S3_LR

						CK_M0/SDMMC2_D3_M1/GPIO3_A4_d
47	GMAC1_RXD1_M0	I/O	DOWN	3.3V	AR6	VOP_BT1120_D8/GMAC1_RXD1_M0/UART4_TX_M1/PWM9_M0/GPIO3_B2_d
48	GMAC1_RXD0_M0	I/O	DOWN	3.3V	AP7	VOP_BT1120_D7/GMAC1_RXD0_M0/UART4_RX_M1/PWM8_M0/GPIO3_B1_d
49	GMAC1_RXDV_CRS_M0	I/O	DOWN	3.3V	AP6	VOP_BT1120_D9/GMAC1_RXDV_CRS_M0/I2C5_SCL_M0/PDM_SDI0_M2/GPIO3_B3_d
50	GMAC1_RXER_M0	I/O	DOWN	3.3V	1U3	VOP_BT1120_D10/GMAC1_RXER_M0/I2C5_SDA_M0/PDM_SDI1_M2/GPIO3_B4_d
51	GMAC1_RXCLK_M0	I/O	DOWN	3.3V	1V3	VOP_BT1120_D5/GMAC1_RXCLK_M0/SDMMC2_DET_M1/GPIO3_A7_d
52	GMAC1_TXD3_M0	I/O	DOWN	3.3V	AP10	VOP_BT1120_D2/GMAC1_TXD3_M0/I2S3_SCLK_M0/SDMMC2_D2_M1/GPIO3_A3_d
53	GMAC1_TXD2_M0	I/O	DOWN	3.3V	AR10	VOP_BT1120_D1/GMAC1_TXD2_M0/I2S3_MCLK_M0/SDMMC2_D1_M1/GPIO3_A2_d
54	GMAC1_TXD1_M0	I/O	DOWN	3.3V	1V2	VOP_BT1120_D12/GMAC1_TXD1_M0/I2C3_SDA_M1/PWM11_IR_M0/GPIO3_B6_d
55	GMAC1_TXD0_M0	I/O	DOWN	3.3V	1T4	VOP_BT1120_D11/GMAC1_TXD0_M0/I2C3_SCL_M1/PWM10_M0/GPIO3_B5_d
56	GMAC1_TXEN_M0	I/O	DOWN	3.3V	AP5	PWM12_M0/GMAC1_TXEN_M0/UART3_TX_M1/PDM_SDI2_M2/GPIO3_B7_d
57	GMAC1_TXCLK_M0	I/O	DOWN	3.3V	1U4	VOP_BT1120_CLK/GMAC1_TXCLK_M0/I2S3_SDI_M0/SDMMC2_CLK_M1/GPIO3_A6_d
58	GMAC1_INT/PMEB_GPIO3_A1_D	I/O	DOWN	3.3V	1U5	VOP_BT1120_D0/SPI1_CS0_M1/SDMMC2_D0_M1/GPIO3_A1_d
59	HDMITX_CEC_M0	I/O	UP	3.3V	1V5	HDMITX_CEC_M0/SPI3_CS1_M1/GPIO4_D1_u
60	HDMITX_SDA	I/O	UP	3.3V	AP11	HDMITX_SDA/I2C5_SDA_M1/GPIO4_D0_u
61	HDMITX_SCL	I/O	UP	3.3V	AR12	HDMITX_SCL/I2C5_SCL_M1/GPIO4_C7_u
62	GPIO_C4_D	I/O	DOWN	3.3V	1U6	PWM12_M1/SPI3_MISO_M1/SATA1_ACT_LED/UART9_TX_M1/I2S3_SDO_M1/GPIO4_C5_d
63	IR_IN	I/O	DOWN	3.3V	AP12	PWM15_IR_M1/SPI3_MOSI_M1/I2S3_SCLK_M1/GPIO4_C3_d
64	SENSOR_INT	I/O	DOWN	3.3V	1U7	PWM14_M1/SPI3_CLK_M1/I2S3_MCLK_M1/GPIO4_C2_d
65	UART2_RX_M0_DEBUG	I/O	UP	3.3V	1V19	UART2_RX_M0/GPIO0_D0_u
66	UART2_TX_M0_DEBUG	I/O	UP	3.3V	1U18	UART2_TX_M0/GPIO0_D1_u
67	LCD0_BL_PWM4	I/O	DOWN	3.3V	AN38	PWM4/VOP_PWM_M0/MCU_JTAG_TRSTn/GPIO0_C3_d
68	RTCIC_INT_L_GPIO0_C0	I/O	DOWN	3.3V	AN37	PWM5/SPI0_CS1_M0/UART0_RTSn/GPIO0_C4_d
69	I2C5_SDA_M1	I/O	UP	3.3V/2.2K	AM38	I2C1_SDA/PCIE20_BUTTONRSTn/MCU_JTAG_TCK/GPIO0_B4_u

70	I2C5_SCL_M1	I/O	UP	3.3V/2.2K	AK37	I2C1_SCL/MCU_JTAG_TDO/GPIO0_B3_u
71	I2C0_SDA_PMIC	I/O	UP	3.3V/2.2K	AK38	I2C0_SDA/GPIO0_B2_U
72	I2C0_SCL_PMIC	I/O	UP	3.3V/2.2K	AJ37	I2C0_SCL/GPIO0_B1_U
73	TP_INT_3V3	I/O	UP	3.3V/2.2k	1U20	I2C2_SCL_M0/SPI0_CLK_M0/PCIE20_WAKEn_M0/PWM1_M1/GPIO0_B5_u
74	GND	G				GND
75	LVDS/MIPI_DSI_TX0_CLKN	AO		1.8V	1V15	MIPI_DSI_TX0_CLKN/LVDS_TX0_CLKN
76	LVDS/MIPI_DSI_TX0_CLKP	AO		1.8V	1V16	MIPI_DSI_TX0_CLKP/LVDS_TX0_CLKP
77	LVDS/MIPI_DSI_TX0_D3N	AO		1.8V	AP26	MIPI_DSI_TX0_D3N/LVDS_TX0_D3N
78	LVDS/MIPI_DSI_TX0_D3P	AO		1.8V	AR26	MIPI_DSI_TX0_D3P/LVDS_TX0_D3P
79	LVDS/MIPI_DSI_TX0_D2N	AO		1.8V	AR27	MIPI_DSI_TX0_D2N/LVDS_TX0_D2N
80	LVDS/MIPI_DSI_TX0_D2P	AO		1.8V	AP27	MIPI_DSI_TX0_D2P/LVDS_TX0_D2P
81	LVDS/MIPI_DSI_TX0_D1N	AO		1.8V	AP29	MIPI_DSI_TX0_D1N/LVDS_TX0_D1N
82	LVDS/MIPI_DSI_TX0_D1P	AO		1.8V	AR29	MIPI_DSI_TX0_D1P/LVDS_TX0_D1P
83	LVDS/MIPI_DSI_TX0_D0N	AO		1.8V	AR30	MIPI_DSI_TX0_D0N/LVDS_TX0_D0N
84	LVDS/MIPI_DSI_TX0_D0P	AO		1.8V	AP30	MIPI_DSI_TX0_D0P/LVDS_TX0_D0P
85	HDMI_TXCLKN_PORT	AO		1.8V	AP32	HDMI_TX_CLKN
86	HDMI_TXCLKP_PORT	AO		1.8V	AR32	HDMI_TX_CLKP
87	HDMI_TX0N_PORT	AO		1.8V	AR33	HDMI_TX_D0N
88	HDMI_TX0P_PORT	AO		1.8V	AP33	HDMI_TX_D0P
89	HDMI_TX1N_PORT	AO		1.8V	AP35	HDMI_TX_D1N
90	HDMI_TX1P_PORT	AO		1.8V	AR35	HDMI_TX_D1P
91	HDMI_TX2N_PORT	AO		1.8V	AR36	HDMI_TX_D2N
92	HDMI_TX2P_PORT	AO		1.8V	AP36	HDMI_TX_D2P
93	HDMI_TX_HPDIN	AO		1.8V	1V17	HDMI_TX_HPDIN
94	EDP_TX_AUXP	AO		1.8V	1H19	EDP_TX_AUXP
95	EDP_TX_AUXN	AO		1.8V	1H20	EDP_TX_AUXN
96	EDP_TX_D3P	AO		1.8V	N37	EDP_TX_D3P
97	EDP_TX_D3N	AO		1.8V	N38	EDP_TX_D3N
98	EDP_TX_D2N	AO		1.8V	M38	EDP_TX_D2N
99	EDP_TX_D2P	AO		1.8V	M37	EDP_TX_D2P
100	EDP_TX_D1N	AO		1.8V	K37	EDP_TX_D1N
101	EDP_TX_D1P	AO		1.8V	K38	EDP_TX_D1P
102	EDP_TX_D0N	AO		1.8V	J38	EDP_TX_D0N
103	EDP_TX_D0P	AO		1.8V	J37	EDP_TX_D0P
104	PCIE20_TXN/SATA2_TXN	AI/O		1.8V	AA38	PCIE20_TXN/SATA2_TXN
105	PCIE20_TXP/SATA2_TXP	AI/O		1.8V	AA37	PCIE20_TXP/SATA2_TXP
106	PCIE20_RXN/SATA2_RXN	AI/O		1.8V	AB38	PCIE20_RXN/SATA2_RXN
107	PCIE20_RXP/SATA2_RXP	AI/O		1.8V	AB37	PCIE20_RXP/SATA2_RXP
108	GND	G				GND
109	USB_HOST_DP	AI/O		3.3V	1J19	USB3_HOST1_DP

110	USB_HOST_DM	AI/O		3.3V	1J20	USB3_HOST1_DM
111	USB3_HOST1_SSTXP/SATA1_TX P	AI/O		3.3V	W37	USB3_HOST1_SSTXP/SATA1_TXP
112	USB3_HOST1_SSTXN/SATA1_TX N	AI/O		3.3V	W38	USB3_HOST1_SSTXN/SATA1_TXN
113	USB3_HOST1_SSRXP/SATA1_RX P	AI/O		3.3V	V38	USB3_HOST1_SSRXP/SATA1_RXP
114	USB3_HOST1_SSRXN/SATA1_RX N	AI/O		3.3V	V37	USB3_HOST1_SSRXN/SATA1_RXN
115	SPKP_OUT			5.0V		MAX:1.3W ClassD @ 8Ω
116	SPKN_OUT			5.0V		MAX:1.3W ClassD @ 8Ω
117	HPL_OUT					MAX:0.5Vrms @ 32Ω/ 0.8Vrms @ 300Ω
118	HP_SNS	/	/	/	/	/
119	HPR_OUT					MAX:0.5Vrms @ 32Ω/ 0.8Vrms @ 300Ω
120	MIC1_INN	I		3.3V		MIC1_INN
121	MIC1_INP	I		3.3V		MIC1_INP
122	VCC_RTC	P		3.3V		
123	GND	G				GND
124	VCC5V0_SYS	P		5.0V		
125	VCC5V0_SYS	P		5.0V		
126	GND	G				GND
127	USB_OTG0_ID	I		3.3V	T37	USB_OTG0_ID
128	USB_OTG0_VBUSDET	I		3.3V	T38	USB_OTG0_VBUSDET
129	USB_OTG0_DP	AI/O		3.3V	R37	USB_OTG0_DP
130	USB_OTG0_DM	AI/O		3.3V	R38	USB_OTG0_DM
131	VCC5V0_HOST	P		5.0V		
132	PMIC_32KOUT			3.3V		
133	BL_ADJ	I/O	DOWN	3.3V	1R17	PWM0_M0/CPUAVS/GPIO0_B7_d
134	SDMMC1_CLK	I/O	UP	1.8V	B37	SDMMC1_CLK/UART9_TX_M0/GPIO2_B0_d
135	SDMMC1_D1	I/O	UP	1.8V	1E18	SDMMC1_D1/UART6_TX_M0/GPIO2_A4_u
136	SDMMC1_D0	I/O	UP	1.8V	1C19	SDMMC1_D0/UART6_RX_M0/GPIO2_A3_u
137	SDMMC1_D3	I/O	UP	1.8V	1A20	SDMMC1_D3/UART7_TX_M0/GPIO2_A6_u
138	SDMMC1_D2	I/O	UP	1.8V	1D18	SDMMC1_D2/UART7_RX_M0/GPIO2_A5_u
139	SDMMC1_CMD	I/O	UP	1.8V	B35	SDMMC1_CMD/UART9_RX_M0/GPIO2_A7_u
140	GND	G				GND
141	UART0_RX	I/O	DOWN	3.3V	1T19	PWM1_M0/GPUAVS/UART0_RX/GPIO0_C0_d
142	UART0_TX	I/O	DOWN	3.3V	1R18	PWM2_M0/NPUAVS/UART0_TX/MCU_JTAG_T DI/GPIO0_C1_d
143	UART1_CTSN_M0	I/O	UP	1.8V	G37	UART1_CTSn_M0/SPI1_MISO_M0/GPIO2_B6_u
144	UART1_RX_M0	I/O	UP	1.8V	1C20	UART1_RX_M0/GPIO2_B3_u

MIPI-CSI

PIN	Core board pin definition	Pad type	IO Pull	IO Power domain	Pin Number	Pin Name
1	GND	G				GND
2	MIPICAMF_RST_L_GPIO4_B0	I/O	DOWN	1.8V	AH2	ISP_FLASHTRIGOUT/EBC_SDCE0/GMAC1_TXEN_M1/SPI3_CS0_M0/I2S1_SCLK_RX_M1/GPIO4_A6_d
3	I2C2_SDA_M1	I/O	DOWN	1.8V	AF1	I2C2_SDA_M1/EBC_GDSP/ISP_FLASH_TRIGIN/VOP_BT656_CLK_M1/GPIO4_B4_d
4	I2C2_SCL_M1	I/O	DOWN	1.8V	AD1	I2C2_SCL_M1/EBC_SDSHR/I2S1_SDO3_M1/GPIO4_B5_d
5	GND	G				GND
6	MIPI_CSI_RX_D0P	AI		1.8V	AP18	MIPI_CSI_RX_D0P
7	MIPI_CSI_RX_D0N	AI		1.8V	AR18	MIPI_CSI_RX_D0N
8	MIPI_CSI_RX_D1P	AI		1.8V	AR17	MIPI_CSI_RX_D1P
9	MIPI_CSI_RX_D1N	AI		1.8V	AP17	MIPI_CSI_RX_D1N
10	MIPI_CSI_RX_D2P	AI		1.8V	AP15	MIPI_CSI_RX_D2P
11	MIPI_CSI_RX_D2N	AI		1.8V	AR15	MIPI_CSI_RX_D2N
12	MIPI_CSI_RX_D3P	AI		1.8V	AR14	MIPI_CSI_RX_D3P
13	MIPI_CSI_RX_D3N	AI		1.8V	AP14	MIPI_CSI_RX_D3N
14	MIPI_CSI_RX_CLK0P	AI		1.8V	1V9	MIPI_CSI_RX_CLK0P
15	MIPI_CSI_RX_CLK0N	AI		1.8V	1U9	MIPI_CSI_RX_CLK0N
16	GND	G				GND
17	MIPI_CSI_RX_CLK1N	AI		1.8V	1U8	MIPI_CSI_RX_CLK1N
18	MIPI_CSI_RX_CLK1P	AI		1.8V	1V8	MIPI_CSI_RX_CLK1P
19	GND	G				GND
20	VCC2V8_DVP	P		2.8V		
21	VCC1V8_DVP	P		1.8V		
22	VCC1V2_DVP	P		1.2V		
23	GND	G				GND
24	CAM_CLKOUT1	I/O	DOWN	1.8V	1L2	CAM_CLKOUT1/EBC_SDCE2/GMAC1_RXD1_M1/SPI3_MISO_M0/I2S1_SDO1_M1/GPIO4_B0_d
25	GND	G				GND
26	MIPICAMB_RST_L_GPIO4_B1	I/O	DOWN	1.8V	AG2	ISP_PRELIGHT_TRIG/EBC_SDCE3/GMAC1_RXDV_CRS_M1/I2S1_SDO2_M1/GPIO4_B1_d
27	CAM_CLKOUT0	I/O	DOWN	1.8V	1N1	CAM_CLKOUT0/EBC_SDCE1/GMAC1_RXD0_M1/SPI3_CS1_M0/I2S1_LRCK_RX_M1/GPIO4_A7_d

28	CAMERAB_PDN_L_GPIO4_B3	I/O	DOWN	1.8V	AE2	I2C4_SCL_M0/EBC_GDOE/ETH1_REFCLKO_2 5M_M1/SPI3_CLK_M0/I2S2_SDO_M1/GPIO4_B3_d
29	CAMERA_F_PDN_L_GPIO4_B2	I/O	DOWN	1.8V	AF2	I2C4_SDA_M0/EBC_VCOM/GMAC1_RXER_M1 /SPI3_MOSI_M0/I2S2_SDI_M1/GPIO4_B2_d Core board Pull up resistance 2.2K to 1.8V
30	MIPI_CSI_SEL	I/O	DOWN	3.3V	1V6	EDP_HPDIN_M0/SPDIF_TX_M2/SATA2_ACT_ LED/I2S3_LRCK_M1/GPIO4_C4_d

DVP

PIN	Core board pin definition	Pad type	IO Pull	IO Power domain	Pin Number	Pin Name
1	DVP_PDN0	I/O	DOWN	1.8V	1T1	CIF_D7/EBC_SDDO7/SDMMC2_PWREN_M0/I 2S1_SDI3_M1/VOP_BT656_D7_M1/GPIO3_D5_d
2	I2C2_SDA_M1	I/O	DOWN	1.8V	AF1	I2C2_SDA_M1/EBC_GDSP/ISP_FLASH_TRIGI N/VOP_BT656_CLK_M1/GPIO4_B4_d
3	I2C2_SCL_M1	I/O	DOWN	1.8V	AD1	I2C2_SCL_M1/EBC_SDSHR/I2S1_SDO3_M1/G PIO4_B5_d
4	DVP_PDN1	I/O	DOWN	1.8V	1R2	CIF_D6/EBC_SDDO6/SDMMC2_DET_M0/I2S1 _SDI2_M1/VOP_BT656_D6_M1/GPIO3_D4_d
5	VCC1V2_DVP	P		1.2V		
6	VCC1V8_DVP	P		1.8V		
7	VCC2V8_DVP	P		2.8V		
8	GND	G				GND
9	CIF_HREF	I/O	DOWN	1.8V	1L1	CIF_HREF/EBC_SDLE/GMAC1_MDC_M1/UAR T1_RTsn_M1/I2S2_MCLK_M1/GPIO4_B6_d
10	CIF_VSYNC	I/O	DOWN	1.8V	AC2	CIF_VSYNC/EBC_SDOE/GMAC1_MDIO_M1/I2 S2_SCLK_TX_M1/GPIO4_B7_d
11	CIF_CLKIN	I/O	DOWN	1.8V	AB1	CIF_CLKIN/EBC_SDCLK/GMAC1_MCLKINOUT _M1/UART1_CTSn_M1/I2S2_SCLK_RX_M1/GP IO4_C1_d
12	CIF_CLKOUT	I/O	DOWN	1.8V	AB2	CIF_CLKOUT/EBC_GDCLK/PWM11_IR_M1/GP IO4_C0_d
13	GND	G				GND
14	CIF_8BIT_D0	I/O	DOWN	1.8V	AL2	CIF_D8/EBC_SDDO8/GMAC1_TXD2_M1/UART 1_TX_M1/PDM_CLK0_M1/GPIO3_D6_d
15	CIF_8BIT_D1	I/O	DOWN	1.8V	AL1	CIF_D9/EBC_SDDO9/GMAC1_TXD3_M1/UART 1_RX_M1/PDM_SDI0_M1/GPIO3_D7_d

16	CIF_8BIT_D2	I/O	DOWN	1.8V	AK2	CIF_D10/EBC_SDDO10/GMAC1_TXCLK_M1/PDM_CLK1_M1/GPIO4_A0_d
17	CIF_8BIT_D3	I/O	DOWN	1.8V	1P2	CIF_D11/EBC_SDDO11/GMAC1_RXD2_M1/PDM_SDI1_M1/GPIO4_A1_d
18	CIF_8BIT_D4	I/O	DOWN	1.8V	1R1	CIF_D12/EBC_SDDO12/GMAC1_RXD3_M1/UART7_TX_M2/PDM_SDI2_M1/GPIO4_A2_d
19	CIF_8BIT_D5	I/O	DOWN	1.8V	AJ2	CIF_D13/EBC_SDDO13/GMAC1_RXCLK_M1/UART7_RX_M2/PDM_SDI3_M1/GPIO4_A3_d
20	CIF_8BIT_D6	I/O	DOWN	1.8V	1N2	CIF_D14/EBC_SDDO14/GMAC1_TXD0_M1/UART9_TX_M2/I2S2_LRCK_TX_M1/GPIO4_A4_d
21	CIF_8BIT_D7	I/O	DOWN	1.8V	AJ1	CIF_D15/EBC_SDDO15/GMAC1_TXD1_M1/UART9_RX_M2/I2S2_LRCK_RX_M1/GPIO4_A5_d
22	GND	G				GND
23	DVP_RST1	I/O	DOWN	1.8V	AM2	CIF_D4/EBC_SDDO4/SDMMC2_CMD_M0/I2S1_SDI0_M1/VOP_BT656_D4_M1/GPIO3_D2_d
24	DVP_RST0	I/O	DOWN	1.8V	AM1	CIF_D5/EBC_SDDO5/SDMMC2_CLK_M0/I2S1_SDI1_M1/VOP_BT656_D5_M1/GPIO3_D3_d

4. system software

Types	Description
OS	Android 、 Linux

5. Application



Picture 5-1 Application

Application areas		
Commercial display integrated equipment	medical and health equipment	industrial computers
intelligent POS machines	intelligent robots	game and entertainment equipment
intelligent display terminals	industrial automation terminals	video terminal products

6. Contact us

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