RK3568(4 Core)

Directory

Notice: The manuals of the motherboards on sale will be updated frequently, please download the latest manuals from the website without further notice.

Overview

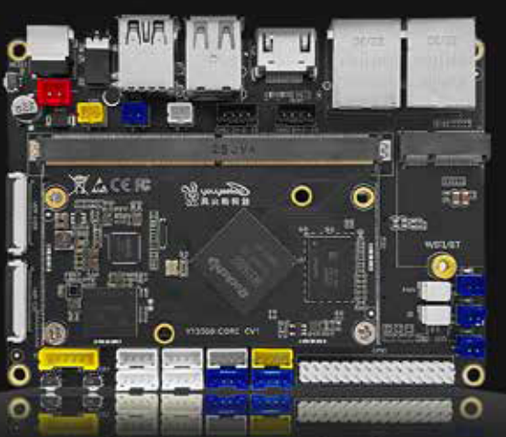

youyeetoo
RK3568
YY3568-CORE CV1
youyeetoo
风火轮科技
YY3568-CORE CV1
Rich Interface
5 SERIAL PORTS,、2*I2C、
1*CAN、GPIO、ADC
Rich
Display interface
2*DSI、1*HDMI
1*eDP(supports touch)
Multiple
Network Interface
Dual Ethernet、
5G WIFI、BT5.0、4G LTE
Multiple
Memory Interface
SATA、SSD、TF card
Complete
audio interface
AMPLIFIER SPK、MIC、
HEADPHONE JACK
Reserved
MULTI_PHY interface
Bring out two
sets of buses


RK3568 is a mid- to High-end processor
RK3568 quad-core 64-bit Cortex-A55 processor, with brand new ARM v8.2-A architecture, has frequency up to 2.0GHz — the efficiency is greatly improved. With 22nm lithography process, it features low power consumption and high performance.
0.8Tops
NPU
2.0GHz
main frequency
Quad-Core 64-bit
architecture
Rockchip
RK3568

Product characteristics

Rich extension interface

With SATA3.0, PCIe3.0, I2C, CAN, UART, MIPI-CSI,MIPI-DSI, USB3.0, USB2.0, GPIO, and other expansion interfaces

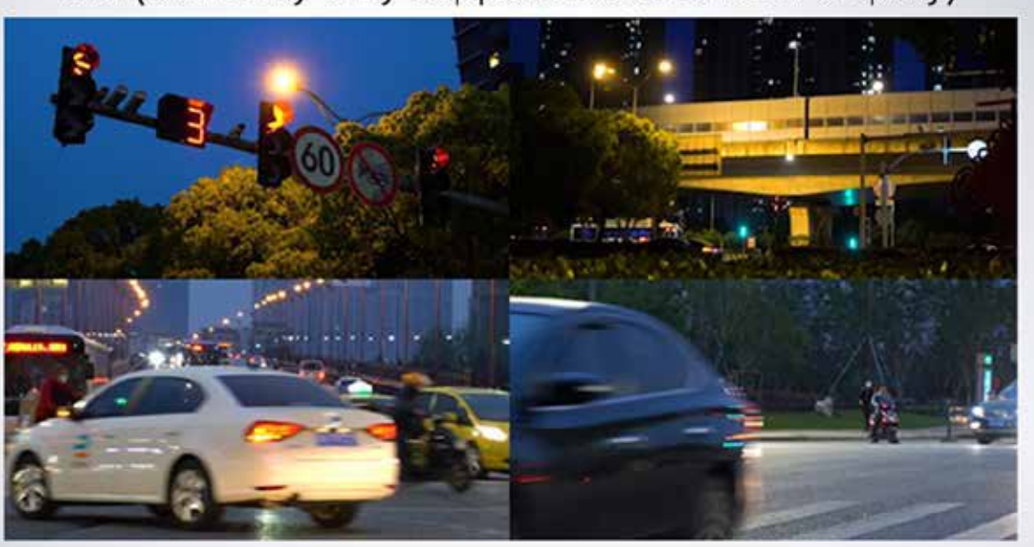


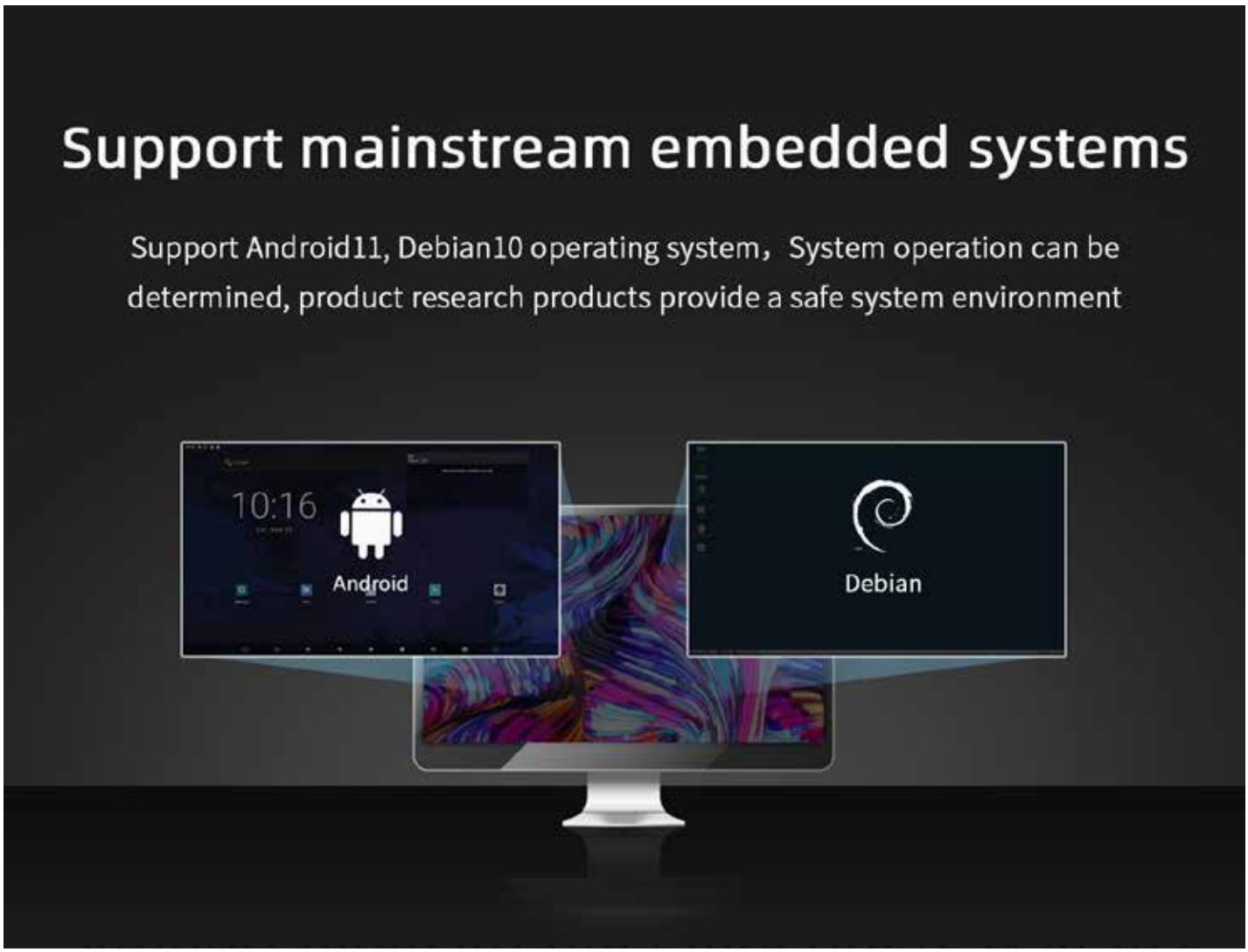
PCIE 3.0 | SATA 3.0 | UART | CAN | eDP

I2C | GPIO | MIPI-DSI | MIPI-CSI | USB 3.0

Different display on multiple screens

Onboard multi-channel display output interface can realize multi-screen different display2*DSI, 1*HDMI (4K@60fps), eDP(Currently only supports dual-screen display)




Support mainstream embedded systems
Support Android11, Debian10 operating system，System operation can be determined, product research products provide a safe system environment
10:16
Android
Debian

Interface definition

Part A	PIN	Core board pin definition	pad type	IO Pull	Function for Floor(MB_x005f JM3-RK3568)	Defual function description	IO Power domain	RK3568 Pin	RK3568 Pin NAME
	1	VCC5V0_SYS_1	P		VCC_SYS	Input Voltage 4.8V-5.5V	5.0V		
	3	VCC5V0_SYS_2	P		VCC_SYS		5.0V		
	5	VCC5V0_SYS_3	P		VCC_SYS		5.0V		
	7	GND	G		GND	GND	GND		
	9	GND	G		GND		GND		
	11	GND	G		GND		GND		
	13	GND	G		GND		GND		
	15	VCCA_1V8	P		VCC_1V8	1.8V Output,VCC_1V8 Total Max:500mA(Pin13/14 same net)	1.8V		
	17	VCC3V3_SD	P		VCC3V3_SD	3V3 Output TF Card Power,VCC3V3_SD Total Max:200mA(Pin 17/18 same net)	3.3V		
	19	VCC3V3_SD	P		VCC3V3_SD	3V3 Output TF Card Power,VCC3V3_SD Total Max:200mA(Pin 17/18 same net)	3.3V		
	21	VCCIO_WL	P		VCCIO_WL	WIFI/GMAC1 VCCIO Input, 1.8V or 3.3V option	1.8V/3.3V		
	23	VCCIO_WL	P		VCCIO_WL	WIFI/GMAC1 VCCIO Input, 1.8V or 3.3V option	1.8V/3.3V		
	25	GND	G		GND	GND	GND		
	27	NC			NC		NC		
	29	GND	G		GND	GND	GND		
	31	GPIO1_D2_U/FSPI_D1/FLASH_RON	I/O	UP	FSPI_D1/FLASH_RDN	FSPI_D1	1.8V	D23	FSPI_D1/FLASH_RDN/GPIO1_D2_U
	33	GPIO1_D3_U/FSPI_CSON/FLASH_CSON	I/O	UP	FSPI_CSON/FLASH_CSON	FSPI_CSON	1.8V	C23	FSPI_CSON/FLASH_CSON/GPIO1_D3_U
	35	GPIO1_D0_D/FSPI_CLK/FLASH_ALE	I/O	UP	FSPI_CLK/FLASH_ALE	FSPI_CLK Core board series resistance 22R	1.8V	A22	FSPI_CLK/FLASH_ALE/GPIO1_D0_D
	37	GPIO1_B1_D/I2S1_SDO2_M0/I2S1_SDI_M0/PDM_SDI2_M0_CON	I/O	DOWN	EDP_VCC_EN	EDP Power EN, Active H	3.3V	E20	I2S1_SDO2_M0/I2S1_SDI2_M0/PDM_SDI2_M0_CON/GPIO1_B1_D
	39	I2S1_SDO1_M0/I2S1_SDI3_M0/PDM_SDI3_M0_CON/GPIO1_B0_D	I/O	DOWN	EAR_CTL	Headphone output control, Active H	3.3V	D20	I2S1_SDO1_M0/I2S1_SDI3_M0/PDM_SDI3_M0_CON/GPIO1_B0_D
	41	I2S1_SDO3_M0/I2S1_SDI1_M0/PDM_SDI1_M0_CON/GPIO1_B2_D	I/O	DOWN	GPIO1_B2_D	MIPI DSI1 BL_EN,Active H	3.3V	A21	I2S1_SDO3_M0/I2S1_SDI1_M0/PDM_SDI1_M0_CON/GPIO1_B2_D
	43	FSPI_D0/FLASH_RDY/GPIO1_D1_u	I/O	UP	FSPI_D0/FLASH_RDY	FSPI_D0	1.8V	C24	FSPI_D0/FLASH_RDY/GPIO1_D1_u
	45	FSPI_D3/FLASH_CS1N/GPIO1_D4_u	I/O	UP	FSPI_D3/FLASH_CS1N	FSPI_D3/FLASH_CS1N	1.8V	A27	FSPI_D3/FLASH_CS1N/GPIO1_D4_u
	47	I2C3_SDA_M0	I/O	UP	I2C3_SDA_M0	I2C3_SDA_M0 Core board Pull up resistance 2.2K to	3.3V	D18	I2C3_SDA_M0/UART3_RX_M0/CAN1_RX_M0/A UDIOPWM_LOUT_P/GPIO1_A0_U
	49	I2C3_SCL_M0	I/O	UP	I2C3_SCL_M0	I2C3_SCL_M0 Core board Pull up resistance 2.2K to	3.3V	E18	I2C3_SCL_M0/UART3_TX_M0/CAN1_TX_M0/AU DIOPWM_LOUT_N/GPIO1_A1_U
	51	GPIO1_A4_D/I2S1_SCLK_RX_M0/PDM_CLK1_M0_CON/SPDIF_TX_M0	I/O	DOWN	EDP_BL_EN	EDP Backlight EN, Active H	3.3V	F18	GPIO1_A4_D/I2S1_SCLK_RX_M0/PDM_CLK1_M0_CON/SPDIF_TX_M0
	53	GPIO1_C7_D/EMMC_RSTN/FSPI_D2/FLASH_WPN	I/O	DOWN	EMMC_RSTN/FSPI_D2/FLASH_WPN	FSPI_D2/FLASH_WPN	1.8V	F20	GPIO1_C7_D/EMMC_RSTN/FSPI_D2/FLASH_WPN
	55	I2C0_SCL_PMIC	I/O	UP	NC	NC, Core board Pull up resistance 2.2K	3.3V	AF24	I2C0_SCL/GPIO0_B1_u
	57	I2C0_SDA_PMIC	I/O	UP	NC	NC, Core board Pull up resistance 2.2K	3.3V	AB21	I2C0_SDA/GPIO0_B2_u
	59	GND	G		GND	GND	GND		
	61	UART8_RX_M0	I/O	UP	UART8_RX_M0	UART8_RX_M0 For BT	1.8V	E26	CLK32K_OUT1/UART8_RX_M0/SPI1_CS1_M0/GPIO2_C6_d
	63	UART8_TX_M0	I/O	DOWN	UART8_TX_M0	UART8_TX_M0 For BT	1.8V	F26	I2S2_SDI_M0/GMAC0_RXER/UART8_TX_M0/SPI2_CS1_M0/GPIO2_C5_d
	65	UART8_CTSn_M0	I/O	UP	UART8_CTSn_M0	UART8_CTSn_M0 For BT	1.8V	E25	SDMMC1_DET/I2C4_SCL_M1/UART8_CTSn_M0/CAN2_TX_M1/GPIO2_B2_u
	67	UART8_RTSN_M0	I/O	UP	UART8_RTSN_M0	UART8_RTSN_M0 For BT	1.8V	D26	SDMMC1_PWREN/I2C4_SDA_M1/UART8_RTSn_M0/CAN2_RX_M1/GPIO2_B1_d
	69	GND	G		GND	GND	GND		
	71	CLK32K_OUT0_WIFI/SOC_CLK32K_OUT	I/O	UP	4G_PWR_EN	4G/5G Power_EN , Active H	3.3V	AD23	CLK32K_IN/CLK32K_OUT/GPIO0_B0_u
	73	RK809 32KOUT WIFI	O		RK809 32KOUT WIFI	PMIC RK809 32.768KHz clock output for WIFI	1.8V		RK809 32KOUT WIFI
	75	GND	G		GND	GND	GND		
	77	GMAC0_RXCLK	I/O	UP	GMAC0_RXCLK	GMAC0_RXCLK	1.8V	B28	GMAC0_RXCLK/SDMMC1_D2/UART7_RX_M0/GPIO2_A5_u
	79	GND	G		GND	GND	GND		
	81	GMAC0_RXD3	I/O	UP	GMAC0_RXD3	GMAC0_RXD3	1.8V	E28	GMAC0_RXD3/SDMMC1_D1/UART6_TX_M0/GPIO2_A4_u
	83	GMAC0_RXD2	I/O	UP	GMAC0_RXD2	GMAC0_RXD2	1.8V	E27	GMAC0_RXD2/SDMMC1_D0/UART6_RX_M0/GPIO2_A3_u
	85	GMAC0_RXD1	I/O	DOWN	GMAC0_RXD1	GMAC RX data	1.8V	H25	GMAC0_RXD1/I2S2_SCLK_RX_M0/UART6_RTSn_M0/SPI1_MOSI_M0/GPIO2_B7_d
	87	GMAC0_RXD0	I/O	UP	GMAC0_RXD0	GMAC0_RXD0	1.8V	F27	GMAC0_RXD0/UART1_CTSn_M0/SPI1_MISO_M0/GPIO2_B6_u
	89	GMAC0_RXDV_CRS	I/O	DOWN	GMAC0_RXDV_CRS	GMAC RX data valid signal	1.8V	F24	GMAC0_RXDV_CRS/I2S2_LRCK_RX_M0/UART6_CTSn_M0/SPI1_CS0_M0/GPIO2_C0_d
	91	GMAC0_MDIO	I/O	DOWN	GMAC0_MDIO	GMAC management interface data	1.8V	H23	GMAC0_MDIO/I2S2_SDO_M0/UART9_CTSn_M0/SPI2_CS0_M0/GPIO2_C4_d
	93	GND	G		GND	GND	GND		
	95	SDMMC0_D2	I/O	UP	SDMMC0_D2	SDMMC0_D2 For TF Card	Default is 3.3V; VCCIO_SD =1.8V(SDIO 3.0) or 3.3V(SDIO 2.0)	H26	SDMMC0_D2/ARMJTAG_TCK/UART5_CTSn_M0/GPIO1_D7_u
	97	SDMMC0_D1	I/O	UP	SDMMC0_D1	SDMMC0_D1 For TF Card		J24	SDMMC0_D1/UART2_RX_M1/UART6_RX_M1/PWM9_M1/GPIO1_D6_u
	99	SDMMC0_D0	I/O	UP	SDMMC0_D0	SDMMC0_D0 For TF Card		J25	SDMMC0_D0/UART2_TX_M1/UART6_TX_M1/PWM8_M1/GPIO1_D5_u
	101	SDMMC0_D3	I/O	UP	SDMMC0_D3	SDMMC0_D3 For TF Card		J23	SDMMC0_D3/ARMJTAG_TMS/UART5_RTSn_M0/GPIO2_A0_u
	103	GND	G		GND	GND	GND		
	105	EDP_TX_D0P	O		EDP_TX_D0P	EDP_TX_D0+ core board series capacitance 0.1uF	1.8V	J28	EDP_TX_D0P
	107	EDP_TX_D0N	O		EDP_TX_D0N	EDP_TX_D0- core board series capacitance 0.1uF	1.8V	K27	EDP_TX_D0N
	109	EDP_TX_D1P	O		EDP_TX_D1P	EDP_TX_D1+ core board series capacitance 0.1uF	1.8V	K28	EDP_TX_D1P
	111	EDP_TX_D1N	O		EDP_TX_D1N	EDP_TX_D1- core board series capacitance 0.1uF	1.8V	L27	EDP_TX_D1N
	113	EDP_TX_D2P	O		EDP_TX_D2P	EDP_TX_D2+ core board series capacitance 0.1uF	1.8V	L28	EDP_TX_D2P
	115	EDP_TX_D2N	O		EDP_TX_D2N	EDP_TX_D2- core board series capacitance 0.1uF	1.8V	M27	EDP_TX_D2N
	117	EDP_TX_D3P	O		EDP_TX_D3P	EDP_TX_D3+ core board series capacitance 0.1uF	1.8V	M28	EDP_TX_D3P
	119	EDP_TX_D3N	O		EDP_TX_D3N	EDP_TX_D3- core board series capacitance 0.1uF	1.8V	N27	EDP_TX_D3N
	121	GND	G		GND	GND	GND		
	123	EDP_TX_AUXP	O		EDP_TX_AUXP	eDP CH-AUX positive differential output	1.8V	L25	EDP_TX_AUXP
	125	EDP_TX_AUXN	O		EDP_TX_AUXN	eDP CH-AUX negative differential output	1.8V	M25	EDP_TX_AUXN
	127	GND	G		GND	GND	GND		
	129	MULTI_PHY0_REFCLKN	O		NA	NA	1.8V	R25	MULTI_PHY0_REFCLKN
	131	MULTI_PHY0_REFCLKP	O		NA	NA	1.8V	R24	MULTI_PHY0_REFCLKP
	133	MULTI_PHY1_REFCLKP	O		NA	NA	1.8V	U25	MULTI_PHY1_REFCLKP
	135	MULTI_PHY1_REFCLKN	O		NA	NA	1.8V	U24	MULTI_PHY1_REFCLKN
	137	GND	G		GND	GND	GND		
	139	PCIE30_TX0P	O		PCIE30_TX0P	PCIE30_TX0P	1.8V	AA28	PCIE30_TX0P
	141	PCIE30_TX0N	O		PCIE30_TX0N	PCIE30_TX0N	1.8V	AA27	PCIE30_TX0N
	143	PCIE30_TX1P	O		PCIE30_TX1P	PCIE30_TX1P	1.8V	AB28	PCIE30_TX1P
	145	PCIE30_TX1N	O		PCIE30_TX1N	PCIE30_TX1N	1.8V	AB27	PCIE30_TX1N
	147	PCIE30_RX0P	I		PCIE30_RX0P	PCIE30_RX0P	1.8V	AC28	PCIE30_RX0P
	149	PCIE30_RX0N	I		PCIE30_RX0N	PCIE30_RX0N	1.8V	AC27	PCIE30_RX0N
	151	PCIE30_RX1P	I		PCIE30_RX1P	PCIE30_RX1P	1.8V	AD28	PCIE30_RX1P
	153	PCIE30_RX1N	I		PCIE30_RX1N	PCIE30_RX1N	1.8V	AD27	PCIE30_RX1N
	155	GND	G		GND	GND	GND		
	157	PCIE30_REFCLKP_IN	I		PCIE30_REFCLKP_IN	PCIE30_REFCLKP_IN	1.8V	Y25	PCIE30_REFCLKP_IN
	159	PCIE30_REFCLKN_IN	I		PCIE30_REFCLKN_IN	PCIE30_REFCLKN_IN	1.8V	AA25	PCIE30_REFCLKN_IN
	161	PCIE20_REFCLKN	O		PCIE20_REFCLKN	PCIE20_REFCLKN	1.8V	V25	PCIE20_REFCLKN
	163	PCIE20_REFCLKP	O		PCIE20_REFCLKP	PCIE20_REFCLKP	1.8V	V24	PCIE20_REFCLKP
	165	GND	G		GND	GND	GND		
	167	GND	G		GND	GND	GND		
	169	GPIO0_A6	I/O	DOWN	WK2124_INT	WK2124 interrupt input ,Active L	3.3V	AE24	USB_HOST_PWREN_H/GPU_PWREN/SATA_CP_POD/PCIE30X2_CLKREQn_M/GPIO0_A6_d
	171	GPIO0_C1	I/O	DOWN	LCD1_TP_INT_GPIO0_C1	MIPI DSI1 TP interrupt input ,Active L	3.3V	AF23	PWM2_M0/NPUAVS/UART0_TX/MCU_JTAG_TDI/GPIO0_C1_d
	173	GPIO0_D6	I/O	DOWN	USB30_HOST_PWREN_H	USB30_HOST Power enable ,Active H	1.8V	AC24	GPIO0_D6_d
	175	GPIO0_C3	I/O	DOWN	LCD0_BL_PWM4	PWM4 Output	3.3V	AE23	PWM4/VOP_PWM_M0/PCIE30X1_PERSTn_M0/MCU_JTAG_TRSTn/GPIO0_C3_d
	177	PCIE_PWREN_H GPIO0_D4	I/O	DOWN	PCIE_PWREN_H GPIO0_D4	PCIE Power enable ,Active H	1.8V	AB23	GPIO0_D4_d
	179	WORKING_LEDEN_H_GPIO0_C0	I/O	DOWN	WORK_LED	LED EN, active H	3.3V	AD22	PWM1_M0/GPUAVS/UART0_RX/GPIO0_C0_d
	181	LCD1_BL_PWM5	I/O	DOWN	LCD1_BL_PWM5	LCD1_BL_PWM5	3.3V	AD21	PWM5/SPI0_CS1_M0/UART0_RTSn/GPIO0_C4_d
	183	GPIO0_C7	I/O	DOWN	LCD0_PWR_EN/GPIO0_C7	MIPI DSI0 Power EN ,Active H	3.3V	AH25	HDMITX_CEC_M1/PWM0_M1/UART0_CTSn/GPIO0_C7_d
	185	GPIO0_B7	I/O	DOWN	NC	NC	3.3V	AH26	PWM0_M0/CPUAVS/GPIO0_B7_d
	187	GPIO0_C5	I/O	DOWN	LCD0_RST_L_GPIO0_C5	MIPI DSI0_Reset Active L	3.3V	AC21	PWM6/SPI0_MISO_M0/PCIE30X2_WAKEn_M0/GPIO0_C5_d
	189	HDMITX_SDA	I/O	UP	HDMITX_SDAI	I2C SDA for HDMI	3.3V	AG7	HDMITX_SDA/I2C5_SDA_M1/GPIO4_D0_u
	191	HDMITX_SCL	I/O	UP	HDMITX_SCL	I2C SCL for HDMI	3.3V	AG8	HDMITX_SCL/I2C5_SCL_M1/GPIO4_C7_u
	193	HDMITX_CEC_M0	I/O	UP	HDMITX_CEC_M0	HDMITX_CEC_M0	3.3V	AH6	HDMITX_CEC_M0/SPI3_CS1_M1/GPIO4_D1_u
	195	HDMI_TX_HPDIN	I		HDMI_TX_HPDIN	HDMI_TX_HPDIN ,Active H	1.8V	AB18	HDMI_TX_HPDIN
	197	GND	G		GND	GND	GND		
	199	MIPI_DSI_TX1_D0N	O		MIPI_DSI_TX1_D0N	MIPI_DSI_TX1_D0N	1.8V	AE18	MIPI_DSI_TX1_D0N
	201	MIPI_DSI_TX1_D0P	O		MIPI_DSI_TX1_D0P	MIPI_DSI_TX1_D0P	1.8V	AD18	MIPI_DSI_TX1_D0P
	203	MIPI_DSI_TX1_D1N	O		MIPI_DSI_TX1_D1N	MIPI_DSI_TX1_D1N	1.8V	AC17	MIPI_DSI_TX1_D1N
	205	MIPI_DSI_TX1_D1P	O		MIPI_DSI_TX1_D1P	MIPI_DSI_TX1_D1P	1.8V	AD17	MIPI_DSI_TX1_D1P
	207	GND	G		GND	GND	GND		
	209	MIPI_DSI_TX1_CLKN	O		MIPI_DSI_TX1_CLKN	MIPI_DSI_TX1_CLKN	1.8V	AE15	MIPI_DSI_TX1_CLKN
	211	MIPI_DSI_TX1_CLKP	O		MIPI_DSI_TX1_CLKP	MIPI_DSI_TX1_CLKP	1.8V	AD15	MIPI_DSI_TX1_CLKP
	213	MIPI_DSI_TX1_D2N	O		MIPI_DSI_TX1_D2N	MIPI_DSI_TX1_D2N	1.8V	AC14	MIPI_DSI_TX1_D2N
	215	MIPI_DSI_TX1_D2P	O		MIPI_DSI_TX1_D2P	MIPI_DSI_TX1_D2P	1.8V	AD14	MIPI_DSI_TX1_D2P
	217	MIPI_DSI_TX1_D3N	O		MIPI_DSI_TX1_D3N	MIPI_DSI_TX1_D3N	1.8V	AE12	MIPI_DSI_TX1_D3N
	219	MIPI_DSI_TX1_D3P	O		MIPI_DSI_TX1_D3P	MIPI_DSI_TX1_D3P	1.8V	AD12	MIPI_DSI_TX1_D3P
	221	MIPI_CSI_RX_D2N	I		MIPI_CSI_RX_D2N	MIPI_CSI_RX_D2N	1.8V	AD11	MIPI_CSI_RX_D2N
	223	MIPI_CSI_RX_D2P	I		MIPI_CSI_RX_D2P	MIPI_CSI_RX_D2P	1.8V	AE11	MIPI_CSI_RX_D2P
	225	MIPI_CSI_RX_D3N	I		MIPI_CSI_RX_D3N	MIPI_CSI_RX_D3N	1.8V	AE9	MIPI_CSI_RX_D3N
	227	MIPI_CSI_RX_D3P	I		MIPI_CSI_RX_D3P	MIPI_CSI_RX_D3P	1.8V	AD9	MIPI_CSI_RX_D3P
	229	GND	G		GND	GND	GND		
	231	UART9_TX_M1	I/O	DOWN	BL_EN0	MIPI DSI0 BL_EN, Active H	3.3V	AD8	PWM12_M1/SPI3_MISO_M1/SATA1_ACT_LED/UART9_TX_M1/I2S3_SDO_M1/GPIO4_C5_d
	233	UART9_RX_M1	I/O	DOWN	LCD1_RST_L	MIPI DSI1 Reset, Active L	3.3V	AE8	PWM13_M1/SPI3_CS0_M1/SATA0_ACT_LED/UART9_RX_M1/I2S3_SDI_M1/GPIO4_C6_d
	235	CAN1_RX_M1	I/O	DOWN	CAN1_RX_M1	CAN1_RX_M1	3.3V	AF8	PWM14_M1/SPI3_CLK_M1/CAN1_RX_M1/PCIE30X2_CLKREQn_M2/I2S3_MCLK_M1/GPIO4_C2_d
	237	CAN1_TX_M1	I/O	DOWN	CAN1_TX_M1	CAN1_TX_M1	3.3V	AA11	PWM15_IR_M1/SPI3_MOSI_M1/CAN1_TX_M1/PCIE30X2_WAKEn_M2/I2S3_SCLK_M1/GPIO4_C3_d
	239	GMAC1_INT/PMEB_GPIO2_D0	I/O	DOWN	GMAC1_INT/PMEB_GPIO2_D0	GMAC1_INT/PMEB	3.3V	AG6	LCDC_D0/VOP_BT656_D0_M0/SPIO_MISO_M1/PCIE20_CLKREQn_M1/I2S1_MCLK_M2/GPIO2_D0_d
	241	BT_WAKE_HOST_H_GPIO3_A1	I/O	DOWN	SPI1_CS0_M1	SPI1_CS0_M1	3.3V	AB8	LCDC_D8/VOP_BT1120_D0/SPI1_CS0_M1/PCIE30X1_PERSTn_M1/SDMMC2_D_M1/GPIO3_A1_d
	243	GMAC1_RSTN_GPIO2_D1	I/O	DOWN	GMAC1_RSTN_GPIO2_D1	GMAC1_Reset, Active L	3.3V	AD7	LCDC_D1/VOP_BT656_D1_M0/SPIO_MOSI_M1/PCIE20_WAKEn_M1/I2S1_SCLK_TX_M2/GPIO2_D1_d
	245	GMAC0_INT/PMEB_GPIO2_D2	I/O	DOWN	GMAC0_INT/PMEB_GPIO2_D2	GMAC0_INT/PMEB	3.3V	AC8	LCDC_D2/VOP_BT656_D2_M0/SPIO_CS0_M1/PCIE30X1_CLKREQn_M1/I2S1_LRCK_TX_M2/GPIO2_D2_d
	247	GMAC0_RSTN_GPIO2_D3	I/O	DOWN	GMAC0_RSTN_GPIO2_D3	GMAC0_Reset, Active L	3.3V	AC7	LCDC_D3/VOP_BT656_D3_M0/SPIO_CLK_M1/PCIE30X1_WAKEn_M1/I2S1_SDI0_M2/GPIO2_D3_d
	249	ETH1_REFCLKO_25M_M0	I/O	DOWN	ETH1_REFCLKO_25M_M0	ETH1_REF CLOCK OUTPUT_25MHz CPU to PHY,Default NC	3.3V	AG2	LCDC_D15/VOP_BT1120_D6/ETH1_REFCLKO_25M_M0/SDMMC2_PWREN_M1/GPIO3_B0_d
	251	CON_INT_L GPIO4_D2	I/O	DOWN	GSENSOR_INT_L GPIO4_D2	GSENSOR_INT,Active L	3.3V	AB9	GPIO4_D2_d
	253	I2S3_LRCK_M0	I/O	DOWN	I2S3_LRCK_M0	I2S3_LRCK_M0	3.3V	AF4	LCDC_D11/VOP_BT1120_D3/GMAC1_RXD2_M0/I2S3_LRCK_M0/SDMMC2_D3_M1/GPIO3_A4_d
	255	I2S3_SCLK_M0	I/O	DOWN	I2S3_SCLK_M0	I2S3_SCLK_M0	3.3V	AG4	LCDC_D10/VOP_BT1120_D2/GMAC1_TXD3_M0/I2S3_SCLK_M0/SDMMC2_D2_M1/GPIO3_A3_d
	257	UART3_RX_M1	I/O	DOWN	UART3_RX_M1	UART3_RX_M1	3.3V	AD2	LCDC_D23/PWM13_M0/GMAC1_MCLKINOUT_M0/UART3_RX_M1/PDM_SDI3_M2/GPIO3_C0_d
	259	UART3_TX_M1	I/O	DOWN	UART3_TX_M1	UART3_TX_M1	3.3V	AD4	LCDC_D22/PWM12_M0/GMAC1_TXEN_M0/UART3_TX_M1/PDM_SDI2_M2/GPIO3_B7_d
	261	PA_EN_H_GPIO3_C3	I/O	DOWN	SPI1_CLK_M1	SPI1_CLK_M1 out	3.3V	AC4	LCDC_DEN/VOP_BT1120_D15/SPI1_CLK_M1/UART5_RX_M1/I2S1_SCLK_RX_M2/GPIO3_C3_d
	263	PWM14_M0	I/O	DOWN	EDP_BL_PWM14_M0	EDP_BL_PWM14_M0	3.3V	AC3	PWM14_M0/VOP_PWM_M1/GMAC1_MDC_M0/UART7_TX_M1/PDM_CLK1_M2/GPIO3_C4_d
	265	CAMERA0_PDN_L_GPIO4_B4	I/O	DOWN	CAN2_RX_M0	CAN2_RX_M0	VCCIO_WL	V6	I2C2_SDA_M1/EBC_GDSP/CAN2_RX_M0/ISP_FLASH_TRIGIN/VOP_BT656_CLK_M1/GPIO4_B4_d
	267	CAMERA1_PDN_L_GPIO4_B5	I/O	DOWN	CAN2_TX_M0	CAN2_TX_M0	VCCIO_WL	V5	I2C2_SCL_M1/EBC_SDSHR/CAN2_TX_M0/I2S1_SDO3_M1/GPIO4_B5_d
	269	MIPICAM1_RST_L_GPIO3_B5	I/O	DOWN	HOST_WAKE_BT_H_GPIO3_B5	HOST WAKE BT, Active H	3.3V	AE2	LCDC_D20/VOP_BT1120_D11/GMAC1_TXDO_M0/I2C3_SCL_M1/PWM10_M0/GPIO3_B5_d
	271	PCIE30X2_WAKEn_M1	I/O	DOWN	PCIE30X2_WAKEn_M1	PCIE30X2_WAKEN	3.3V	AF6	LCDC_D5/VOP_BT656_D5_M0/SPI2_CS0_M1/PCIE30X2_WAKEn_M1/I2S1_SDI2_M2/GPIO2_D5_d
	273	PCIE30X2_CLKREQN_M1	I/O	DOWN	PCIE30X2_CLKREQN_M1	PCIE30X2_CLKREQN	3.3V	AF5	LCDC_D4/VOP_BT656_D4_M0/SPI2_CS1_M1/PCIE30X2_CLKREQn_M1/I2S1_SDI1_M2/GPIO2_D4_d
	275	SATA2_ACT_LED	I/O	DOWN	SATA2_ACT_LED	SATA2_ACT_LED EN,Active H	3.3V	AH7	EDP_HPDIN_M0/SPDIF_TX_M2/SATA2_ACT_LED/PCIE30X2_PERSTn_M2/I2S3_LRCK_M1/GPIO4_C4_d
	277	GND	G		GND	GND	GND		
	279	SDMMC2_D0_M0/CIF_D0	I/O	DOWN	SDMMC2_D0_M0	SDMMC2_D0_M0 To WIFI	VCCIO_WL	AC5	CIF_D0/EBC_SDD00/SDMMC2_D0_M0/I2S1_MCLK_M1/VOP_BT656_D0_M1/GPIO3_C6_d
	281	SDMMC2_D1_M0/CIF_D1	I/O	DOWN	SDMMC2_D1_M0	SDMMC2_D1_M0 To WIF	VCCIO_WL	AA6	CIF_D1/EBC_SDD01/SDMMC2_D1_M0/I2S1_SCLK_TX_M1/VOP_BT656_D1_M1/GPIO3_C7_d
	283	SDMMC2_CMD_M0/CIF_D4	I/O	DOWN	SDMMC2_CMD_M0	SDMMC2_CMD_M To WIFI	VCCIO_WL	Y7	CIF_D4/EBC_SDD04/SDMMC2_CMD_M0/I2S1_SDI0_M1/VOP_BT656_D4_M1/GPIO3_D2_d
	285	WIFI_REG_ON_H_GPIO3_D5/CIF_D7	I/O	DOWN	WIFI_REG_ON_H	WIFI EN , Active H	VCCIO_WL	AA5	CIF_D7/EBC_SDD07/SDMMC2_PWREN_M0/I2S1_SDI3_M1/VOP_BT656_D7_M1/GPIO3_D5_d
	287	GND	G		GND	GND	GND		
	289	GMAC1_TXCLK_M1/CIF_D10	I/O	DOWN	GMAC1_TXCLK_M1	GMAC1_TXCLK_M1, core board series resistance 22R	VCCIO_WL	AA3	CIF_D10/EBC_SDD010/GMAC1_TXCLK_M1/PDM_CLK1_M1/GPIO4_A0_d
	291	GMAC1_RXCLK_M1/CIF_D13	I/O	DOWN	GMAC1_RXCLK_M1	GMAC1_RXCLK_M1	VCCIO_WL	Y3	CIF_D13/EBC_SDD013/GMAC1_RXCLK_M1/UART7_RX_M2/PDM_SDI3_M1/GPIO4_A3_d
	293	GMAC1_RXD3_M1/CIF_D12	I/O	DOWN	GMAC1_RXD3_M1	GMAC1_RXD3_M1	VCCIO_WL	Y4	CIF_D12/EBC_SDD012/GMAC1_RXD3_M1/UART7_TX_M2/PDM_SDI2_M1/GPIO4_A2_d
	295	GMAC1_TXD3_M1/CIF_D9	I/O	DOWN	GMAC1_TXD3_M1	GMAC1_TXD3_M1, core board series resistance 22R	VCCIO_WL	Y5	CIF_D9/EBC_SDD09/GMAC1_TXD3_M1/UART1_RX_M1/PDM_SDI0_M1/GPIO3_D7_d
	297	GMAC1_TXD2_M1/CIF_D8	I/O	DOWN	GMAC1_TXD2_M1	GMAC1_TXD2_M1, core board series resistance 22R	VCCIO_WL	Y6	CIF_D8/EBC_SDD08/GMAC1_TXD2_M1/UART1_TX_M1/PDM_CLK0_M1/GPIO3_D6_d
	299	GMAC1_RXD1_M1/CAM_CLKOUT1	I/O	DOWN	GMAC1_RXD1_M1	GMAC1_RXD1_M1	VCCIO_WL	V7	CAM_CLKOUT1/EBC_SDCE2/GMAC1_RXD1_M1/SPI3_MISO_M0/I2S1_SDO1_M1/GPIO4_B0_d
	301	GND	G		GND	GND			
	303	CIF_CLKOUT	I/O	DOWN	CIF_CLKOUT	CIF_CLK OUT For MIPI Camera	VCCIO_WL	U3	CIF_CLKOUT/EBC_GDCLK/PWM11_IR_M1/GPIO4_C0_d
	305	GND	G		GND	GND	GND		
	307	GMAC1_MDIO_M1/CIF_VSYNC	I/O	DOWN	GMAC1_MDIO_M1	GMAC1_MDIO_M1	VCCIO_WL	U4	CIF_VSYNC/EBC_SDOE/GMAC1_MDIO_M1/I2S2_SCLK_TX_M1/GPIO4_B7_d
	309	GMAC1_MDC_M1/CIF_HREF	I/O	DOWN	GMAC1_MDC_M1	GMAC1_MDC_M1	VCCIO_WL	U5	CIF_HREF/EBC_SDLE/GMAC1_MDC_M1/UART1_RTSn_M1/I2S2_MCLK_M1/GPIO4_B6_d
	311	GND	G		GND	GND	GND		
	313	I2C4_SCL_M0	I/O	DOWN	I2C4_SCL_M0	I2C4_SCL_M0 core board series resistance 22R Core board Pull up resistance 2.2K to VCCIO_WL	VCCIO_WL	V1	I2C4_SCL_M0/EBC_GDOE/ETH1_REFCLKO_25M_M1/SPI3_CLK_M0/I2S2_SDO_M1/GPIO4_B3_d
	315	I2C4_SDA_M0	I/O	DOWN	I2C4_SDA_M0	I2C4_SDA_M0 Core board Pull up resistance 2.2K to VCCIO_WL	VCCIO_WL	V4	I2C4_SDA_M0/EBC_VCOM/GMAC1_RXER_M1/SPI3_MOSI_M0/I2S2_SDI_M1/GPIO4_B2_d
	317	GND	G		GND	GND	GND		

Part B	PIN	Core board pin definition	Pad type	IO Pull	Function for Floor(DB JM3-RK3568)	Defaul function description	IO Power domain	RK3568 Pin number	RK3568 Pin NAME
	2	VCC5V	P		VCC5V	Input Voltage 4.8V~5.5V	5.0V		
	4	VCC5V	P		VCC5V	Input Voltage 4.8V~5.5V	5.0V		
	6	VCC5V	P		VCC5V	Input Voltage 4.8V~5.5V	5.0V		
	8	GND	G		GND	GND	GND		
	10	GND	G		GND	GND	GND		
	12	GND	G		GND	GND	GND		
	14	VCC_3V3	P		VCC_3V3	3.3V Output ,VCC_3V3 Total Max:800mA (Pin23/24 same net)	3.3V		VCC_3V3
	16	VCC_3V3	P		VCC_3V3	3.3V Output ,VCC_3V3 Total Max:800mA (Pin23/24 same net)	3.3V		VCC_3V3
	18	VCC_1V8	P		VCC_1V8	1.8V Output ,VCC_1V8 Total Max:500mA (Pin13/14 same net)	1.8V		
	20	VCC_1V8	P		VCC_1V8	1.8V Output ,VCC_1V8 Total Max:500mA (Pin13/14 same net)	1.8V		
	22	NC			NC	NC			
	24	VCC10_ACODEC	P		VCC10_ACODEC	3.3V Output For codec,VCC10_ACODEC Total Max:200mA, (Pin17/18 same net)	3.3V		
	26	VCC10_ACODEC	P		VCC10_ACODEC	3.3V Output For codec,VCC10_ACODEC Total Max:200mA, (Pin17/18 same net)	3.3V		
	28	GND	G		GND	GND	GND		
	30	SARADC_VIN7	I		SARADC_VIN7	SARADC_VIN7	1.8V	F21	SARADC_VIN7
	32	SARADC_VIN6	I		SARADC_VIN6	SARADC_VIN6	1.8V	G20	SARADC_VIN6
	34	SARADC_VIN5	I/O		SARADC_VIN5	SARADC_VIN5	1.8V	F22	SARADC_VIN5
	36	SARADC_VIN4	I		SARADC_VIN4	SARADC_VIN4	1.8V	G21	SARADC_VIN4
	38	SARADC_VIN3	I/O	UP	SARADC_VIN3_EVB_HW_ID	SARADC_VIN3: distinguish HW version	1.8V	E23	SARADC_VIN3
	40	SARADC_VIN2	I/O	UP	SARADC_VIN2	SARADC_VIN2	1.8V	D24	SARADC_VIN2
	42	SARADC_VIN1	I		SARADC_VIN1	SARADC_VIN1	1.8V	C26	SARADC_VIN1
	44	SARADC_VINO_KEY/RECOVERY	I		SARADC_VINO_KEY/RECOVERY	SARADC_VINO_KEY (MB must pullup to 1.8V)	1.8V	B27	SARADC_VINO_KEY
	46	GND	G		GND	GND	GND		
	48	RESET_KEY	I	UP	RESET_KEY	System reset input Reset key , Active L Pull up resistance 10K ,series resistance 22R	3.3V	AH27	nPOR_u
	50	EXT_EN	O		EXT_EN	PMIC POWER_EN Output, Active H	3.3V		
	52	RK809 PWRON	I/O	DOWN	PWRON_KEY	PMIC PWRON_KEY Input, Active L	3.3V		
	54	GND	G		GND	GND	GND		
	56	SPKP_OUT	O		SPKP_OUT	PMIC RK809 Speaker Out+ core board series bead 180R@100MHz	5.0V		SPKP_OUT
	58	SPKN_OUT	O		SPKN_OUT	PMIC RK809 Speaker Out core board series bead 180R@100MHz	5.0V		SPKN_OUT
	60	GND	G		GND	GND	GND		
	62	HPL_OUT	O		HPL_OUT	HeadPhone_OUT L	3.3V		HPL_OUT
	64	HP_SNS	G		HP_SNS	HeadPhone_OUT GND			HP_SNS
	66	HPR_OUT	O		HPR_OUT	HeadPhone_OUT R			HPR_OUT
	68	GND	G		GND	GND	GND		
	70	MIC1_INP	I		MIC1_INP	MIC1_INPUT+ core board series capacitance 0.1uF	3.3V		MIC1_INP
	72	MIC1_INN	I		MIC1_INN	MIC1_INPUT core board series capacitance 0.1uF	3.3V		MIC1_INN
	74	GND	G		GND	GND	GND		
	76	GMAC0_MCLKINOUT	I/O	DOWN	GMAC0_MCLKINOUT	GMAC0_MCK_IN/OUT PUT Default: Input--PHY use external crysta	1.8V	F25	GMAC0_MCLKINOUT/I2S2_SCLK_TX_M0 /UART7_CTSn_M0/SPI2_MISO_M0/GPI 02_C2_d
	78	ETH0_REFCLKO_25M	I/O	DOWN	ETH0_REFCLKO_25M	ETH0_REF CLOCK OUTPUT 25MHz CPU to PHY,Default NC series resistance 22R	1.8V	G23	ETH0_REFCLK_25M/I2S2_MCLK_M0/UA RT7_RTSn_M0/SPI2_CLK_M0/GPI02_C 1_d
	80	GND	G		GND	GND	GND		
	82	GMAC0_TXCLK	I/O	DOWN	GMAC0_TXCLK	GMAC0_TXCLK core board series resistance 22R	1.8V	D27	GMAC0_TXCLK/SDMMC1_CLK/UART9_TX _M0/GPI02_B0_d
	84	GND	G		GND	GND	GND		
	86	GMAC0_TXD3	I/O	UP	GMAC0_TXD3	GMAC0_TXD3 core board series resistance 22R	1.8V	G27	GMAC0_TXD3/SDMMC1_CMD/UART9_RX_ M0/GPI02_A7_u
	88	GMAC0_TXD2	I/O	UP	GMAC0_TXD2	GMAC0_TXD2 core board series resistance 22R	1.8V	F28	GMAC0_TXD2/SDMMC1_D3/UART7_TX_M 0/GPI02_A6_u
	90	GMAC0_TXD1	I/O	UP	GMAC0_TXD1	GMAC0_TXD1 core board series resistance 22R	1.8V	G27	GMAC0_TXD1/UART1_TX_M0/GPI02_B4 _u
	92	GMAC0_TXD0	I/O	UP	GMAC0_TXD0	GMAC0_TXD0 core board series resistance 22R	1.8V	F28	GMAC0_TXD0/UART1_RX_M0/GPI02_B3 _u
	94	GMAC0_TXEN	I/O	UP	GMAC0_TXEN	GMAC0_TXEN core board series resistance 22R	1.8V	G28	GMAC0_TXEN/UART1_RTSn_M0/SPI1_C LK_M0/GPI02_B5_u
	96	GMAC0_MDC	I/O	UP	GMAC0_MDC	GMAC management interface clock	1.8V	H24	GMAC0_MDC/I2S2_LRCK_TX_M0/UART9 _RTSn_M0/SPI2_MOSI_M0/GPI02_C3_ d
	98	GND	G		GND	GND	GND		
	100	SDMMC0_CLK/CAN0_RX_M1	I/O	DOWN	SDMMC0_CLK	SDMMC0_CLK to TF Card core board series resistance 22R	Default is 3.3V; VCC10_SD =1.8V(SD IO 3.0) or 3.3V(SDI O 2.0)	H28	SDMMC0_CLK/TEST_CLKOUT/UART5_TX _M0/CAN0_RX_M1/GPI02_A2_d
	102	SDMMC0_CMD/CAN0_TX_M1	I/O	UP	SDMMC0_CMD	SDMMC0_CMD to TF Card		H27	SDMMC0_CMD/PWM10_M1/UART5_RX_M0 /CAN0_TX_M1/GPI02_A1_u
	104	GND	G		GND	GND	GND		
	106	SDMMC0_DET_L	I/O	UP	SDMMC0_DET_L	SDMMC0_DET Input, Active L	3.3V	Y22	SDMMC0_DET_L/SATA_CP_DET/PCIE30 X1_CLKREQn_M0/GPI00_A4_u
	108	USB3_OTG0_ID	I		USB3_OTG0_ID	OTG0 DET,Active L Default NC	1.8V	L23	USB3_OTG0_ID
	110	USB3_OTG0_VBUSDET	I		USB3_OTG0_VBUSDET	USB Plug-in DET,Active H	3.3V	M24	USB3_OTG0_VBUSDET
	112	GND	G		GND	GND	GND		
	114	USB3_OTG0_DP	I/O		USB3_OTG0_DP	USB3_OTG0_DP	3.3V	P27	USB3_OTG0_DP
	116	USB3_OTG0_DM	I/O		USB3_OTG0_DM	USB3_OTG0_DM	3.3V	P28	USB3_OTG0_DM
	118	GND	G		GND	GND	GND		
	120	USB3_OTG0_SSRXN	I/O		USB3_OTG0_SSRXN	USB3_OTG0_SSRXN	1.8V	R27	USB3_OTG0_SSRXN/SATA0_RXN
	122	USB3_OTG0_SSRXP	I/O		USB3_OTG0_SSRXP	USB3_OTG0_SSRXP	1.8V	R28	USB3_OTG0_SSRXP/SATA0_RXP
	124	USB3_OTG0_SSTXN	I/O		USB3_OTG0_SSTXN	USB3_OTG0_SSTXN	1.8V	T27	USB3_OTG0_SSTXN/SATA0_TXN
	126	USB3_OTG0_SSTXP	I/O		USB3_OTG0_SSTXP	USB3_OTG0_SSTXP	1.8V	T28	USB3_OTG0_SSTXP/SATA0_TXP
	128	GND	G		GND	GND	GND		
	130	USB3_HOST1_SSRXN	I/O		USB3_HOST1_SSRXN	USB3_HOST1_SSRXN	1.8V	U27	USB3_HOST1_SSRXN/SATA1_RXN/QSGM II_RXN_M0
	132	USB3_HOST1_SSRXP	I/O		USB3_HOST1_SSRXP	USB3_HOST1_SSRXP	1.8V	U28	USB3_HOST1_SSRXP/SATA1_RXP/QSGM II_RXP_M0
	134	USB3_HOST1_SSTXN	I/O		USB3_HOST1_SSTXN	USB3_HOST1_SSTXN	1.8V	V27	USB3_HOST1_SSTXN/SATA1_TXN/QSGM II_TXN_M0
	136	USB3_HOST1_SSTXP	I/O		USB3_HOST1_SSTXP	USB3_HOST1_SSTXP	1.8V	V28	USB3_HOST1_SSTXP/SATA1_TXP/QSGM II_TXP_M0
	138	GND	G		GND	GND	GND		
	140	USB3_HOST1_DP	I/O		USB3_HOST1_DP	USB3_HOST1_DP	3.3V	P24	USB3_HOST1_DP
	142	USB3_HOST1_DM	I/O		USB3_HOST1_DM	USB3_HOST1_DM	3.3V	P25	USB3_HOST1_DM
	144	GND	G		GND	GND	GND		
	146	SATA2_TXP	O		SATA2_TXP	SATA2_TXP	1.8V	W27	PCIE20_TXP/SATA2_TXP/QSGMII_TXP _M1
	148	SATA2_TXN	O		SATA2_TXN	SATA2_TXN	1.8V	W28	PCIE20_TXN/SATA2_TXN/QSGMII_TXN _M1
	150	SATA2_RXP	I		SATA2_RXP	SATA2_RXP	1.8V	Y27	PCIE20_RXP/SATA2_RXP/QSGMII_RXP _M1
	152	SATA2_RXN	I		SATA2_RXN	SATA2_RXN	1.8V	Y28	PCIE20_RXN/SATA2_RXN/QSGMII_RXN _M1
	154	GND	G		GND	GND	GND		
	156	REFCLK_OUT_CAM	I/O	DOWN	REFCLK_OUT_CAM	Clock output for camera core board series resistance 22R	3.3V	AG27	REFCLK_OUT_CAM/GPI00_A0_d
	158	GND	G		GND	GND	GND		
	160	GPI00_D5	I/O	DOWN	USB20_HOST0_PWREN	USB20_HOST0_PWREN ,Active H	1.8V	AD25	GPI00_D5_d
	162	RTCIC_INT_L_GPI00_D3	I/O	DOWN	RTCIC_INT_L_GPI00_D3	RTC IC INT ,Active L	1.8V	AE26	GPI00_D3_d
	164	GPI00_A5	I/O	DOWN	USB_OTG_PWREN_H_GPI00_A5	USB_OTG_PWREN_H_GPI00_A5	3.3V	AF25	SDMMC0_PWREN/SATA_MP_SWITCH/PCI E20_CLKREQn_M0/GPI00_A5_d
	166	GND	G		GND	GND	GND		
	168	GND	G		GND	GND	GND		
	170	HDMI_TX2P_PORT	O		HDMI_TX2P_PORT	HDMI_TX2P_PORT, core board series	1.8V	AG22	HDMI_TX2P_PORT
	172	HDMI_TX2N_PORT	O		HDMI_TX2N_PORT	HDMI_TX2N_PORT, core board series	1.8V	AH22	HDMI_TX2N_PORT
	174	HDMI_TX1P_PORT	O		HDMI_TX1P_PORT	HDMI_TX1P_PORT, core board series	1.8V	AG21	HDMI_TX1P_PORT
	176	HDMI_TX1N_PORT	O		HDMI_TX1N_PORT	HDMI_TX1N_PORT, core board series	1.8V	AH21	HDMI_TX1N_PORT
	178	HDMI_TX0P_PORT	O		HDMI_TX0P_PORT	HDMI_TX0P_PORT, core board series	1.8V	AG20	HDMI_TX0P_PORT
	180	HDMI_TX0N_PORT	O		HDMI_TX0N_PORT	HDMI_TX0N_PORT, core board series	1.8V	AH20	HDMI_TX0N_PORT
	182	HDMI_TXCLKP_PORT	O		HDMI_TXCLKP_PORT	HDMI_TXCLKP_PORT, core board series	1.8V	AH19	HDMI_TXCLKP_PORT
	184	HDMI_TXCLKN_PORT	O		HDMI_TXCLKN_PORT	HDMI_TXCLKN_PORT, core board series	1.8V	AG19	HDMI_TXCLKN_PORT
	186	GND	G		GND	GND	GND		
	188	TP_INT_L_GPI00_B5	I/O	UP	TP_INT_L_GPI00_B5	MIPI DSI0 TP interrupt input ,Active L	3.3V	AC22	I2C2_SCL_M0/SPI0_CLK_M0/PCIE20W AKEn_M0/PWM1_M1/GPI00_B5_u
	190	TP_RST_L_GPI00_B6	I/O	UP	TP_RST_L_GPI00_B6	MIPI DSI0 TP_Reset ,Active L	3.3V	AA20	I2C2_SDA_M0/SPI0_MOSI_M0/PCIE20 _PERSTn_M0/PWM2_M1/GPI00_B6_U
	192	I2C1_SCL_TP	I/O	UP	I2C1_SCL_TP	I2C1 SCL for TP Core board Pull up resistance 2.2K	3.3V	AG24	I2C1_SCL/CAN0_TX_M0/PCIE30X1_BU TTONRSTn/MCU_JTAG_TDO/GPI00_B3_ u
	194	I2C1_SDA_TP	I/O	UP	I2C1_SDA_TP	I2C1 SDA for TP Core board Pull up resistance 2.2K	3.3V	AB20	I2C1_SDA/CAN0_RX_M0/PCIE20_BUTT ONRSTn/MCU_JTAG_TCK/GPI00_B4_u
	196	PWM7_IR	I/O	DOWN	PWM7_IR	PWM7_IR Input	3.3V	AD20	PWM7_IR/SPI0_CS0_M0/PCIE30X2_PE RSTn_M0/GPI00_C6_d
	198	UART2_TX_M0_DEBUG	I/O	UP	UART2_TX_M0_DEBUG	UART2 TX M0 for DEBUG	3.3V	AH24	UART2_TX_M0/GPI00_D1_u
	200	UART2_RX_M0_DEBUG	I/O	UP	UART2_RX_M0_DEBUG	UART2 RX M0 for DEBUG	3.3V	AC20	UART2_RX_M0/GPI00_D0_u
	202	GPI00_C2	I	DOWN	EDP_HPD	EDP_HPD det ,Active H	3.3V	AG23	PWM3_IR/EDP_HPDIN_M1/PCIE30X1_W AKEn_M0/MCU_JTAG_TMS/GPI00_C2_d
	204	GND	G		GND	GND	GND		
	206	MIPI_DSI_TXO_DON/LVDS_TXO_DON	O		MIPI_DSI_TXO_DON/LVDS_TXO_DON	MIPI_DSI_TXO_DON/LVDS_TXO_DON	1.8V	AG17	MIPI_DSI_TXO_DON/LVDS_TXO_DON
	208	MIPI_DSI_TXO_DOP/LVDS_TXO_DOP	O		MIPI_DSI_TXO_DOP/LVDS_TXO_DOP	MIPI_DSI_TXO_DOP/LVDS_TXO_DOP	1.8V	AH17	MIPI_DSI_TXO_DOP/LVDS_TXO_DOP
	210	MIPI_DSI_TXO_DIN/LVDS_TXO_DIN	O		MIPI_DSI_TXO_DIN/LVDS_TXO_DIN	MIPI_DSI_TXO_DIN/LVDS_TXO_DIN	1.8V	AG16	MIPI_DSI_TXO_DIN/LVDS_TXO_DIN
	212	MIPI_DSI_TXO_DIP/LVDS_TXO_DIP	O		MIPI_DSI_TXO_DIP/LVDS_TXO_DIP	MIPI_DSI_TXO_DIP/LVDS_TXO_DIP	1.8V	AH16	MIPI_DSI_TXO_DIP/LVDS_TXO_DIP
	214	MIPI_DSI_TXO_CLKN/LVDS_TXO_CLKN	O		MIPI_DSI_TXO_CLKN/LVDS_TXO_CLKN	MIPI_DSI_TXO_CLKN/LVDS_TXO_CLKN	1.8V	AG15	MIPI_DSI_TXO_CLKN/LVDS_TXO_CLKN
	216	MIPI_DSI_TXO_CLKP/LVDS_TXO_CLKP	O		MIPI_DSI_TXO_CLKP/LVDS_TXO_CLKP	MIPI_DSI_TXO_CLKP/LVDS_TXO_CLKP	1.8V	AH15	MIPI_DSI_TXO_CLKP/LVDS_TXO_CLKP
	218	MIPI_DSI_TXO_D2N/LVDS_TXO_D2N	O		MIPI_DSI_TXO_D2N/LVDS_TXO_D2N	MIPI_DSI_TXO_D2N/LVDS_TXO_D2N	1.8V	AG14	MIPI_DSI_TXO_D2N/LVDS_TXO_D2N
	220	MIPI_DSI_TXO_D2P/LVDS_TXO_D2P	O		MIPI_DSI_TXO_D2P/LVDS_TXO_D2P	MIPI_DSI_TXO_D2P/LVDS_TXO_D2P	1.8V	AH14	MIPI_DSI_TXO_D2P/LVDS_TXO_D2P
	222	MIPI_DSI_TXO_D3N/LVDS_TXO_D3N	O		MIPI_DSI_TXO_D3N/LVDS_TXO_D3N	MIPI_DSI_TXO_D3N/LVDS_TXO_D3N	1.8V	AG13	MIPI_DSI_TXO_D3N/LVDS_TXO_D3N
	224	MIPI_DSI_TXO_D3P/LVDS_TXO_D3P	O		MIPI_DSI_TXO_D3P/LVDS_TXO_D3P	MIPI_DSI_TXO_D3P/LVDS_TXO_D3P	1.8V	AH13	MIPI_DSI_TXO_D3P/LVDS_TXO_D3P
	226	GND	G		GND	GND	GND		
	228	MIPI_CSI_RX_DON	I		MIPI_CSI_RX_DON	MIPI_CSI_RX_DON	1.8V	AH12	MIPI_CSI_RX_DON
	230	MIPI_CSI_RX_DOP	I		MIPI_CSI_RX_DOP	MIPI_CSI_RX_DOP	1.8V	AG12	MIPI_CSI_RX_DOP
	232	MIPI_CSI_RX_DIN	I		MIPI_CSI_RX_DIN	MIPI_CSI_RX_DIN	1.8V	AH11	MIPI_CSI_RX_DIN
	234	MIPI_CSI_RX_DIP	I		MIPI_CSI_RX_DIP	MIPI_CSI_RX_DIP	1.8V	AG11	MIPI_CSI_RX_DIP
	236	MIPI_CSI_RX_CLKON	I		MIPI_CSI_RX_CLKON	MIPI_CSI_RX_CLKON	1.8V	AH10	MIPI_CSI_RX_CLKON
	238	MIPI_CSI_RX_CLKOP	I		MIPI_CSI_RX_CLKOP	MIPI_CSI_RX_CLKOP	1.8V	AG10	MIPI_CSI_RX_CLKOP
	240	MIPI_CSI_RX_CLKIN	I		MIPI_CSI_RX_CLKIN	MIPI_CSI_RX_CLKIN	1.8V	AH9	MIPI_CSI_RX_CLKIN
	242	MIPI_CSI_RX_CLKIP	I		MIPI_CSI_RX_CLKIP	MIPI_CSI_RX_CLKIP	1.8V	AG9	MIPI_CSI_RX_CLKIP
	244	GND	G		GND	GND	GND		
	246	PCIE30X2_PERSTN_M1	I/O	DOWN	PCIE30X2_PERSTN_M1	PCIE Reset, Active L	3.3V	AD6	SDMMC0_D6/VOP_BT656_D6_M0/SPI2_MO SI_M1/PCIE30X2_PERSTn_M1/I2S1_S DI3_M2/GPI02_D6_d
	248	PCIE30X2_PRSNT_L_GPI02_D7	I/O	DOWN	BT_WAKE_HOST_H_GPI02_D7	BT_WAKE_HOST,Active H	3.3V	AH5	SDMMC0_D7/VOP_BT656_D7_M0/SPI2_MI SO_M1/UART8_TX_M1/I2S1_SDO0_M2/ GPI02_D7_d
	250	BT_REG_ON_H_GPI03_A0	I/O	DOWN	BT_REG_ON_H_GPI03_A0	BT_EN ,Active H	3.3V	AH4	I2C0_CLK/VOP_BT656_CLK_M0/SPI2_ CLK_M1/UART8_RX_M1/I2S1_SDO1_M2 /GPI03_A0_d
	252	HOST_WAKE_BT_H_GPI03_A2	I/O	DOWN	HUB_USB1_PWREN_H	HOST_USB2.0 POWER Output EN, Active H	3.3V	AE5	I2C0_D9/VOP_BT1120_D1/GMAC1_TXD 2_M0/I2S3_MCLK_M0/SDMMC2_D1_M1/ GPI03_A2_d
	254	I2S3_SDO_M0	I/O	DOWN	I2S3_SDO_M0	I2S3_SDO_M0	3.3V	AH3	I2C0_D12/VOP_BT1120_D4/GMAC1_RX D3_M0/I2S3_SDO_M0/SDMMC2_CMD_M1 /GPI03_A5_d
	256	I2S3_SDI_M0	I/O	DOWN	I2S3_SDI_M0	I2S3_SDI_M0	3.3V	AG3	I2C0_D13/VOP_BT1120_CLK/GMAC1_T
	258	PCIECLKIC_OE_H_GPI03_A7	I/O	DOWN	PCIECLKIC_OE_H_GPI03_A7	PCIE CLOCK IC_EN ,Active H	3.3V	AH2	I2C0_D14/VOP_BT1120_D5/GMAC1_RX CLK_M0/SDMMC2_DET_M1/GPI03_A7_d
	260	GND	G		GND	GND	GND		
	262	HP_DET_L_GPI03_C2	I/O	DOWN	SPI1_MISO_M1	SPI1_MISO_M1	3.3V	AA7	I2C0_VSYNC/VOP_BT1120_D14/SPI1_ MISO_M1/UART5_TX_M1/I2S1_SDO3_M 2/GPI03_C2_d
	264	UART4_TX_M1	I/O	DOWN	UART4_TX_M1	UART4_TX_M1	3.3V	AF2	I2C0_D17/VOP_BT1120_D8/GMAC1_RX D1_M0/UART4_TX_M1/PWM9_M0/GPI03 _B2_d
	266	UART4_RX_M1	I/O	DOWN	UART4_RX_M1	UART4_RX_M1	3.3V	AG1	I2C0_D16/VOP_BT1120_D7/GMAC1_RX D0_M0/UART4_RX_M1/PWM8_M0/GPI03 _B1_d
	268	GPI03_B6	I/O	DOWN	BAT_ALRT, Default NC	BAT_ALRT, Default NC	3.3V	AE3	I2C0_D21/VOP_BT1120_D12/GMAC1_T XD1_M0/I2C3_SDA_M1/PWM11_IR_M0/ GPI03_B6_d
	270	I2C5_SCL_M0	I/O	DOWN	I2C5_SCL_M0	I2C5_SCL_M0 Core board Pull up resistance 2.2K	3.3V	AF1	I2C0_D18/VOP_BT1120_D9/GMAC1_RX DV_CRS_M0/I2C5_SCL_M0/PDM_SDI0_ M2/GPI03_B3_d
	272	I2C5_SDA_M0	I/O	DOWN	I2C5_SDA_M0	I2C5_SDA_M0 Core board Pull up resistance 2.2K	3.3V	AE1	I2C0_D19/VOP_BT1120_D10/GMAC1_R XER_M0/I2C5_SDA_M0/PDM_SDI1_M2/ GPI03_B4_d
	274	GSENSOR_INT_L_GPI03_C1	I/O	DOWN	SPI1_MOSI_M1	SPI1_MOSI_M1	3.3V	AD1	LCDC_HSYNC/VOP_BT1120_D13/SPI1_ MOSI_M1/PCIE20_PERSTn_M1/I2S1_S DO2_M2/GPI03_C1_d
	276	SPDIF_TX_M1	I/O	DOWN	SPK_CTL_H	SPK_EN ,Active H	3.3V	AC2	PWM15_IR_M0/SPDIF_TX_M1/GMAC1_M D10_M0/UART7_RX_M1/I2S1_LRCK_RX _M2/GPI03_C5_d
	278	GND	G		GND	GND	GND		
	280	SDMMC2_CLK_M0/CIF_D5	I/O	DOWN	SDMMC2_CLK_M0 To WIFI core board series resistance 22R	SDMMC2_CLK_M0	VCC10_W L	AC1	CIF_D5/EBC_SDDO5/SDMMC2_CLK_M0/ I2S1_SDI1_M1/VOP_BT656_D5_M1/GP I03_D3_d
	282	SDMMC2_D2_M0/CIF_D2	I/O	DOWN	SDMMC2_D2_M0	SDMMC2_D2_M0 To WIFI	VCC10_W L	AB5	CIF_D2/EBC_SDDO2/SDMMC2_D2_M0/I 2S1_LRCK_TX_M1/VOP_BT656_D2_M1/ GPI03_D0_d
	284	SDMMC2_D3_M0/CIF_D3	I/O	DOWN	SDMMC2_D3_M0	SDMMC2_D3_M0 To WIFI	VCC10_W L	AB1	CIF_D3/EBC_SDDO3/SDMMC2_D3_M0/I 2S1_SDO0_M1/VOP_BT656_D3_M1/GPI 03_D1_d
	286	GND	G		GND	GND	GND		
	288	GPI04_A1	I/O	DOWN	GMAC1_RXD2_M1	GMAC1_RXD2_M1	VCC10_W L	AA2	CIF_D11/EBC_SDDO11/GMAC1_RXD2_M 1/PDM_SDI1_M2/GPI04_A1_d
	290	GPI03_D4	I/O	DOWN	WIFI_WAKE_HOST_H_GPI03_D4	WIFI_WAKE_HOST Active H	VCC10_W L	AA1	CIF_D6/EBC_SDDO6/SDMMC2_DET_M0/ I2S1_SDI2_M1/VOP_BT656_D6_M1/GP I03_D4_d
	292	GPI04_A4	I/O	DOWN	GMAC1_TXD0_M1	GMAC1_TXD0_M1 core board series resistance 22R	VCC10_W L	Y2	CIF_D14/EBC_SDDO14/GMAC1_TXD0_M 1/UART9_TX_M2/I2S2_LRCK_TX_M1/G PI04_A4_d
	294	GPI04_A5	I/O	DOWN	GMAC1_TXD1_M1	GMAC1_TXD1_M1 core board series resistance 22R	VCC10_W L	Y1	CIF_D15/EBC_SDDO15/GMAC1_TXD1_M 1/UART9_RX_M2/I2S2_LRCK_RX_M1/G PI04_A5_d
	296	GPI04_A6	I/O	DOWN	GMAC1_TXEN_M1	GMAC1_TXEN_M1 core board series resistance 22R	VCC10_W L	W2	ISP_FLASHTRIGOUT/EBC_SDCE0/GMAC 1_TXEN_M1/SPI3_CS0_M0/I2S1_SCLK _RX_M1/GPI04_A6_d
	298	GPI04_A7	I/O	DOWN	GMAC1_RXD0_M1	GMAC1_RXD0_M1	VCC10_W L	W1	CAM_CLKOUT0/EBC_SDCE1/GMAC1_RXD 0_M1/SPI3_CS1_M0/I2S1_LRCK_RX_M 1/GPI04_A7_d
	300	GPI04_B1	I/O	DOWN	GMAC1_RXDV_CRS_M1	GMAC1_RXDV_CRS_M1	VCC10_W L	V2	ISP_PRELIGHT_TRIG/EBC_SDCE3/GMA C1_RXDV_CRS_M1/I2S1_SDO2_M1/GPI 04_B1_d
	302	GPI04_C1	I/O	DOWN	GMAC1_MCLKINOUT_M1	GMAC1_MCLKINOUT_M1 Input--PHY use external crystal	VCC10_W L	U2	CIF_CLKIN/EBC_SDCLK/GMAC1_MCLKI NOUT_M1/UART1_CTSn_M1/I2S2_SCLK _RX_M1/GPI0_C1_d
	304	GND	G		GND	GND	GND		
	306	USB2_HOST3_DP	I/O		USB2_HOST3_DP	USB2_HOST3_DP	3.3V	T2	USB2_HOST3_DP
	308	USB2_HOST3_DM	I/O		USB2_HOST3_DM	USB2_HOST3_DM	3.3V	T1	USB2_HOST3_DM
	310	USB2_HOST2_DP	I/O		USB2_HOST2_DP	USB2_HOST2_DP	3.3V	R2	USB2_HOST2_DP
	312	USB2_HOST2_DM	I/O		USB2_HOST2_DM	USB2_HOST2_DM	3.3V	R1	USB2_HOST2_DM
	314	GND	G		GND	GND	GND		
	316	NC			NC	NC	NC		
	318	GND	G		GND	GND	GND		

Note: VCC10_WL =1.8V or 3.3V INPUT Option (Default: 1.8V)

Technical Parameter

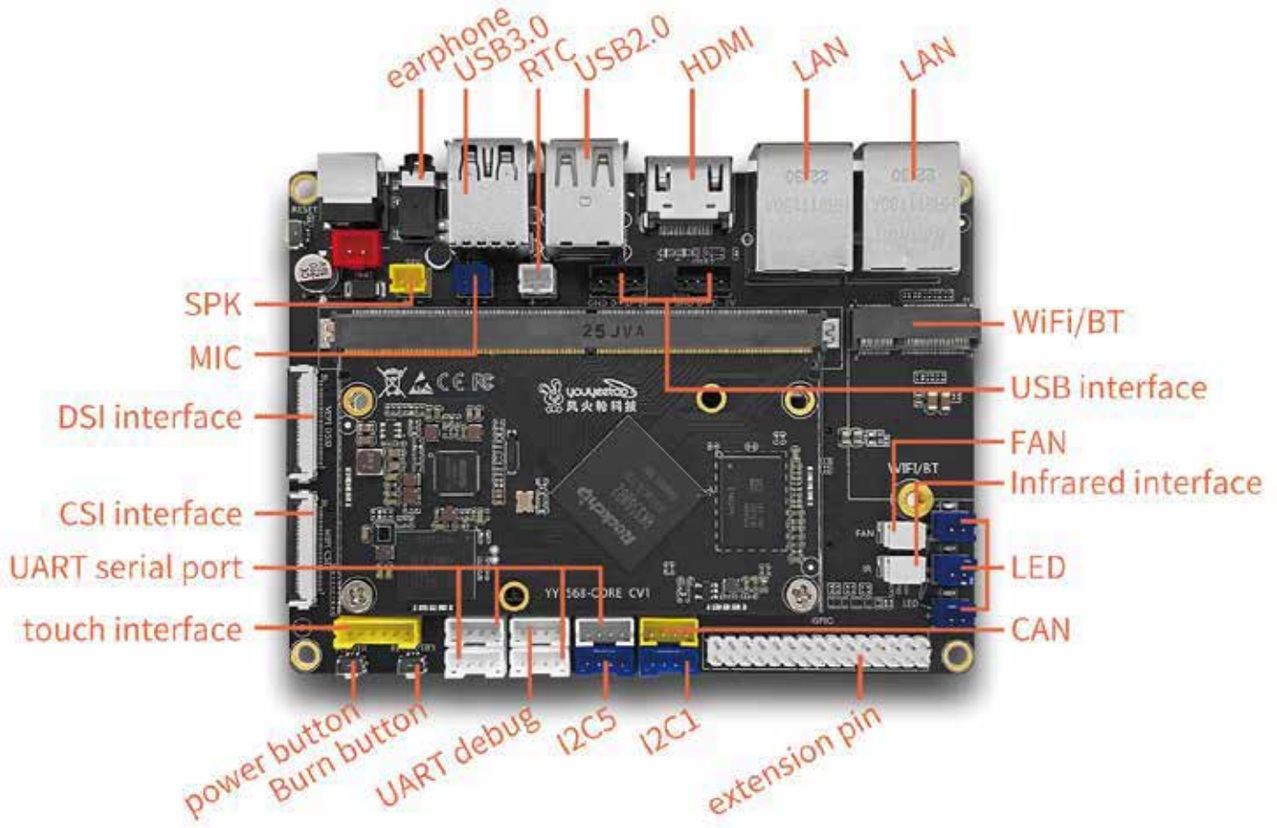
Specifications	
SOC	Rockchip RK3568
CPU	Quad-core 64-bit Cortex-A55, 22nm lithography process, frequency up to 2.0GHz
GPU	ARM G52 2EE Supports OpenGL ES 1.1/2.0/3.2, OpenCL 2.0, Vulkan 1.1 Embedded high-performance 2D acceleration hardware
NPU	0.8Tops@INT8,integrated high-performance AI accelerator RKNN NPU Supports one-click switching of Caffe/TensorFlow/ TFLite/ONNX/PyTorch/Keras/Darknet
VPU	Supports 4K 60fps H.265/H.264/VP9 video decoding Supports 1080P 60fps H.265/H.264 video encoding Supports 8M ISP, supports HDR
RAM	2GB / 4GB LPDDR4 (optional)
Storage	16GB / 32GB eMMC (optional)
Peripheral configuration	
Ethernet	Dual Gigabit Ethernet (1000Mbps)
WiFi	Expandable via M.2 interface: - 4G LTE (data Internet access)、 - "WiFi+Bluetooth" two-in-one module (2.4GHz / 5GHz dual-band WiFi, WiFi5, 802.11a/b/ g/n/ac/ protocol -- supports Bluetooth 5.0) (WIFI+BT, 4G LTE need to purchase accessories separately)
Display	1 x eDP: 2 x MIPI DSI、 1 x HDMI 2.0

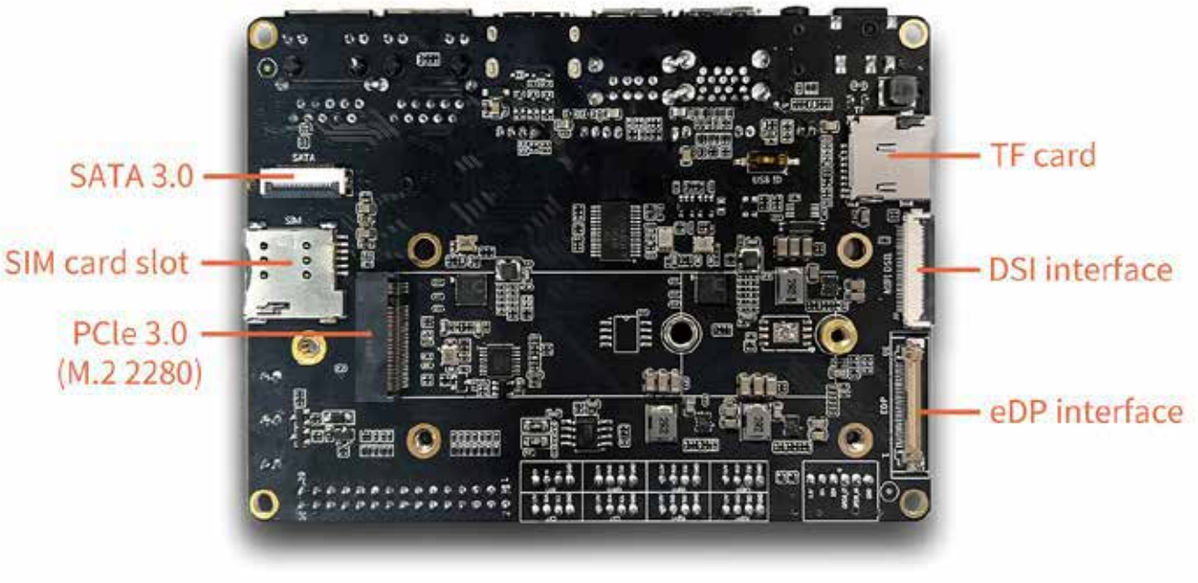
Camera	Support CSI camera, USB camera
Audio	1 × MIC audio input 1 x HDMI audio output 1 × power amplifier speaker speaker output (4 ohms 2 watts power) 1 × Phone headphone output (3-segment)
PCIE	1 x PCIe3.0
SATA	1 x SATA3.0(Need to purchase an adapter board)
USB	2 × USB 3.0、2 × USB 2.0(USB TYPE-A interface)、 OTG(dial switch)、2 x USB2.0(pin)
Interface	30Pin GPIO　5 x UART(serial port) 1 x SDMMC2　2 x I2C 4 x ADC　1 x CAN 2 x MULTI_PHY　2 x USB2.0(pin interface) 1 x SPDIF　1 x TP interface 3 x LED　1 x MIC(microphone)
power	1 x 12~19V DC Power Input Jack (5.5/2.1 mm)
OS/Software	
OS	Support Android11, Debian10 system
Others	
Size	120mm x 88mm x 19mm
Operating Temperature	-10℃ ~ 60℃
Storage Temperature	-20℃ ~ 70℃
Storage Humidity	10% ~ 80 %

Core board and backplane

Rich extension interface

Dual Gigabit Ethernet, SATA3.0, PCIe3.0, DSI, EDP,
HDMI, CSI and other interfaces are readily available





Size

About us

Shenzhen youyeetoo Tech is a company specializing in hardware and software technical services for IoT/Edge Computing/AI applications/Robots. We provide a wide range of products and services in these fields and provide customized designs.

Since its establishment, we have owned a lot of software copyrights and patents in the fields of embedded system applications, NFC near field communication and robotics. Focusing on technology and R&D is our fundamental.

We have also established global sales channels and china mainstream e-commerce platforms， such as JD.com, Tmall.com, Taobao are fully covered, In the main e-commerce platforms oversea of Amazon and AliExpress, we have 6 overseas warehouses in the UK, Russia, India and Japan, United States and Germany,covering major markets in North America, Europe, and Asia. We are outstanding.

Customers can purchase our products in the most convenient and comfortable way. At the same time, we ensure that the products can reach customers as quickly as possible.

youyeetoo
深圳风火轮科技

Web：https://www.youyeetoo.com/
Forum：https://forum.youyeetoo.com/
amazon：https://www.amazon.com/stores/page/FB-FEE817-720A-481E-976F-23203EB49551
blog： https://youyeetoo.com/blog/
中文网站：https://youyeetoo.cn/
aliexpress：https://smartfire.aliexpress.com/store/1100924668
Custom service：peter@youyeetoo.com