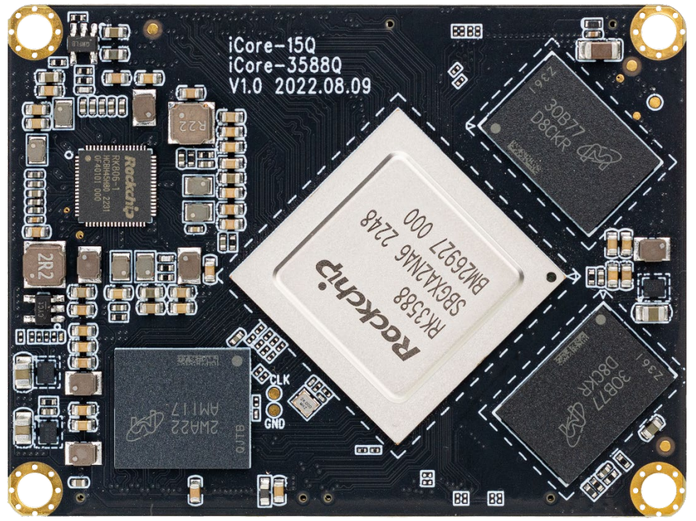
8K AI Core Board

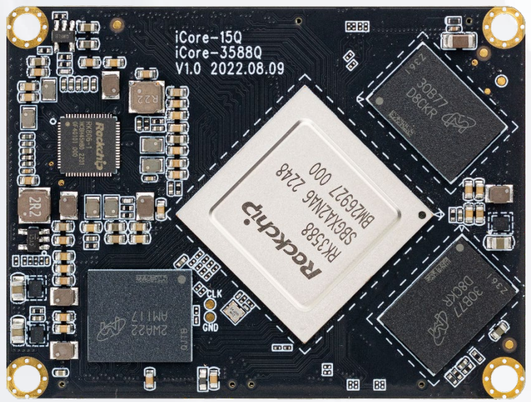
- iCore-3588Q(Commercial)
- iCore-3588JQ(Industrial)
- iCore-3588MQ(Automotive)



V1.0 2026-1-5

FIREFLY TECHNOLOGY

Product features



New-gen AIoT SoC RK3588

RK3588 is Rockchip's new-gen flagship high-end processor with 8nm lithography process and frequency of up to 2.4GHz.

6TOPS powerful computing power

Built-in powerful NPU, comprehensive computing power up to 6TOPS. It supports INT4/INT8/INT16 hybrid computing, and can realize network model conversion based on TensorFlow, MXNet, PyTorch, Caffe and other series frameworks.

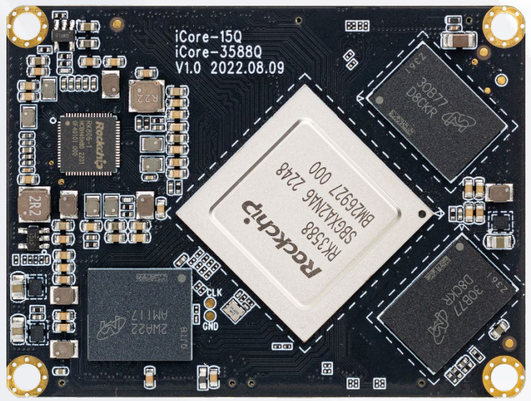
8K video encoding and decoding

The computer supports 8K@60fps H.265/VP9 video decoding and 8K@30fps H.265/H.264 video encoding, with simultaneous encoding and decoding capabilities. It can achieve up to 32-channel 1080P@30fps decoding and 16-channel 1080P@30fps encoding.

Super-large 32GB RAM

Up to 32GB of super-large RAM can be configured, which exceeds the limit of the previous RAM and delivers faster response speed. It is able to meet the application requirements of products with large RAM and large storage.

Product features



Strong network communication capability

Integrated with PCIe3.0/GMAC/SDIO3.0/USB3.0, it can be extended to multi-channel Gigabit Ethernet, WiFi 6/Bluetooth, 5G/4G LTE, enabling high-speed network communication.

Support various systems

The computer provides Android 12.0, Ubuntu (Desktop and Server), Debian11, Buildroot. It supports RTLinux, delivering excellent real-time performance. Thanks to these options, a safe and stable system environment for product research and production is available.

A variety of interfaces

Equipped with PCIe3.0, SATA3.0, I2S, I2C, CAN, UART, SPDIF, SDIO3.0, MIPI-CSI, MIPI-DSI, USB3.0, USB2.0, SPI and GPIO and other expansion interfaces.

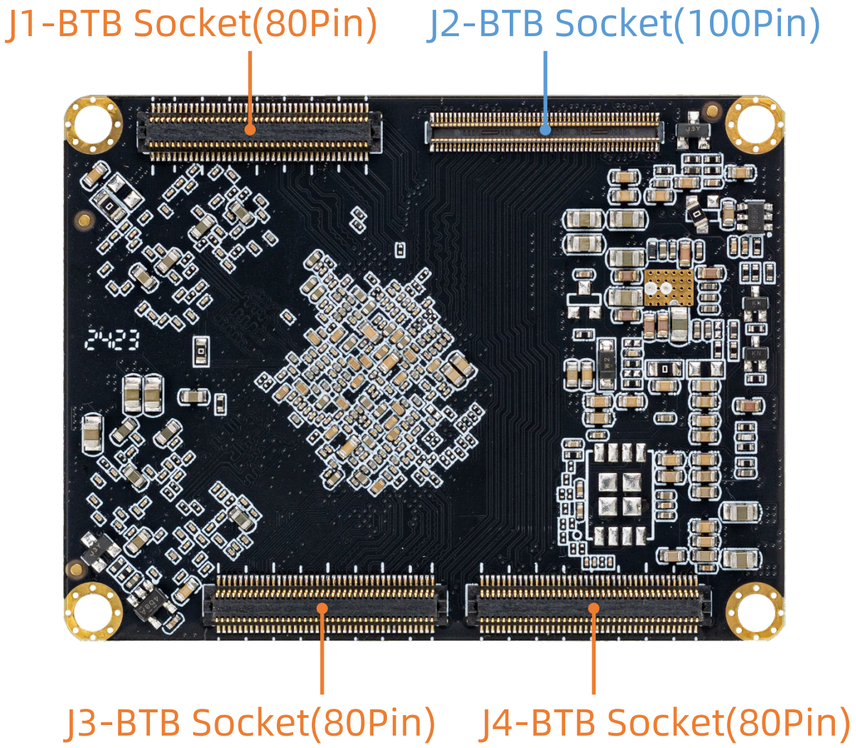
A wide range of applications

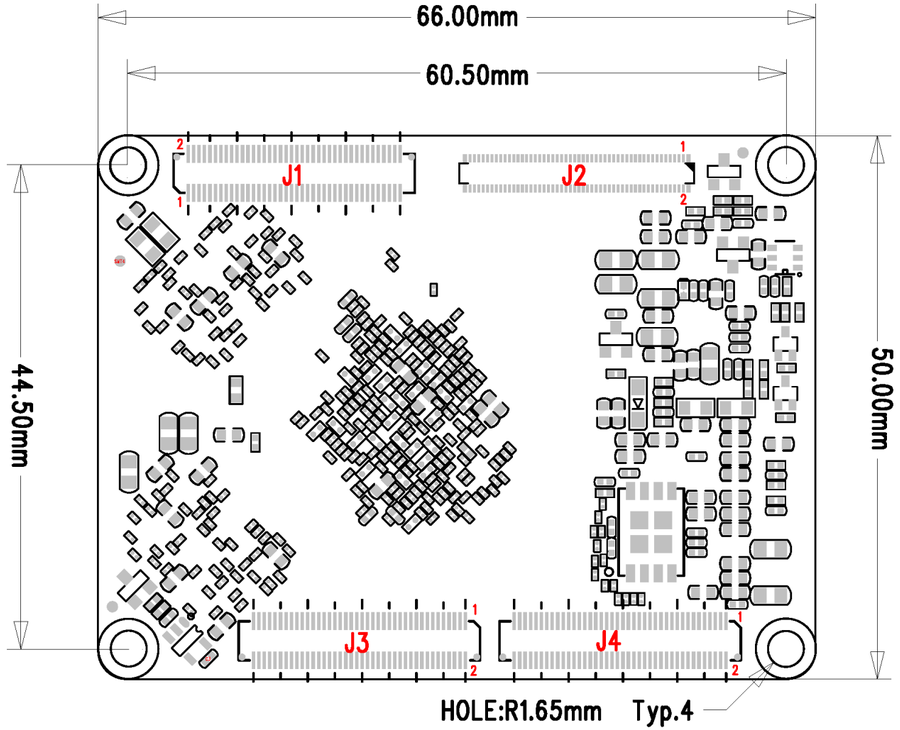
This mainboard can be widely used in ARM PC, edge computing, cloud server, smart NVR, smart video wall, AR/VR, smart car and other fields.

Specifications

		iCore-3588Q (Commercial)	iCore-3588JQ(Industrial)	iCore-3588MQ(Automotive)
Basic Specifications	CPU	RK3588 Octa-core 64-bit (4×Cortex-A76+4×Cortex-A55), up to 2.4GHz	RK3588J Octa-core 64-bit (4×Cortex-A76+4×Cortex-A55), up to 1.6GHz	RK3588M Octa-core 64-bit (4×Cortex-A76+4×Cortex-A55), up to 2.0GHz
	GPU	ARM Mali-G610 MP4 quad-core GPU, support OpenGL ES3.2 / OpenCL 2.2 / Vulkan1.1, 450 GFLOPS		
	NPU	Up to 6TOPS (INT8), support INT4/INT8/INT16 mixed operations Support framework switching of TensorFlow/MXNet/PyTorch/Caffe		
	ISP	48MP ISP with HDR & 3DNR		
	VPU	Hardware decoding: 8K@60fps H.265/VP9/AVS2, 8K@30fps H.264 AVC/MVC, 4K@60fps AV1, 1080P@60fps MPEG-2/-1/VC-1/VP8 Hardware encoding: 8K@30fps H.265/H.264		
	RAM	LPDDR4/LPDDR4x/LPDDR5 (4GB/8GB/16GB/32GB optional)		
	Storage	eMMC (32GB/64GB/128GB/256GB optional)		
	Power	4V (voltage tolerance ± 5%)		
	Power consumption	Min:≈0.032W(4.0V/8mA) Normal:≈0.84W(4.0V/210mA) Max:≈11.2W(4.0V/2.8A)	Min:≈0.032W(4.0V/8mA) Normal:≈0.84W(4.0V/210mA) Max:≈7.6W(4.0V/1.9A)	Min:≈0.032W(4.0V/8mA) Normal:≈0.92W(4.0V/230mA) Max:≈10W(4.0V/2.5A)
	OS	Android and Linux OS		
	Interface	BTB (3 × BTB Socket (80Pin) + 1 × BTB Socket (100Pin))		
	Size	66.0mm × 50.0mm × 5.8mm		
	Weight	≈22g		
	Environment	Operating temperature: -20℃ ~ 60℃ Operating humidity: 10% ~ 90%RH (non-condensing)	Operating temperature: -40℃ ~ 85℃ Operating humidity: 10% ~ 90%RH (non-condensing)	Operating temperature: -40℃ ~ 85℃ Operating humidity: 10% ~ 90%RH (non-condensing)
Interface Specifications	Network	2 × GMAC, providing RGMII/RMII interface, supporting 10/100/1000Mbps data transfer rate Expandable WiFi6/Bluetooth via SDIO3.0/PCIe3.0 interface Expandable 5G/4G LTE via USB3.0 interface		
	Video Input	1 × HDMI-IN (4K@60fps), supporting HDCP 2.3 2 × MIPI-CSI (4 lanes) or 4 × MIPI-CSI (2 lanes) or 1 × MIPI-CSI (4 lanes) + 2 × MIPI-CSI (2 lanes) 2 × MIPI DC (4-lane DPHY v2.0 or 3-lane CPHY V1.1) 1 × DVP (up to 150MHz data input) * Support multi-channel 8K video output and 4K video input. Up to seven displays can be achieved		
	Video Output	2 × HDMI2.1 (8K@60fps or 4K@120fps, shared with eDP) 2 × MIPI-DSI (4K@60fps) 2 × DP1.4 (8K@30fps, shared with USB3.0) 1 × BT.1120 (1080P@60fps)		
	Audio Output	2 × I2S (8 lanes), 2 × I2S (2 lanes), 2 × SPDIF, 1 × VAD, 2 × PDM (8 lanes, support multi-Mic array), 1 × dual-channel digital audio codec (16-bit DAC)		
	USB	2 × USB3.1(Gen1) OTG, 1 × USB3.1(Gen1) HOST, 2 × USB2.0 HOST, 2 × USB2.0 OTG		
	PCIe	1 × PCIe3.0 (2×2lanes, 1×4lanes, 4×1lane, 1×2lanes+2×1lane) 3 × PCIe2.1 (1lane, multiplexed with SATA3.0)		
	SATA	3 × SATA3.0 (Multiplexed with PCIe2.1)		
	Watchdog	Independent watchdog		
	Other	9 × I2C, 10 × UART, 5 × SPI, 4 × ADC, 16 × PWM, 1 × SDMMC, GPIOs, 3 × CAN (not supported by iCore-3588MQ)		

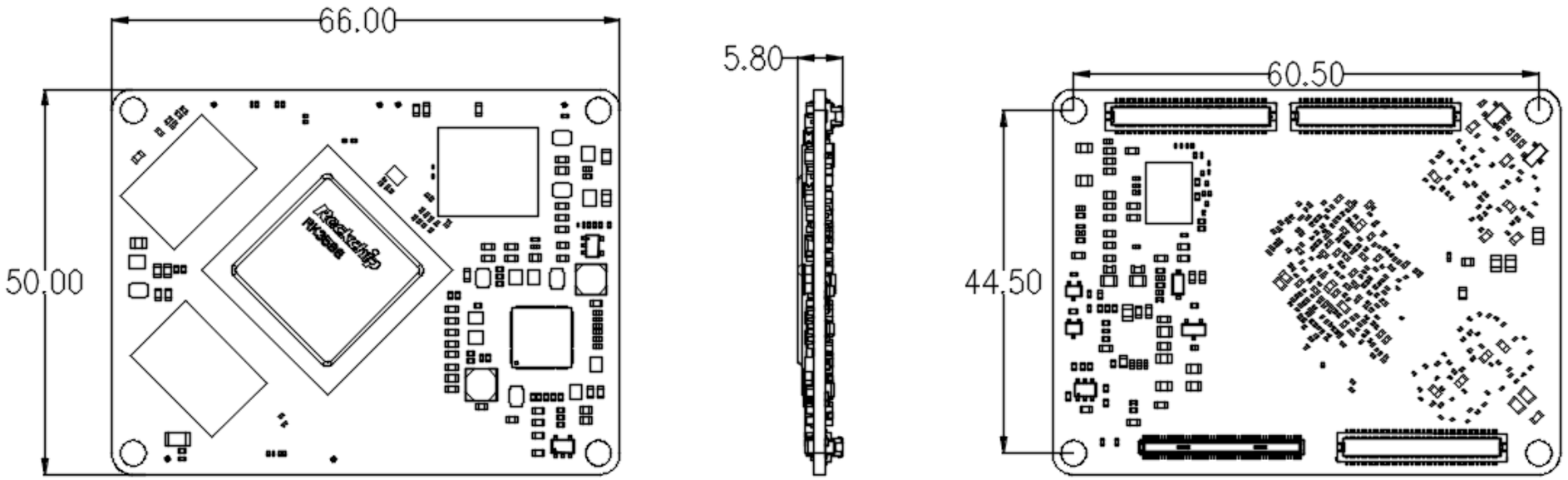
Core board Interface description



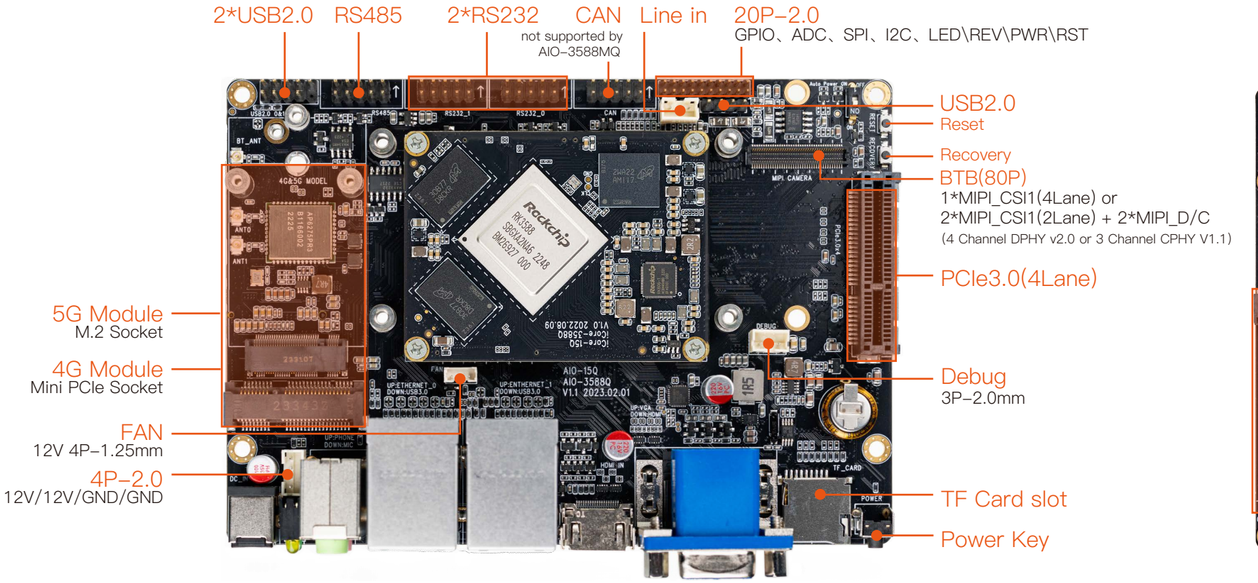


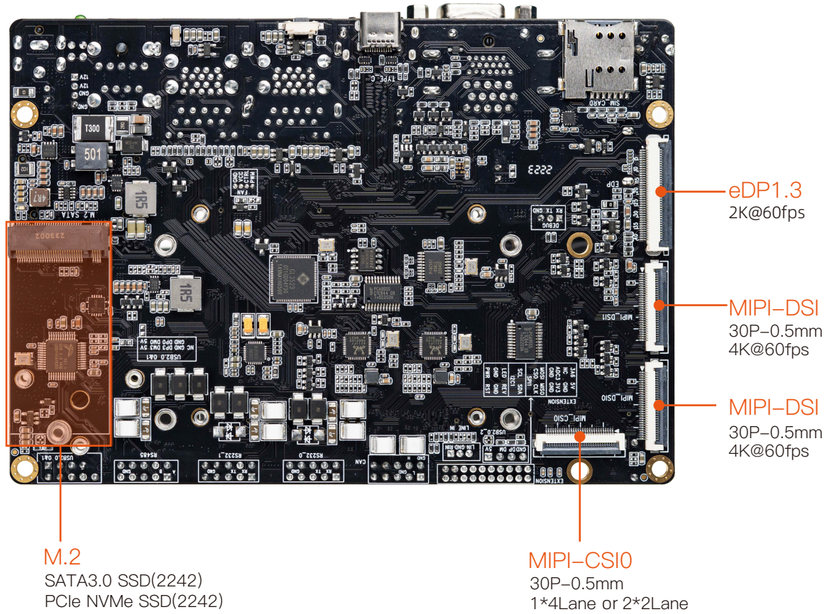
PCIe3.0	SATA3.0	UART	SPDIF	CAN	(iCore-3588MQ doesn’t support CAN)
SDIO3.0	GPIO	USB3.1	MIPI-DSI	MIPI-CSI	

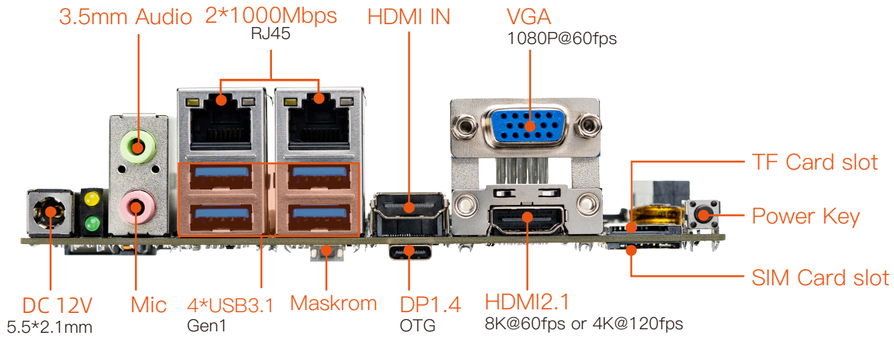
Core board Dimension



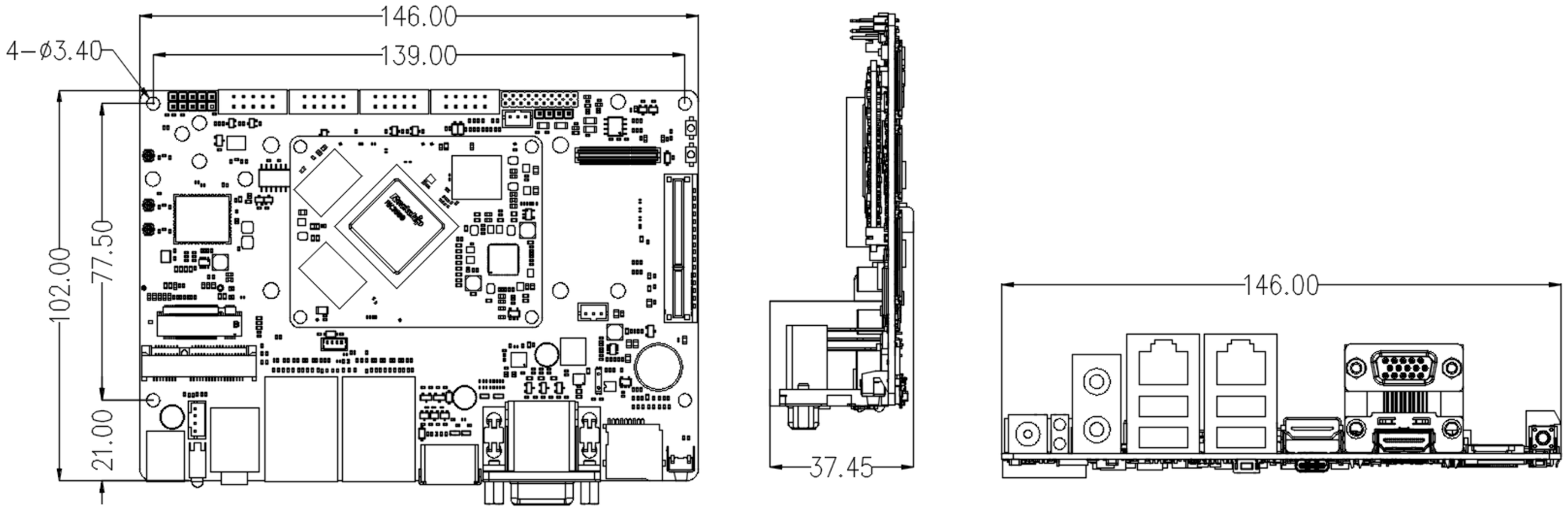
Mainboard Interface description







Mainboard Dimension



Interface definition

① : 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 = Lowe Level H = High level”

PIN	(J1) ICORE-3588Q pin definition	Pad type	IO Pull	Function for Mainboard (MB-Q-RK3588)	Defual function description	IO Power domain	RK3588 Pin Number
1	GND	G		GND	GND	GND	
3	GND	G				GND	
5	GND	G				GND	
7	GND	G				GND	
9	VCC4V0_SYS	P		VCC4V0_SYS	Core board Power Input:4.0V +/-5%	4.0V	
11	VCC4V0_SYS	P				4.0V	
13	VCC4V0_SYS	P				4.0V	
15	VCC4V0_SYS	P				4.0V	
17	VCC4V0_SYS	P				4.0V	
19	VCC4V0_SYS	P				4.0V	
21	VCCA_3V3_S0	P		VCCA_3V3_S0	3.3V Output (Max:300mA)	3.3V	
23	MIPI_CAMERA0_CLK_M0/SPDIF1_TX_M1/I2S1_SDO0_M0/PCIE30X1_0_BUTTON_RSTN/SATA2_ACT_LED_M0/I2C6_SCL_M3/UART8_RX_M0/SPI0_CS1_M1/GPIO4_B1_u	I/O	UP	I2S1_SDO_M0_BT	I2S1_SDO_M0_BT	3.3V	AL24
25	BT1120_D15/SPDIF1_TX_M2/PCIE20X1_2_PERSTN_M1/HDMI_TX0_CEC_M0/I2C8_SDA_M3/PWM6_M1/SPI3_CS1_M1/GPIO4_C1_d	I/O	DOWN	HDMITX0_CEC_M0	HDMITX0_CEC_M0	3.3V	AK24
27	BT1120_D14/PCIE20X1_2_WAKEN_M1/HDMI_TX0_SDA_M0/I2C8_SCL_M3/SPI3_CS0_M1/GPIO4_C0_u	I/O	UP	HDMITX0_SDA_M0	HDMITX0_SDA_M0	3.3V	AJ25
29	BT1120_D13/PCIE20X1_2_CLKREQN_M1/HDMI_TX0_SCL_M0/I2C5_SDA_M1/SPI3_CLK_M1/GPIO4_B7_u	I/O	UP	HDMITX0_SCL_M0	HDMITX0_SCL_M0	3.3V	AJ28

Interface definition

31	TYPEC1_USB20_OTG_ID	I		NC	NC	1.8V	AK8
33	TYPEC1_USB20_VBUSDET	I		NC	NC	3.3V	AL8
35	TYPEC0_USB20_OTG_ID	I		NC	NC	1.8V	AL14
37	TYPEC0_USB20_VBUSDET	I		TYPEC0_USB20_VBUSDET	TYPEC0_USB20_VBUS DET,Active H	3.3V	AM14
39	CIF_D14/PCIE30X2_CLKREQN_M2/HDMI_RX_SCL_M1/I2C7_SCL_M2/UART9_RTSN_M2/SPI0_MOSI_M3/GPIO3_D2_d	I/O	DOWN	HDMI_RX_SCL_M1	HDMI_RX_SCL_M1	VCCIO5	AG25
41	CIF_D15/PCIE30X2_WAKEN_M2/HDMI_RX_SDA_M1/I2C7_SDA_M2/UART9_CTSN_M2/PWM10_M2/SPI0_CLK_M3/GPIO3_D3_d	I/O	DOWN	HDMI_RX_SDA_M1	HDMI_RX_SDA_M1	VCCIO5	AG24
43	CIF_D13/PCIE20X1_2_PERSTN_M0/HDMI_RX_CEC_M1/UART4_TX_M1/PWM9_M2/SPI0_MISO_M3/GPIO3_D1_d	I/O	DOWN	HDMI_RX_CEC	HDMI_RX_CEC	VCCIO5	AG23
45	GND	G		GND	GND	GND	
47	HDMI_RX_CLKN	I		HDMI_RX_CLKN	HDMI_RX_CLKN		AF5
49	HDMI_RX_CLKP	I		HDMI_RX_CLKP	HDMI_RX_CLKP		AF6
51	HDMI_RX_D0N	I		HDMI_RX_D0N	HDMI_RX_D0N		AG4
53	HDMI_RX_D0P	I		HDMI_RX_D0P	HDMI_RX_D0P		AG5
55	HDMI_RX_D1N	I		HDMI_RX_D1N	HDMI_RX_D1N		AH5
57	HDMI_RX_D1P	I		HDMI_RX_D1P	HDMI_RX_D1P		AH6
59	HDMI_RX_D2N	I		HDMI_RX_D2N	HDMI_RX_D2N		AJ4
61	HDMI_RX_D2P	I		HDMI_RX_D2P	HDMI_RX_D2P		AJ5
63	GND	G		GND	GND	GND	
65	USB20_HOST0_DP	I/O		USB20_HOST0_DP	USB20_HOST0_DP		AK6

Interface definition

67	USB20_HOST0_DM	I/O		USB20_HOST0_DM	USB20_HOST0_DM		AL6
69	USB20_HOST1_DP	I/O		USB20_HOST1_DP	USB20_HOST1_DP		AL7
71	USB20_HOST1_DM	I/O		USB20_HOST1_DM	USB20_HOST1_DM		AM7
73	TYPEC1_USB20_OTG_DP	I/O		TYPEC1_OTG_DP	TYPEC1_OTG_DP		AK9
75	TYPEC1_USB20_OTG_DM	I/O		TYPEC1_OTG_DM	TYPEC1_OTG_DM		AL9
77	TYPEC1_SBU1/DP1_AUXP	I/O		DP1_AUXP	DP1_AUXP		AL10
79	TYPEC1_SBU2/DP1_AUXN	I/O		DP1_AUXN	DP1_AUXN		AM10
PIN	**(J1) ICORE-3588Q pin definition**	**Pad type**	**IO Pull**	**Function for Mainboard (MB-Q-RK3588)**	**Defual function description**	**IO Power domain**	**RK3588 Pin Number**
2	GND	G		GND	GND	GND	
4	GND	G				GND	
6	GND	G				GND	
8	GND	G				GND	
10	VCC4V0_SYS	P		VCC4V0_SYS	Core board Power Input: 4.0V +/-5%	4.0V	
12	VCC4V0_SYS	P				4.0V	
14	VCC4V0_SYS	P				4.0V	
16	VCC4V0_SYS	P				4.0V	
18	VCC4V0_SYS	P				4.0V	
20	VCC4V0_SYS	P				4.0V	

Interface definition

22	CIF_HREF/BT1120_D8/I2S1_SDO1_M0/PCIE30X1_1_BUTTON_RSTN/I2C7_SCL_M3/UART8_RTSN_M0/PWM14_M1/SPI0_CS0_M1/CAN1_RX_M1/GPIO4_B2_u	I/O	UP	CAN1_RX_M1/GPIO4_B2	CAN1_RX_M1/GPIO4_B2	3.3V	AK25
24	CIF_D9/FSPI_CS1N_M2/PCIE30X4_WAKEN_M2/HDMI_TX1_SDA_M1/CAN2_TX_M0/UART5_RX_M1/SPI3_CS1_M3/GPIO3_C5_u	I/O	UP	UART5_RX_M1	UART5_RX_M1	VCCIO5	AH25
26	CIF_D10/PCIE30X4_PERSTN_M2/HDMI_TX1_SCL_M1/SPI3_MISO_M3/GPIO3_C6_u	I/O	UP	TP1_INT_L	TP1_INT Input ， Active L	VCCIO5	AG26
28	CIF_D8/FSPI_CS0N_M2/PCIE30X4_CLKREQN_M2/HDMI_TX1_CEC_M2/CAN2_RX_M0/UART5_TX_M1/SPI3_CS0_M3/GPIO3_C4_u	I/O	UP	UART5_TX_M1	UART5_TX_M1	VCCIO5	AH26
30	CIF_CLKOUT/BT1120_D10/I2S1_SDO3_M0/PCIE30X4_CLKREQN_M1/DP0_HPDIN_M0/SPDIF0_TX_M1/UART9_TX_M1/PWM11_IR_M1/GPIO4_B4_u	I/O	UP	PCIE30X4_CLKREQN_M1_L	PCIE30X4_CLKREQN_M1_L	3.3V	AL26
32	CIF_D0/BT1120_D0/I2S1_MCLK_M0/PCIE30X1_1_CLKREQN_M1/UART9_RTSN_M1/SPI0_MISO_M1/GPIO4_A0_d	I/O	DOWN	HDMI0_TX_ON_H	HDMI0_TX_ON EN, Active H	3.3V	AK30
34	CIF_D1/BT1120_D1/I2S1_SCLK_M0/PCIE30X1_1_WAKEN_M1/UART9_CTSN_M1/SPI0_MOSI_M1/GPIO4_A1_d	I/O	DOWN	I2S1_SCLK_M0_BT	I2S1_SCLK_M0_BT	3.3V	AL30
36	BT1120_D12/PCIE30X4_PERSTN_M1/HDMI_RX_HPDOUT_M0/SATA0_ACT_LED_M0/I2C5_SCL_M1/PWM13_M1/SPI3_MOSI_M1/GPIO4_B6_d	I/O	DOWN	PCIE30X4_PERSTN_M1_L	PCIE30X4_PERSTN_M1_L	3.3V	AJ27
38	BT1120_D11/PCIE30X4_WAKEN_M1/HDMI_RX_CEC_M0/SATA1_ACT_LED_M0/UART9_RX_M1/PWM12_M1/SPI3_MISO_M1/GPIO4_B5_d	I/O	DOWN	PCIE30X4_WAKEN_M1_L/GPIO4_B5	PCIE30X4_WAKEN_M1_L/GPIO4_B5	3.3V	AJ26
40	CIF_D2/BT1120_D2/I2S1_LRCK_M0/PCIE30X1_1_PERSTN_M1/SPI0_CLK_M1/GPIO4_A2_d	I/O	DOWN	I2S1_LRCK_M0_BT	I2S1_LRCK_M0_BT	3.3V	AM29
42	CIF_CLKIN/BT1120_CLKOUT/I2S1_SDI3_M0/PCIE30X2_PERSTN_M1/I2C6_SDA_M3/UART8_TX_M0/SPI2_CS1_M1/GPIO4_B0_d	I/O	DOWN	PHONE_CTL	PHONE_Output EN , Active H	3.3V	AK26
44	GND	G		GND	GND	GND	
46	SDMMC_DET/GPIO0_A4_u	I/O	UP	SDMMC_DET_L	SDMMC_DET Input , Active L Core board Pull up resistance 100K	1.8V	P31
48	SDMMC_D1/PDM1_SDI2_M0/JTAG_TMS_M1/I2C3_SDA_M4/UART2_RX_M1/PWM9_M1/GPIO4_D1_u	I/O	UP	SDMMC0_D1	SDMMC0_D1/UART2_RX_M1 Core board Pull up resistance 10K	VCCIO_SD_S0	AD1
50	SDMMC_D0/PDM1_SDI3_M0/JTAG_TCK_M1/I2C3_SCL_M4/UART2_TX_M1/PWM8_M1/GPIO4_D0_u	I/O	UP	SDMMC0_D0/UART2_TX_M1	SDMMC0_D0/UART2_TX_M1 Core board Pull up resistance 10K	VCCIO_SD_S0	AD2
52	SDMMC_CLK/PDM1_CLK0_M0/TEST_CLKOUT_M0/MCU_JTAG_TMS_M0/CAN0_RX_M1/UART5_TX_M0/GPIO4_D5_d	I/O	DOWN	SDMMC_CLK	SDMMC_CLK Core board Pull up resistance 10K	VCCIO_SD_S0	AE1

Interface definition

54	SDMMC_CMD/PDM1_CLK1_M0/MCU_JTAG_TCK_M0/CAN0_TX_M1/UART5_RX_M0/PWM7_IR_M1/GPIO4_D4_u	I/O	UP	SDMMC_CMD	SDMMC_CMD Core board Pull up resistance 10K	VCCIO_SD_S0	AE2
56	SDMMC_D3/PDM1_SDI0_M0/JTAG_TMS_M0/I2C8_SDA_M0/UART5_RTSN_M0/PWM10_M1/GPIO4_D3_u	I/O	UP	SDMMC_D3	SDMMC_D3 Core board Pull up resistance 10K	VCCIO_SD_S0	AF1
58	SDMMC_D2/PDM1_SDI1_M0/JTAG_TCK_M0/I2C8_SCL_M0/UART5_CTSN_M0/GPIO4_D2_u	I/O	UP	SDMMC_D2	SDMMC_D2 Core board Pull up resistance 10K	VCCIO_SD_S0	AF2
60	GND	G		GND	GND	GND	
62	CIF_D7/BT1120_D7/I2S1_SDI2_M0/PCIE30X2_WAKEN_M1/I2C5_SDA_M2/SPI2_CS0_M1/GPIO4_A7_d	I/O	DOWN	PCIE30X2_WAKEN_M1	PCIE30X2_WAKEN_M1	3.3V	AM27
64	CIF_D6/BT1120_D6/I2S1_SDI1_M0/PCIE30X2_CLKREQN_M1/I2C5_SCL_M2/UART3_RX_M2/SPI2_CLK_M1/GPIO4_A6_d	I/O	DOWN	PCIE30X2_CLKREQN_M1	PCIE30X2_CLKREQN_M1	3.3V	AL27
66	TYPEC1_SSRX1P/DP1_TX0P	I		TYPEC1_SSRX1P	TYPEC1_SSRX1P		AN8
68	TYPEC1_SSRX1N/DP1_TX0N	I		TYPEC1_SSRX1N	TYPEC1_SSRX1N		AP8
70	TYPEC1_SSTX1N/DP1_TX1N	O		TYPEC1_SSTX1N	TYPEC1_SSTX1N		AN9
72	TYPEC1_SSTX1P/DP1_TX1P	O		TYPEC1_SSTX1P	TYPEC1_SSTX1P		AP9
74	TYPEC1_SSRX2P/DP1_TX2P	O		DP1_TX2P	DP1_TX2P		AN10
76	TYPEC1_SSRX2N/DP1_TX2N	O		DP1_TX2N	DP1_TX2N		AP10
78	TYPEC1_SSTX2N/DP1_TX3N	O		DP1_TX3N	DP1_TX3N		AN11
80	TYPEC1_SSTX2P/DP1_TX3P	O		DP1_TX3P	DP1_TX3P		AP11
VCCIO_SD_S0 (1.8V/3.3V auto switch): 1.8V--SDIO3.0; 3.3V--SDIO2.0							
PIN	**(J2) iCORE-3588Q pin definition**	**Pad type**	**IO Pull**	**Function for Mainboard (MB-Q-RK3588)**	**Defual function description**	**IO Power domain**	**RK3588 Pin Number**
1	MIPI_DPHY0_TX_D2P/MIPI_CPHY0_TX_TRIO2_B	O		MIPI_DPHY0_TX_D2P	MIPI_DPHY0_TX_D2P		AN27
3	MIPI_DPHY0_TX_D2N/MIPI_CPHY0_TX_TRIO2_A	O		MIPI_DPHY0_TX_D2N	MIPI_DPHY0_TX_D2N		AP27

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5	MIPI_DPHY0_TX_CLKP/MIPI_CPHY0_TX_TRIO1_C	O		MIPI_DPHY0_TX_CLKP	MIPI_DPHY0_TX_CLKP		AN26
7	MIPI_DPHY0_TX_CLKN/MIPI_CPHY0_TX_TRIO1_B	O		MIPI_DPHY0_TX_CLKN	MIPI_DPHY0_TX_CLKN		AP26
9	MIPI_DPHY0_TX_D1P/MIPI_CPHY0_TX_TRIO1_A	O		MIPI_DPHY0_TX_D1P	MIPI_DPHY0_TX_D1P		AN25
11	MIPI_DPHY0_TX_D1N/MIPI_CPHY0_TX_TRIO0_C	O		MIPI_DPHY0_TX_D1N	MIPI_DPHY0_TX_D1N		AP25
13	MIPI_DPHY0_TX_D0P/MIPI_CPHY0_TX_TRIO0_B	O		MIPI_DPHY0_TX_D0P	MIPI_DPHY0_TX_D0P		AN24
15	MIPI_DPHY0_TX_D0N/MIPI_CPHY0_TX_TRIO0_A	O		MIPI_DPHY0_TX_D0N	MIPI_DPHY0_TX_D0N		AP24
17	GND	G		GND	GND	GND	
19	MIPI_DPHY1_TX_D3N/MIPI_CPHY1_TX_TRIO2_C	O		MIPI_DPHY1_TX_D3N	MIPI_DPHY1_TX_D3N		AP22
21	MIPI_DPHY1_TX_D3P/NO_USE	O		MIPI_DPHY1_TX_D3P	MIPI_DPHY1_TX_D3P		AN22
23	MIPI_DPHY1_TX_D2N/MIPI_CPHY1_TX_TRIO2_A	O		MIPI_DPHY1_TX_D2N	MIPI_DPHY1_TX_D2N		AP21
25	MIPI_DPHY1_TX_D2P/MIPI_CPHY1_TX_TRIO2_B	O		MIPI_DPHY1_TX_D2P	MIPI_DPHY1_TX_D2P		AN21
27	MIPI_DPHY1_TX_CLKN/MIPI_CPHY1_TX_TRIO1_B	O		MIPI_DPHY1_TX_CLKN	MIPI_DPHY1_TX_CLKN		AP20
29	MIPI_DPHY1_TX_CLKP/MIPI_CPHY1_TX_TRIO1_C	O		MIPI_DPHY1_TX_CLKP	MIPI_DPHY1_TX_CLKP		AN20
31	MIPI_DPHY1_TX_D1N/MIPI_CPHY1_TX_TRIO0_C	O		MIPI_DPHY1_TX_D1N	MIPI_DPHY1_TX_D1N		AP19
33	MIPI_DPHY1_TX_D1P/MIPI_CPHY1_TX_TRIO1_A	O		MIPI_DPHY1_TX_D1P	MIPI_DPHY1_TX_D1P		AN19
35	MIPI_DPHY1_TX_D0N/MIPI_CPHY1_TX_TRIO0_A	O		MIPI_DPHY1_TX_D0N	MIPI_DPHY1_TX_D0N		AP18
37	MIPI_DPHY1_TX_D0P/MIPI_CPHY1_TX_TRIO0_B	O		MIPI_DPHY1_TX_D0P	MIPI_DPHY1_TX_D0P		AN18
39	GND	G		GND	GND	GND	

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41	TYPEC0_SSTX2P/DP0_TX3P	O		TYPEC0_SSTX2P	TYPEC0_SSTX2P		AP16
43	TYPEC0_SSTX2N/DP0_TX3N	O		TYPEC0_SSTX2N	TYPEC0_SSTX2N		AN16
45	TYPEC0_SSRX2N/DP0_TX2N	I		TYPEC0_SSRX2N	TYPEC0_SSRX2N		AP15
47	TYPEC0_SSRX2P/DP0_TX2P	I		TYPEC0_SSRX2P	TYPEC0_SSRX2P		AN15
49	TYPEC0_SSTX1P/DP0_TX1P	O		TYPEC0_SSTX1P	TYPEC0_SSTX1P		AP14
51	TYPEC0_SSTX1N/DP0_TX1N	O		TYPEC0_SSTX1N	TYPEC0_SSTX1N		AN14
53	TYPEC0_SSRX1N/DP0_TX0N	I		TYPEC0_SSRX1N	TYPEC0_SSRX1N		AP13
55	TYPEC0_SSRX1P/DP0_TX0P	I		TYPEC0_SSRX1P	TYPEC0_SSRX1P		AN13
57	GND	G		GND	GND	GND	
59	HDMI_TX1_D2N/EDP_TX1_D2N	O		NC	NC		AP6
61	HDMI_TX1_D2P/EDP_TX1_D2P	O		NC	NC		AN6
63	HDMI_TX1_D1N/EDP_TX1_D1N	O		HDMI1_TX1N_PORT/EDP1_TX_D1N	HDMI1_TX1N_PORT/EDP1_TX_D1N		AN5
65	HDMI_TX1_D1P/EDP_TX1_D1P	O		HDMI1_TX1P_PORT/EDP1_TX_D1P	HDMI1_TX1P_PORT/EDP1_TX_D1P		AM5
67	HDMI_TX1_D0N/EDP_TX1_D0N	O		HDMI1_TX0N_PORT/EDP1_TX_D0N	HDMI1_TX0N_PORT/EDP1_TX_D0N		AP4
69	HDMI_TX1_D0P/EDP_TX1_D0P	O		HDMI1_TX0P_PORT/EDP1_TX_D0P	HDMI1_TX0P_PORT/EDP1_TX_D0P		AN4
71	HDMI_TX1_D3N/EDP_TX1_D3N	O		NC	NC		AN3
73	HDMI_TX1_D3P/EDP_TX1_D3P	O		NC	NC		AM3
75	HDMI_TX1_SBDN/EDP_TX1_AUXN	I/O		HDMI1_TX_SBDN/EDP1_TX_AUXN	HDMI1_TX_SBDN/EDP1_TX_AUXN		AP2

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77	HDMI_TX1_SBDP/EDP_TX1_AUXP	I/O		HDMI1_TX_SBDP/EDP1_TX_AUXP	HDMI1_TX_SBDP/EDP1_TX_AUXP		AN2
79	GND	G		GND	GND	GND	
81	HDMI_TX0_D2P/EDP_TX0_D2P	O		HDMI0_TX2P_PORT/EDP0_TX_D2P	HDMI0_TX2P_PORT/EDP0_TX_D2P		AL2
83	HDMI_TX0_D2N/EDP_TX0_D2N	O		HDMI0_TX2N_PORT/EDP0_TX_D2N	HDMI0_TX2N_PORT/EDP0_TX_D2N		AL1
85	HDMI_TX0_D1P/EDP_TX0_D1P	O		HDMI0_TX1P_PORT/EDP0_TX_D1P	HDMI0_TX1P_PORT/EDP0_TX_D1P		AK3
87	HDMI_TX0_D1N/EDP_TX0_D1N	O		HDMI0_TX1N_PORT/EDP0_TX_D1N	HDMI0_TX1N_PORT/EDP0_TX_D1N		AK2
89	HDMI_TX0_D0P/EDP_TX0_D0P	O		HDMI0_TX0P_PORT/EDP0_TX_D0P	HDMI0_TX0P_PORT/EDP0_TX_D0P		AJ2
91	HDMI_TX0_D0N/EDP_TX0_D0N	O		HDMI0_TX0N_PORT/EDP0_TX_D0N	HDMI0_TX0N_PORT/EDP0_TX_D0N		AJ1
93	HDMI_TX0_D3P/EDP_TX0_D3P	O		HDMI0_TX3P_PORT/EDP0_TX_D3P	HDMI0_TX3P_PORT/EDP0_TX_D3P		AH3
95	HDMI_TX0_D3N/EDP_TX0_D3N	O		HDMI0_TX3N_PORT/EDP0_TX_D3N	HDMI0_TX3N_PORT/EDP0_TX_D3N		AH2
97	HDMI_TX0_SBDP/EDP_TX0_AUXP	I/O		HDMI0_TX_SBDP/EDP0_TX_AUXP	HDMI0_TX_SBDP/EDP0_TX_AUXP		AG2
99	HDMI_TX0_SBDN/EDP_TX0_AUXN	I/O		HDMI0_TX_SBDN/EDP0_TX_AUXN	HDMI0_TX_SBDN/EDP0_TX_AUXN		AG1
PIN	**(J2) iCORE-3588Q pin definition**	**Pad type**	**IO Pull**	**Function for Mainboard (MB-Q-RK3588)**	**Defual function description**	**IO Power domain**	**RK3588 Pin Number**
2	MIPI_DPHY0_RX_D3P/NO_USE	I		MIPI_DPHY0_RX_D3P	MIPI_DPHY0_RX_D3P		AN34
4	MIPI_DPHY0_RX_D3N/MIPI_CPHY0_RX_TRIO2_C	I		MIPI_DPHY0_RX_D3N	MIPI_DPHY0_RX_D3N		AP33
6	MIPI_DPHY0_RX_D2P/MIPI_CPHY0_RX_TRIO2_B	I		MIPI_DPHY0_RX_D2P	MIPI_DPHY0_RX_D2P		AN33
8	MIPI_DPHY0_RX_D2N/MIPI_CPHY0_RX_Trio2_A	I		MIPI_DPHY0_RX_D2N	MIPI_DPHY0_RX_D2N		AP32
10	MIPI_DPHY0_RX_CLKP/MIPI_CPHY0_RX_TRIO1_C	I		MIPI_DPHY0_RX_CLKP	MIPI_DPHY0_RX_CLKP		AN32

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12	MIPI_DPHY0_RX_CLKN/MIPI_CPHY0_RX_TRIO1_B	I		MIPI_DPHY0_RX_CLKN	MIPI_DPHY0_RX_CLKN		AP31
14	MIPI_DPHY0_RX_D1P/MIPI_CPHY0_RX_TRIO1_A	I		MIPI_DPHY0_RX_D1P	MIPI_DPHY0_RX_D1P		AN30
16	MIPI_DPHY0_RX_D1N/MIPI_CPHY0_RX_TRIO0_C	I		MIPI_DPHY0_RX_D1N	MIPI_DPHY0_RX_D1N		AP30
18	MIPI_DPHY0_RX_D0P/MIPI_CPHY0_RX_TRIO0_B	I		MIPI_DPHY0_RX_D0P	MIPI_DPHY0_RX_D0P		AN29
20	MIPI_DPHY0_RX_D0N/MIPI_CPHY0_RX_TRIO0_A	I		MIPI_DPHY0_RX_D0N	MIPI_DPHY0_RX_D0N		AP29
22	MIPI_DPHY0_TX_D3P/NO_USE	O		MIPI_DPHY0_TX_D3P	MIPI_DPHY0_TX_D3P		AN28
24	MIPI_DPHY0_TX_D3N/MIPI_CPHY0_TX_TRIO2_C	O		MIPI_DPHY0_TX_D3N	MIPI_DPHY0_TX_D3N		AP28
26	GND	G		GND	GND	GND	
28	PCIE30_PORT0_RX0P	I		PCIE30_PORT0_RX0P	PCIE30_PORT0_RX0P		G33
30	PCIE30_PORT0_RX0N	I		PCIE30_PORT0_RX0N	PCIE30_PORT0_RX0N		G34
32	PCIE30_PORT0_TX0P	O		PCIE30_PORT0_TX0P	PCIE30_PORT0_TX0P		D32
34	PCIE30_PORT0_TX0N	O		PCIE30_PORT0_TX0N	PCIE30_PORT0_TX0N		D33
36	PCIE30_PORT0_RX1P	I		PCIE30_PORT0_RX1P	PCIE30_PORT0_RX1P		F32
38	PCIE30_PORT0_RX1N	I		PCIE30_PORT0_RX1N	PCIE30_PORT0_RX1N		F33
40	PCIE30_PORT0_TX1P	O		PCIE30_PORT0_TX1P	PCIE30_PORT0_TX1P		C33
42	PCIE30_PORT0_TX1N	O		PCIE30_PORT0_TX1N	PCIE30_PORT0_TX1N		C34
44	PCIE30_PORT0_REF_CLKN	I		PCIE30_PORT0_REFCLKN_IN	PCIE30_PORT0_REFCLKN_IN		E34
46	PCIE30_PORT0_REF_CLKP	I		PCIE30_PORT0_REFCLKP_IN	PCIE30_PORT0_REFCLKP_IN		E33

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48	GND	G		GND	GND	GND	
50	PCIE30_PORT1_RX0P	I		PCIE30_PORT1_RX0P	PCIE30_PORT1_RX0P		B32
52	PCIE30_PORT1_RX0N	I		PCIE30_PORT1_RX0N	PCIE30_PORT1_RX0N		A32
54	PCIE30_PORT1_TX0P	O		PCIE30_PORT1_TX0P	PCIE30_PORT1_TX0P		B30
56	PCIE30_PORT1_TX0N	O		PCIE30_PORT1_TX0N	PCIE30_PORT1_TX0N		A30
58	PCIE30_PORT1_RX1P	I		PCIE30_PORT1_RX1P	PCIE30_PORT1_RX1P		C31
60	PCIE30_PORT1_RX1N	I		PCIE30_PORT1_RX1N	PCIE30_PORT1_RX1N		B31
62	PCIE30_PORT1_TX1P	O		PCIE30_PORT1_TX1P	PCIE30_PORT1_TX1P		C29
64	PCIE30_PORT1_TX1N	O		PCIE30_PORT1_TX1N	PCIE30_PORT1_TX1N		B29
66	PCIE30_PORT1_REF_CLKP	I		PCIE30_PORT1_REFCLKP_IN	PCIE30_PORT1_REFCLKP_IN		A28
68	PCIE30_PORT1_REF_CLKN	I		PCIE30_PORT1_REFCLKN_IN	PCIE30_PORT1_REFCLKN_IN		B28
70	GND	G		GND	GND	GND	
72	MIPI_DPHY1_RX_D3N/MIPI_CPHY1_RX_TRIO2_C	I		MIPI_DPHY1_RX_D3N	MIPI_DPHY1_RX_D3N		AL22
74	MIPI_DPHY1_RX_D3P/NO_USE	I		MIPI_DPHY1_RX_D3P	MIPI_DPHY1_RX_D3P		AK22
76	MIPI_DPHY1_RX_D2N/MIPI_CPHY1_RX_TRIO2_A	I		MIPI_DPHY1_RX_D2N	MIPI_DPHY1_RX_D2N		AL21
78	MIPI_DPHY1_RX_D2P/MIPI_CPHY1_RX_TRIO2_B	I		MIPI_DPHY1_RX_D2P	MIPI_DPHY1_RX_D2P		AK21
80	MIPI_DPHY1_RX_CLKN/MIPI_CPHY1_RX_TRIO1_B	I		MIPI_DPHY1_RX_CLKN	MIPI_DPHY1_RX_CLKN		AL20
82	MIPI_DPHY1_RX_CLKP/MIPI_CPHY1_RX_TRIO1_C	I		MIPI_DPHY1_RX_CLKP	MIPI_DPHY1_RX_CLKP		AK20

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84	MIPI_DPHY1_RX_D1N/MIPI_CPHY1_RX_TRIO0_C	I		MIPI_DPHY1_RX_D1N	MIPI_DPHY1_RX_D1N		AL19
86	MIPI_DPHY1_RX_D1P/MIPI_CPHY1_RX_TRIO1_A	I		MIPI_DPHY1_RX_D1P	MIPI_DPHY1_RX_D1P		AK19
88	MIPI_DPHY1_RX_D0N/MIPI_CPHY1_RX_TRIO0_A	I		MIPI_DPHY1_RX_D0N	MIPI_DPHY1_RX_D0N		AL18
90	MIPI_DPHY1_RX_D0P/MIPI_CPHY1_RX_TRIO0_B	I		MIPI_DPHY1_RX_D0P	MIPI_DPHY1_RX_D0P		AK18
92	GND	G		GND	GND	GND	
94	TYPEC0_SBU2/DP0_AUXN	I/O		TYPEC0_SBU2	TYPEC0_SBU2	1.8V	AM15
96	TYPEC0_SBU1/DP0_AUXP	I/O		TYPEC0_SBU1	TYPEC0_SBU1	1.8V	AL15
98	TYPEC0_USB20_OTG_DM	I/O		TYPEC0_OTG_DM	TYPEC0_OTG_DM		AM12
100	TYPEC0_USB20_OTG_DP	I/O		TYPEC0_OTG_DP	TYPEC0_OTG_DP		AL12
PIN	**(J3) iCORE-3588Q pin definition**	**Pad type**	**IO Pull**	**Function for Mainboard (MB-Q-RK3588)**	**Defual function description**	**IO Power domain**	**RK3588 Pin Number**
1	GND	G		GND	GND	GND	
3	PCIE20_0_RXP/SATA30_0_RXP	I		PCIE20_0_RXP/SATA30_0_RXP	PCIE20_0_RXP/SATA30_0_RXP		N33
5	PCIE20_0_RXN/SATA30_0_RXN	I		PCIE20_0_RXN/SATA30_0_RXN	PCIE20_0_RXN/SATA30_0_RXN		N34
7	PCIE20_0_TXN/SATA30_0_TXN	O		PCIE20_0_TXN/SATA30_0_TXN	PCIE20_0_TXN/SATA30_0_TXN		M33
9	PCIE20_0_TXP/SATA30_0_TXP	O		PCIE20_0_TXP/SATA30_0_TXP	PCIE20_0_TXP/SATA30_0_TXP		M34
11	PCIE20_0_REFCLKP	O		PCIE20_0_TXP	PCIE20_0_TXP		L32
13	PCIE20_0_REFCLKN	O		PCIE20_0_TXN	PCIE20_0_TXN		L33
15	PCIE20_1_TXP/SATA30_1_TXP	O		PCIE20_1_TXP/SATA30_1_TXP	PCIE20_1_TXP/SATA30_1_TXP		K33

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17	PCIE20_1_TXN/SATA30_1_TXN	O		PCIE20_1_TXN/SATA30_1_TXN	PCIE20_1_TXN/SATA30_1_TXN		K34
19	PCIE20_1_RXP/SATA30_1_RXP	I		PCIE20_1_RXP/SATA30_1_RXP	PCIE20_1_RXP/SATA30_1_RXP		J33
21	PCIE20_1_RXN/SATA30_1_RXN	I		PCIE20_1_RXN/SATA30_1_RXN	PCIE20_1_RXN/SATA30_1_RXN		J34
23	PCIE20_1_REFCLKP	O		PCIE20_1_REFCLKP	PCIE20_1_REFCLKP		H32
25	PCIE20_1_REFCLKN	O		PCIE20_1_REFCLKN	PCIE20_1_REFCLKN		H33
27	PCIE20_2_RXP/SATA30_2_RXP/USB30_2_SSRXP	I		PCIE20_2_RXP/SATA30_2_RXP	PCIE20_2_RXP/SATA30_2_RXP		J31
29	PCIE20_2_RXN/SATA30_2_RXN/USB30_2_SSRXN	I		PCIE20_2_RXN/SATA30_2_RXN	PCIE20_2_RXN/SATA30_2_RXN		J30
31	PCIE20_2_TXP/SATA30_2_TXP/USB30_2_SSTXP	O		PCIE20_2_TXP/SATA30_2_TXP	PCIE20_2_TXP/SATA30_2_TXP		H30
33	PCIE20_2_TXN/SATA30_2_TXN/USB30_2_SSTXN	O		PCIE20_2_TXN/SATA30_2_TXN	PCIE20_2_TXN/SATA30_2_TXN		H29
35	PCIE20_2_REFCLKP	O		NC	NC		G31
37	PCIE20_2_REFCLKN	O		NC	NC		G30
39	GND	G		GND	GND	GND	
41	GMAC0_PTP_REFCLK/FSPI_CS0N_M1/HDMI_TX1_SDA_M0/I2C4_SDA_M1/UART7_RX_M0/GPIO2_B4_u	I/O	UP	LCD_RESET_L	LCD0_RESET Output, Active L	1.8V	AB31
43	I2S0_MCLK/I2C6_SDA_M1/UART3_RTSN/PWM3_IR_M2/SPI4_CLK_M0/GPIO1_C2_d	I/O	DOWN	I2S0_MCLK	I2S0_MCLK	1.8V	F30
45	I2S0_SDO0/I2C4_SCL_M4/UART4_CTSN/GPIO1_C7_d	I/O	DOWN	I2S0_SDO0	I2S0_SDO0	1.8V	E29
47	I2S0_SCLK/I2C6_SCL_M1/UART3_CTSN/PWM7_IR_M2/SPI4_CS0_M0/GPIO1_C3_d	I/O	DOWN	I2S0_SCLK_TX	I2S0_SCLK_Output	1.8V	E31
49	I2S0_LRCK/I2C2_SCL_M3/UART4_RTSN/GPIO1_C5_d	I/O	DOWN	I2S0_LRCK_TX	I2S0_LRCK_Output	1.8V	D30
51	I2S0_SDI0/GPIO1_D4_d	I/O	DOWN	I2S0_SDI0	I2S0_SDI0	1.8V	D28

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53	PDM0_CLK0_M0/I2C4_SDA_M4/PWM15_IR_M2/GPIO1_C6_d	I/O	DOWN	PWM15_M2	PWM15_M2	1.8V	D29
55	PDM0_CLK1_M0/I2C2_SDA_M3/PWM11_IR_M2/SPI4_CS1_M0 /GPIO1_C4_d	I/O	DOWN	HP_DET_L	HP_DET, Active L	1.8V	E30
57	MIPI_CAMERA2_CLK_M0/SPDIF1_TX_M0/PCIE30X2_PERSTN_M3/HDM I_RX_CEC_M2/SATA2_ACT_LED_M1/I2C5_SDA_M3/UART1_RX_M1/PW M13_M2/GPIO1_B7_u	I/O	UP	I2C5_SDA_M3/UART1_RX_M1	I2C5_SDA_M3/UART1_RX_M1	1.8V	E27
59	MIPI_CAMERA1_CLK_M0/SPDIF0_TX_M0/PCIE30X2_WAKEN_M3/HDMI _RX_HPDOUT_M2/I2C5_SCL_M3/UART1_TX_M1/GPIO1_B6_u	I/O	UP	I2C5_SCL_M3/UART1_TX_M1	I2C5_SCL_M3/UART1_TX_M1	1.8V	E26
61	MIPI_CAMERA4_CLK_M0/PCIE30X2_CLKREQN_M3/HDMI_RX_SDA_M2 /I2C8_SDA_M2/UART1_CTSN_M1/PWM15_IR_M3/GPIO1_D7_u	I/O	UP	MIPI_CAM4_CLKOUT	MIPI_CAM4_CLK Output	1.8V	F25
63	MIPI_CAMERA3_CLK_M0/HDMI_RX_SCL_M2/I2C8_SCL_M2/UART1_RT SN_M1/PWM14_M2/GPIO1_D6_u	I/O	UP	MIPI_CAM3_CLKOUT	MIPI_CAM3_CLK Output	1.8V	F24
65	GND	G		GND	GND	GND	
67	PCIE30X4_BUTTON_RSTN/DP1_HPDIN_M0/MCU_JTAG_TMS_M1/UAR T9_TX_M2/PWM11_IR_M3/SPI0_CS1_M3/GPIO3_D5_d	I/O	DOWN	DP1_HPDIN_M0	DP1_HPDIN_M0	VCCIO5	AB28
69	GMAC0_PPSTRIG/FSPI_CS1N_M1/HDMI_TX1_SCL_M0/I2C4_SCL_M1/U ART7_TX_M0/GPIO2_B5_u	I/O	UP	LCD_BL_EN_H	LCD0_BL_EN, Active H	1.8V	AB30
71	GMAC0_PPSCLK/TEST_CLKOUT_M1/HDMI_TX1_CEC_M0/UART9_RX_M 0/SPI1_CS1_M0/GPIO2_C4_d	I/O	DOWN	GPIO2_C4_d	GPIO2_C4	1.8V	AC30
73	PDM1_SDI2_M1/PCIE30X4_WAKEN_M3/SPI0_MISO_M2/GPIO1_B1_d	I/O	DOWN	MIPI_CAM4_PWREN_H	MIPI_CAM4_Power EN, Active H	1.8V	D25
75	PDM1_SDI0_M1/PCIE30X1_1_PERSTN_M2/PWM3_IR_M3/SPI2_CS0_M 0/GPIO1_A7_u	I/O	UP	PWM11_M3	PWM11_M3 Output	1.8V	C25
77	HDMI_TX1_HPD_M0/SPI2_CLK_M0/GPIO1_A6_d	I/O	DOWN	MIPI_CAM3_PDN_L	MIPI_CAM3_PDN_L	1.8V	C24
79	PDM1_CLK0_M1/PCIE30X1_0_PERSTN_M2/UART7_RX_M2/SPI0_CS0_ M2/GPIO1_B4_u	I/O	UP	PCIEX1_0_PERSTN_M1_L	PCIEX1_0_PERSTN_M1_L	1.8V	E24
PIN	**(J3) iCORE-3588Q pin definition**	**Pad type**	**IO Pull**	**Function for Mainboard (MB-Q-RK3588)**	**Defual function description**	**IO Power domain**	**RK3588 Pin Number**
2	CIF_D4/BT1120_D4/PCIE30X1_0_WAKEN_M1/I2C3_SCL_M2/UART0_RX _M2/SPI2_MISO_M1/GPIO4_A4_d	I/O	DOWN	UART0_RX_M2	UART0_RX_M2	3.3V	AL28
4	CIF_D3/BT1120_D3/PCIE30X1_0_CLKREQN_M1/UART0_TX_M2/GPIO4_ A3_d	I/O	DOWN	UART0_TX_M2	UART0_TX_M2	3.3V	AL29

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6	I2S1_SDI2_M1/PDM0_SDI0_M1/I2C6_SDA_M0/UART1_RTSN_M2/PWM6_M0/SPI0_MISO_M0/PCIE30X4_WAKEN_M0/GPIO0_C7_d	I/O	DOWN	I2C6_SDA_M0	I2C6_SDA_M0	1.8V	V31
8	I2S1_SDI3_M1/PDM0_SDI1_M1/I2C6_SCL_M0/UART1_CTSN_M2/PWM7_IR_M0/SPI3_MISO_M2/PCIE30X4_PERSTN_M0/GPIO0_D0_d	I/O	DOWN	I2C6_SCL_M0	I2C6_SCL_M0	1.8V	W31
10	PDM0_CLK0_M1/PWM1_M0/I2C2_SDA_M0/CAN0_RX_M0/SPI0_MOSI_M0/PCIE30X1_0_CLKREQN_M0/GPIO0_C0_d	I/O	DOWN	GMAC1_INT/PMEB_1	GMAC1_INT/PMEB_1	1.8V	T31
12	I2S1_LRCK_M1/PWM0_M0/I2C2_SCL_M0/CAN0_TX_M0/SPI0_CS1_M0/PCIE30X1_1_PERSTN_M0/GPIO0_B7_d	I/O	DOWN	GMAC0_INT/PMEB_1	GMAC0_INT/PMEB_1	1.8V	T28
14	I2C1_SDA_M2 (I2C for NPU)	I/O	UP	I2C1_SDA_M2_TP	I2C1_SDA_M2_TP Core board Pull up resistance 2.2K	1.8V	V28
16	I2C1_SCL_M2 (I2C for NPU)	I/O	UP	I2C1_SCL_M2_TP	I2C1_SCL_M2_TP Core board Pull up resistance 2.2K	1.8V	V29
18	I2S1_SDI1_M1/NPU_AVS/UART0_RTSN/PWM5_M1/SPI0_CLK_M0/PCIE30X4_CLKREQN_M0/SATA_CP_POD/GPIO0_C6_u	I/O	UP	BT_REG_ON_H	BT_EN Output, Active H	1.8V	T29
20	GMAC1_PPSTRIG/I2C3_SDA_M1/UART7_TX_M1/SPI1_MISO_M1/GPIO3_C0_d	I/O	DOWN	TP_INT_L	TP0_INT Input, Active L	VCCIO5	Y29
22	HDMI_TX0_HPD_M1/PCIE30X2_PERSTN_M2/HDMI_RX_HPDOUT_M1/MCU_JTAG_TCK_M1/UART9_RX_M2/SPI0_CS0_M3/GPIO3_D4_d	I/O	DOWN	HDMIIRX_HPDOUT_H	HDMIIRX_HPD Output,, Active H	VCCIO5	AA27
24	I2C3_SDA_M0/UART3_RX_M0/SPI4_MISO_M0/GPIO1_C0_z	I/O		I2C3_SDA_M0_MIPI	I2C3_SDA_M0_MIPI	1.8V	G29
26	I2C3_SCL_M0/UART3_TX_M0/SPI4_MOSI_M0/GPIO1_C1_z	I/O		I2C3_SCL_M0_MIPI	I2C3_SCL_M0_MIPI	1.8V	G27
28	I2S1_SCLK_M1/JTAG_TMS_M2/I2C1_SDA_M0/UART2_RX_M0/PCIE30X1_1_WAKEN_M0/GPIO0_B6_d	I/O	DOWN	UART2_RX_M0_DEBUG	UART2_RX_M0 (System DEBUG)	1.8V	R29
30	I2S1_MCLK_M1/JTAG_TCK_M2/I2C1_SCL_M0/UART2_TX_M0/PCIE30X1_1_CLKREQN_M0/GPIO0_B5_d	I/O	DOWN	UART2_TX_M0_DEBUG	UART2_TX_M0 (System DEBUG)	1.8V	P29
32	GMAC1_PPSCLK/PCIE30X2_BUTTON_RSTN/UART7_RX_M1/SPI1_CLK_M1/GPIO3_C1_d	I/O	DOWN	TP0_RST_L	TP0_Reset Input, Active L	VCCIO5	Y27
34	PDM0_CLK1_M1/PWM2_M0/UART0_RX_M0/I2C4_SDA_M2/DP0_HPDIN_M1/PCIE30X1_0_WAKEN_M0/GPIO0_C4_d	I/O	DOWN	WIFI_REG_ON_H	WIFI_EN Output, Active H	1.8V	R30
36	I2S1_SDI0_M1/GPU_AVS/UART0_TX_M0/I2C4_SCL_M2/DP1_HPDIN_M1/PWM4_M0/PCIE30X1_0_PERSTN_M0/GPIO0_C5_u	I/O	UP	HOST_WAKE_BT_H	HOST_WAKE_BT_H	1.8V	P30
38	CLK32K_IN/CLK32K_OUT0/GPIO0_B2__u	I/O	UP	WIFI_WAKE_HOST_H	WIFI_WAKE_HOST_H	1.8V	K29

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40	SPI2_CS1_M2/I2C1_SCL_M1/UART0_RX_M1/GPIO0_B0_z	I/O		RTC_INT_L	RTC_INT Input, Active L	1.8V	L30
42	REFCLK_OUT/GPIO0_A0_d	I/O	DOWN	BT_WAKE_HOST_H	BT_WAKE_HOST_H	1.8V	P33
44	HDMI_TX1_SDA_M2/I2C4_SCL_M3/UART6_CTSN_M1/PWM1_M2/SPI4_CS0_M2/GPIO1_A3_d	I/O	DOWN	UART6_CTSN_M1_BT	UART6_CTSN_M1_BT	1.8V	A27
46	HDMI_TX0_HPD_M0/SPI2_MOSI_M0/GPIO1_A5_d	I/O	DOWN	HDMITX0_HPDIN_M0	HDMITX0_HPD_Input, Active H	1.8V	B26
48	VOP_POST_EMPTY/I2C4_SDA_M3/UART6_RTSN_M1/PWM0_M2/SPI4_CLK_M2/GPIO1_A2_d	I/O	DOWN	UART6_RTSN_M1_BT	UART6_RTSN_M1_BT	1.8V	A26
50	HDMI_TX1_SCL_M2/SPI2_MISO_M0/GPIO1_A4_d	I/O	DOWN	VGA_HPDIN_L	VGA_HPD Input, Active L	1.8V	B25
52	PCIE30X1_1_WAKEN_M2/DP1_HPDIN_M2/SATA1_ACT_LED_M1/I2C2_SCL_M4/UART6_TX_M1/SPI4_MOSI_M2/GPIO1_A1_d	I/O	DOWN	UART6_TX_M1_BT	UART6_TX_M1_BT	1.8V	A25
54	PCIE30X1_1_CLKREQN_M2/DP0_HPDIN_M2/I2C2_SDA_M4/UART6_RX_M1/SPI4_MISO_M2/GPIO1_A0_d	I/O	DOWN	UART6_RX_M1_BT	UART6_RX_M1_BT	1.8V	A24
56	I2S0_SDO3/I2S0_SDI2/PDM0_SDI2_M0/I2C1_SCL_M4/UART4_TX_M0/PWM0_M1/SPI1_CLK_M2/GPIO1_D2_d	I/O	DOWN	SPI1_CLK_M2/UART4_TX_M0/I2C1_SCL_M4	SPI1_CLK_M2/UART4_TX_M0/I2C1_SCL_M4	1.8V	F28
58	PDM0_SDI0_M0/SPI1_CS1_M2/GPIO1_D5_d	I/O	DOWN	HDMIIRX_DET_L	HDMIIRX_DET Input, Active L	1.8V	G26
60	I2S0_SDI1/PDM0_SDI3_M0/I2C1_SDA_M4/UART4_RX_M0/PWM1_M1/SPI1_CS0_M2/GPIO1_D3_d	I/O	DOWN	SPI1_CS0_M2/UART4_RX_M0/I2C1_SDA_M4	SPI1_CS0_M2/UART4_RX_M0/I2C1_SDA_M4	1.8V	E28
62	I2S0_SDO2/I2S0_SDI3/PDM0_SDI1_M0/I2C7_SDA_M0/UART6_RX_M2/SPI1_MOSI_M2/GPIO1_D1_d	I/O	DOWN	SPI1_MOSI_M2/UART6_RX_M2/I2C7_SDA_M0	SPI1_MOSI_M2/UART6_RX_M2/I2C7_SDA_M0	1.8V	F27
64	I2S0_SDO1/I2C7_SCL_M0/UART6_TX_M2/SPI1_MISO_M2/GPIO1_D0_d	I/O	DOWN	SPI1_MISO_M2/UART6_TX_M2/I2C7_SCL_M0	SPI1_MISO_M2/UART6_TX_M2/I2C7_SCL_M0	1.8V	F26
66	PDM1_SDI1_M1/PCIE30X4_CLKREQN_M3/SPI2_CS1_M0/GPIO1_B0_u	I/O	UP	RESET0_CAM	Mipi Camera Reset Output, Active L	1.8V	C27
68	PDM1_CLK1_M1/PCIE30X1_0_WAKEN_M2/SATA0_ACT_LED_M1/UART4_TX_M2/SPI0_CLK_M2/GPIO1_B3_d	I/O	DOWN	PCIEX1_0_WAKEN_M1_L/GPIO1_B3	PCIEX1_0_WAKEN_M1_L/GPIO1_B3	1.8V	D27
70	PDM1_SDI3_M1/PCIE30X4_PERSTN_M3/UART4_RX_M2/SPI0_MOSI_M2/GPIO1_B2_d	I/O	DOWN	MIPI_CAM3_PWREN_H	MIPI_CAM3_Power EN, Active H	1.8V	D26
72	PCIE30X1_0_CLKREQN_M2/UART7_TX_M2/SPI0_CS1_M2/GPIO1_B5_u	I/O	UP	PCIEX1_0_CLKREQN_M1_L	PCIEX1_0_CLKREQN_M1_L	1.8V	E25

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74	GMAC1_TXER/I2S2_SDI_M1/UART2_RX_M2/PWM3_IR_M1/GPIO3_B2_d	I/O	DOWN	WORK_LED	WORK_LED_EN, Active H	VCCIO5	AE28
76	CIF_D11/PCIE20X1_2_CLKREQN_M0/HDMI_TX0_SCL_M2/I2C5_SCL_M0/SPI3_MOSI_M3/GPIO3_C7_u	I/O	UP	GMAC0_RSTN_L_	GMAC0_RSTN_L	VCCIO5	AJ24
78	CIF_D12/PCIE20X1_2_WAKEN_M0/HDMI_TX0_SDA_M2/I2C5_SDA_M0/UART4_RX_M1/PWM8_M2/SPI3_CLK_M3/GPIO3_D0_u	I/O	UP	EDP_BL_PWM1	EDP_BL_PWM1 Output	VCCIO5	AH24
80	VCCIO5_CTRL	I		NC	VCCIO5 1.8V/3.3V select Input H: VCCIO5=3.3V; (NC) L : VCCIO5=1.8V,	3.3V	
***Notes**	**VCCIO5 is controlled by VCCIO5_CTL. VCCIO5_CTL is Hight(3.3V): VCCIO5=3.3V; VCCIO5_CTL is Low(Or NC): VCCIO5=1.8V---Default**						
PIN	**(J4) iCORE-3588Q pin definition**	**Pad type**	**IO Pull**	**Function for Mainboard (MB-Q-RK3588)**	**Defual function description**	**IO Power domain**	**RK3588 Pin Number**
1	VCC_1V8_S3	P		VCC_1V8_S3	1.8V Output (Pin1/3 Total Max:500mA)	1.8V	
3	VCC_1V8_S3	P				1.8V	
5	VCCA_RK806	I		VCCA_RK806	**Power supply Input (RK806's boot up circuit)**	5.0V	
7	GND	G		GND	GND	GND	
9	MIPI_CSI1_RX_CLK1P	I		MIPI_CSI1_RX_CLK1P	MIPI_CSI1_RX_CLK1P		AM31
11	MIPI_CSI1_RX_CLK1N	I		MIPI_CSI1_RX_CLK1N	MIPI_CSI1_RX_CLK1N		AM32
13	MIPI_CSI1_RX_D3P	I		MIPI_CSI1_RX_D3P	MIPI_CSI1_RX_D3P		AL31
15	MIPI_CSI1_RX_D3N	I		MIPI_CSI1_RX_D3N	MIPI_CSI1_RX_D3N		AL32
17	MIPI_CSI1_RX_D2P	I		MIPI_CSI1_RX_D2P	MIPI_CSI1_RX_D2P		AK31
19	MIPI_CSI1_RX_D2N	I		MIPI_CSI1_RX_D2N	MIPI_CSI1_RX_D2N		AK32
21	MIPI_CSI1_RX_CLK0P	I		MIPI_CSI1_RX_CLK0P	MIPI_CSI1_RX_CLK0P		AJ31
23	MIPI_CSI1_RX_CLK0N	I		MIPI_CSI1_RX_CLK0N	MIPI_CSI1_RX_CLK0N		AJ32

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25	MIPI_CSI1_RX_D1P	I		MIPI_CSI1_RX_D1P	MIPI_CSI1_RX_D1P		AH31
27	MIPI_CSI1_RX_D1N	I		MIPI_CSI1_RX_D1N	MIPI_CSI1_RX_D1N		AH32
29	MIPI_CSI1_RX_D0P	I		MIPI_CSI1_RX_D0P	MIPI_CSI1_RX_D0P		AG31
31	MIPI_CSI1_RX_D0N	I		MIPI_CSI1_RX_D0N	MIPI_CSI1_RX_D0N		AG32
33	GND	G		GND	GND	GND	
35	SARADC_IN3	O		SARADC_VIN3	ADC3 Input	1.8V	AN17
37	SARADC_IN0_BOOT	I		BOOT_SARADC_IN0	ADC0 Input (BOOT Mode: L---Maskrom) Core board Pull up resistance 100K	1.8V	AM16
39	SARADC_IN1	I		SARADC_VIN1_KEY/RECOVERY	ADC1 Input/RECOVERY_KEY ,Active L Core board Pull up resistance 10K	1.8V	AL16
41	SARADC_IN6	O		SARADC_IN6	ADC6 Input	1.8V	AK17
43	CIF_D5/BT1120_D5/I2S1_SDI0_M0/PCIE30X1_0_PERSTN_M1/I2C3_SDA_M2/UART3_TX_M2/SPI2_MOSI_M1/GPIO4_A5_d	I/O	DOWN	I2S1_SDI_M0_BT	I2S1_SDI_M0_BT	3.3V	AK27
45	GND	G		GND	GND	GND	
47	GMAC0_TXCLK/SDIO_CLK_M0/FSPI_CLK_M1/I2C3_SDA_M3/GPIO2_B3_d	I/O	DOWN	GMAC0_TXCLK	GMAC0_TXCLK	1.8V	AE33
49	GMAC0_TXEN/I2S2_LRCK_M0/I2C2_SDA_M1/UART1_RTSN_M0/SPI1_CLK_M0/GPIO2_C0_d	I/O	DOWN	GMAC0_TXEN	GMAC0_TXEN	1.8V	AE34
51	GMAC0_TXD0/I2S2_MCLK_M0/I2C5_SCL_M4/UART1_RX_M0/GPIO2_B6_d	I/O	DOWN	GMAC0_TXD0	GMAC0_TXD0	1.8V	AD33
53	GMAC0_TXD1/I2S2_SCLK_M0/I2C5_SDA_M4/UART1_TX_M0/GPIO2_B7_d	I/O	DOWN	GMAC0_TXD1	GMAC0_TXD1	1.8V	AD34
55	GMAC0_TXD2/SDIO_D3_M0/FSPI_D3_M1/I2C8_SDA_M1/UART6_CTSN_M0/GPIO2_B1_u	I/O	UP	GMAC0_TXD2	GMAC0_TXD2	1.8V	AC33
57	GMAC0_TXD3/SDIO_CMD_M0/I2C3_SCL_M3/GPIO2_B2_u	I/O	UP	GMAC0_TXD3	GMAC0_TXD3	1.8V	AC34
59	GMAC1_RXCLK/SDIO_CLK_M1/MIPI_CAMERA0_CLK_M1/FSPI_CLK_M2/I2C4_SDA_M0/UART8_CTSN_M1/GPIO3_A5_d	I/O	DOWN	GMAC1_RXCLK	GMAC1_RXCLK	VCCIO5	AH30

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61	GMAC1_RXDV_CRS/MIPI_CAMERA4_CLK_M1/UART2_TX_M2/PWM2_M1/GPIO3_B1_d	I/O	DOWN	GMAC1_RXDV_CRS	GMAC1_RXDV_CRS	VCCIO5	AH29
63	GMAC1_RXD0/MIPI_CAMERA2_CLK_M1/PWM8_M0/GPIO3_A7_u	I/O	UP	GMAC1_RXD0	GMAC1_RXD0	VCCIO5	AG29
65	GMAC1_RXD1/MIPI_CAMERA3_CLK_M1/PWM9_M0/GPIO3_B0_u	I/O	UP	GMAC1_RXD1	GMAC1_RXD1	VCCIO5	AG28
67	GMAC1_RXD3/SDIO_D3_M1/I2S3_SDO/AUDDSM_RN/FSPI_D3_M2/UART8_RX_M1/SPI4_CS0_M1/GPIO3_A3_u	I/O	UP	GMAC1_RXD3	GMAC1_RXD3	VCCIO5	AE27
69	GMAC1_RXD2/SDIO_D2_M1/I2S3_LRCK/AUDDSM_LP/FSPI_D2_M2/UART8_TX_M1/SPI4_CLK_M1/GPIO3_A2_u	I/O	UP	GMAC1_RXD2	GMAC1_RXD2	VCCIO5	AD27
71	GMAC1_TXCLK/SDIO_CMD_M1/I2S3_SDI/AUDDSM_RP/UART8_RTSN_M1/SPI4_CS1_M1/GPIO3_A4_d	I/O	DOWN	GMAC1_TXCLK	GMAC1_TXCLK	VCCIO5	AD28
73	GMAC1_TXD0/I2S2_SDO_M1/UART2_RTSN/GPIO3_B3_u	I/O	UP	GMAC1_TXD0	GMAC1_TXD0	VCCIO5	AC28
75	GMAC1_TXD1/I2S2_MCLK_M1/UART2_CTSN/GPIO3_B4_u	I/O	UP	GMAC1_TXD1	GMAC1_TXD1	VCCIO5	AC29
77	GMAC1_TXD3/SDIO_D1_M1/I2S3_SCLK/AUDDSM_LN/FSPI_D1_M2/I2C6_SCL_M4/PWM11_IR_M0/SPI4_MOSI_M1/GPIO3_A1_u	I/O	UP	GMAC1_TXD3	GMAC1_TXD3	VCCIO5	AA30
79	GMAC1_TXD2/SDIO_D0_M1/I2S3_MCLK/FSPI_D0_M2/I2C6_SDA_M4/PWM10_M0/SPI4_MISO_M1/GPIO3_A0_u	I/O	UP	GMAC1_TXD2	GMAC1_TXD2	VCCIO5	AA29
PIN	**(J4) iCORE-3588Q pin definition**	**Pad type**	**IO Pull**	**Function for Mainboard (MB-Q-RK3588)**	**Defual function description**	**IO Power domain**	**RK3588 Pin Number**
2	VCC_3V3_S3	P		VCC_3V3_S3	3.3V Output (Pin2/4 Total Max:800mA)	3.3V	
4	VCC_3V3_S3	P				3.3V	
6	VDC_EXT	I		VDC_EXT	VDC power on signal Input，(auto power on)	5.0V	
8	GND	G		GND	GND	GND	
10	MIPI_CSI0_CLK1P	I		MIPI_CSI0_RX_CLK1P	MIPI_CSI0_RX_CLK1P		AM33
12	MIPI_CSI0_CLK1N	I		MIPI_CSI0_RX_CLK1N	MIPI_CSI0_RX_CLK1N		AM34
14	MIPI_CSI0_D3P	I		MIPI_CSI0_RX_D3P	MIPI_CSI0_RX_D3P		AL33

Interface definition

16	MIPI_CSI0_D3N	I		MIPI_CSI0_RX_D3N	MIPI_CSI0_RX_D3N		AL34
18	MIPI_CSI0_D2P	I		MIPI_CSI0_RX_D2P	MIPI_CSI0_RX_D2P		AK33
20	MIPI_CSI0_D2N	I		MIPI_CSI0_RX_D2N	MIPI_CSI0_RX_D2N		AK34
22	MIPI_CSI0_CLK0P	I		MIPI_CSI0_RX_CLK0P	MIPI_CSI0_RX_CLK0P		AJ33
24	MIPI_CSI0_CLK0N	I		MIPI_CSI0_RX_CLK0N	MIPI_CSI0_RX_CLK0N		AJ34
26	MIPI_CSI0_D1P	I		MIPI_CSI0_RX_D1P	MIPI_CSI0_RX_D1P		AH33
28	MIPI_CSI0_D1N	I		MIPI_CSI0_RX_D1N	MIPI_CSI0_RX_D1N		AH34
30	MIPI_CSI0_D0P	I		MIPI_CSI0_RX_D0P	MIPI_CSI0_RX_D0P		AG33
32	MIPI_CSI0_D0N	I		MIPI_CSI0_RX_D0N	MIPI_CSI0_RX_D0N		AG34
34	GND	G		GND	GND	GND	
36	PMIC_EXT_EN	O		PMIC_EXT_EN_OUT	PMIC_EXT_EN_Output, Active H	5.0V	
38	LITCPU_AVS/SPI3_CLK_M2/GPIO0_D3_u	I/O	UP	CC_INT_L	CC_INT_L	1.8V	U33
40	GMAC0_TXER/I2C0_SDA_M1/UART7_CTSN_M0/PWM7_IR_M3/SPI3_CLK_M0/GPIO4_C6_d	I/O	DOWN	PCIE_PWREN_H	PCIE_Power_EN Output, Active H	1.8V	AF33
42	NPOR	I		RESET_L	System Reset Input, Active L Core board Pull up resistance 10K	1.8V	M31
44	PWRON_L(RK806-1)	I		PWRON_L	Power_Key Input, Active L	VCCA_RK806	
46	CIF_VSYNC/BT1120_D9/I2S1_SDO2_M0/PCIE20X1_2_BUTTON_RSTN/I2C7_SDA_M3/UART8_CTSN_M0/PWM15_IR_M1/CAN1_TX_M1/GPIO4_B3_u	I/O	UP	CAN1_TX_M1/GPIO4_B3	CAN1_TX_M1/GPIO4_B3	3.3V	AM25
48	GND	G		GND	GND	GND	

Interface definition

50	ETH0_REFCLKO_25M/I2S2_SDI_M0/I2C6_SCL_M2/SPI1_CS0_M0/GPIO2_C3_d	I/O	DOWN	ETH0_REFCLKO_25M	GPIO2_C3	1.8V	AD30
52	GMAC0_RXDV_CRS/UART7_RTSN_M0/PWM2_M2/SPI3_CS0_M0/GPIO4_C2_d	I/O	DOWN	GMAC0_RXDV_CRS	GMAC0_RXDV_CRS	1.8V	AE31
54	GMAC0_RXCLK/SDIO_D2_M0/FSPI_D2_M1/I2C8_SCL_M1/UART6_RTSN_M0/GPIO2_B0_u	I/O	UP	GMAC0_RXCLK	GMAC0_RXCLK	1.8V	AE32
56	GMAC0_RXD1/I2C6_SDA_M2/UART9_TX_M0/SPI1_MOSI_M0/GPIO2_C2_d	I/O	DOWN	GMAC0_RXD1	GMAC0_RXD1	1.8V	AD31
58	GMAC0_RXD0/I2C2_SCL_M1/UART1_CTSN_M0/SPI1_MISO_M0/GPIO2_C1_d	I/O	DOWN	GMAC0_RXD0	GMAC0_RXD0	1.8V	AD32
60	GMAC0_RXD3/SDIO_D1_M0/FSPI_D1_M1/UART6_TX_M0/GPIO2_A7_u	I/O	UP	GMAC0_RXD3	GMAC0_RXD3	1.8V	AC31
62	GMAC0_RXD2/SDIO_D0_M0/FSPI_D0_M1/UART6_RX_M0/GPIO2_A6_u	I/O	UP	GMAC0_RXD2	GMAC0_RXD2	1.8V	AC32
64	GMAC0_MCLKINOUT/I2S2_SDO_M0/I2C7_SCL_M1/PWM4_M1/SPI3_CS1_M0/GPIO4_C3_d	I/O	DOWN	GMAC0_MCLKINOUT	GMAC0_MCLK Input/Output	1.8V	AF34
66	ETH1_REFCLKO_25M/MIPI_CAMERA1_CLK_M1/I2C4_SCL_M0/GPIO3_A6_d	I/O	DOWN	GPIO3_A6	GPIO3_A6	VCCIO5	AH27
68	GMAC0_MDIO/I2C0_SCL_M1/UART9_CTSN_M0/PWM6_M2/SPI3_MOSI_M0/GPIO4_C5_d	I/O	DOWN	GMAC0_MDIO	GMAC0_MDIO	1.8V	AB33
70	GMAC0_MDC/I2C7_SDA_M1/UART9_RTSN_M0/PWM5_M2/SPI3_MISO_M0/GPIO4_C4_d	I/O	DOWN	GMAC0_MDC	GMAC0_MDC	1.8V	AB34
72	GMAC1_MCLKINOUT/I2S2_LRCK_M1/CAN1_TX_M0/UART3_RX_M1/PWM13_M0/GPIO3_B6_d	I/O	DOWN	GMAC1_MCLKINOUT	GMAC1_MCLK Input/Output	VCCIO5	AE29
74	GMAC1_TXEN/I2S2_SCLK_M1/CAN1_RX_M0/UART3_TX_M1/PWM12_M0/GPIO3_B5_u	I/O	UP	GMAC1_TXEN	GMAC1_TXEN	VCCIO5	AD29
76	GMAC1_MDC/MIPI_TE0/I2C8_SCL_M4/UART7_RTSN_M1/PWM14_M0/SPI1_CS0_M1/GPIO3_C2_d	I/O	DOWN	GMAC1_MDC	GMAC1_MDC	VCCIO5	Y31
78	GMAC1_MDIO/MIPI_TE1/I2C8_SDA_M4/UART7_CTSN_M1/PWM15_IR_M0/SPI1_CS1_M1/GPIO3_C3_d	I/O	DOWN	GMAC1_MDIO	GMAC1_MDIO	VCCIO5	Y30
80	GMAC1_PTP_REF_CLK/HDMI_TX1_HPD_M1/I2C3_SCL_M1/SPI1_MOSI_M1/GPIO3_B7_d	I/O	DOWN	GMAC1_RSTN_L_GPIO3_B7	GMAC1_Rrset ,Active L	VCCIO5	AA28

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