



IAC-IMX95XX-Kit Hardware Manual

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Company Profile

Zhejiang Qiyang Intelligent Technology Co., Ltd. was founded in Hangzhou in 2007, is a national high-tech enterprise focusing on the development, production and sales of ARM embedded products. More than 10 years of accumulation and precipitation, successfully built a product development to mass production service chain.

As the core of the company, Qiyang R&D team consists of more than 30 embedded engineers, dedicated to providing users with easy-to-use embedded hardware, software tools and customized product solutions. It has been widely used in industrial control, Internet of Things, new retail, medical, electric power, environmental monitoring, charging pile and other fields.

The production base in Zhuji provides a strong guarantee for Qiyang, covering an area of 5,000 square meters, with 2 SMT production lines, through and strictly follow the ISO9001 quality management system certification to guide production. Relying on the strong production strength, the annual production capacity can reach 1 million sets to ensure the delivery time of users and solve the worries.

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The combination and extension of R&D, production capacity and market has laid a solid foundation for Qiyang Intelligence to become a professional and global supplier of embedded software and hardware.

We offer:

- **Multi-platform software/hardware products**

NXP, Rockchip, MTK, Renesas, TI, Atmel, Cirrus Logic and other multi-platform ARM development boards/core boards/industrial control

boards and peripheral hardware products, as well as supporting tools and software resources to support rapid secondary development of users.

- **Customized Services**

We fully utilize our accumulated technology on ARM platform and Linux, Android, Ubuntu and Debian operating systems to provide customized embedded product services (OEM/ODM).

Thank you for using Qiyang's products, we will do our best to provide you with technical assistance! Wish you good luck in your work!

Technical Support

If you have questions about the documents, you can contact us during office hours (Monday to Friday 8:30-12:00, 13:30-17:30, Beijing time)

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Information updates

1. Information updates

Product-related manuals and datasheets are constantly being improved and updated; please ensure that they are up-to-date when you use them.

2. Update notice

Qiyang's newest product information and news updates will be released through the WeChat official account, please pay attention!



3. How to get information

After purchase, please contact the relevant sales staff to obtain the SDK.

4. Provided materials

Software: factory image, related kernel source code, interface test source code, cross compiler.

Hardware: corresponding baseboard schematic, PCB source file (Allegro16.6).

Files: hardware manual, test manual, user manual, environment construction manual, IO pin comparison table, core board, baseboard structure dimension drawing (dxf), chip information.

Usage suggestions:

1) before using the board, be sure to read the hardware manual first;

2) please check the packing list carefully before use and check whether there are any missing files;

3) understand the basic structure and composition of the development kit, including the allocation of hardware resources, the definition of each pin of the core board and the carrier board, and the definition of the expansion pins, etc.;

4) if you need to burn an image, test the development board functions, etc., you also need to read the user manual and test manual;

5) we accept bulk orders for the IAC-IMX95XX-Kit development board.

Version Record

Version No.	Hardware Platform	Date	Description	Revised by
V1.0	IAC-IMX95XX-CM-BETA-V1_10 IAC-IMX95XX-MB-BETA-V1_00	2025-09	Initial version	Maoh

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NOTE: The manual mainly introduces the hardware interface of the IAC-IMX95XX-Kit core board

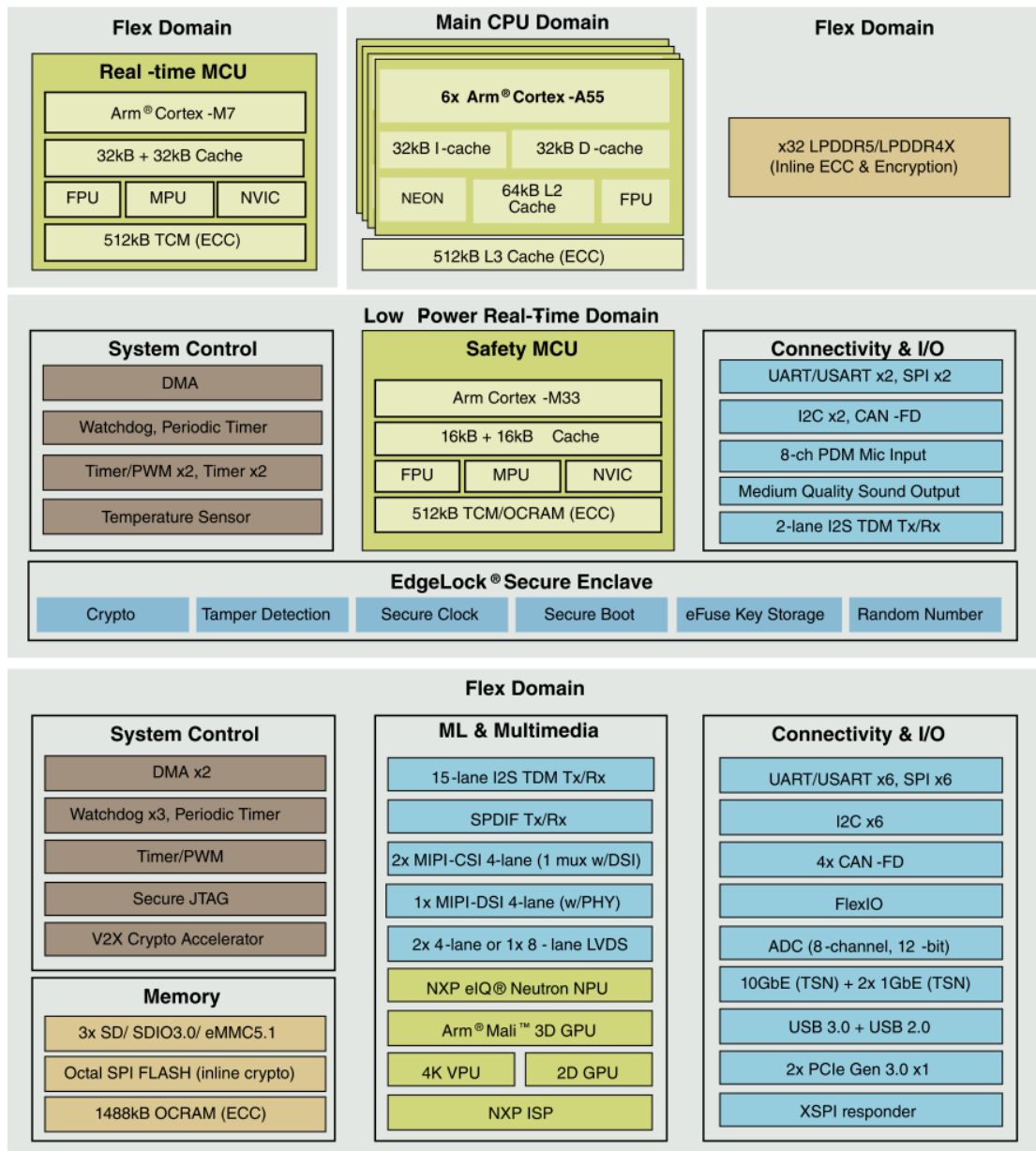
I. System Composition

1.1. Chip Overview

The i.MX 95 applications processor features advanced graphics and video cores, powerful vision and machine learning acceleration, efficient CPU performance, and real-time processing capabilities. It also integrates the EdgeLock® Secure Enclave for advanced security features, supporting energy-efficient edge computing. The processor integrates six Arm Cortex®-A55 cores and is the first i.MX series product to support functional safety, with a built-in Arm Cortex®-M33 core that can be configured as a safety island. Powered by NXP's innovative Energy Flex architecture, the i.MX 95 processor optimizes performance and energy efficiency for industrial, IoT, and automotive devices.

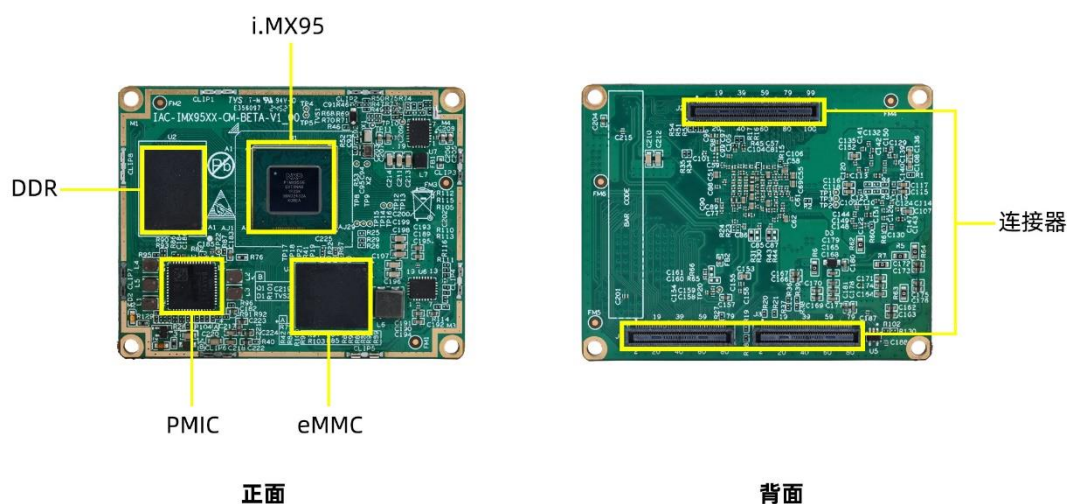
The i.MX 95 applications processor offers a rich set of peripheral interfaces, targeting the automotive, industrial, and commercial IoT markets. As an integral part of the EdgeVerse™ intelligent edge solutions portfolio, the i.MX 95 series will be available in commercial, industrial, extended industrial, and automotive grades, and is backed by long-term product supply program provided by NXP.

i.MX95 processor block diagram:



1.2. SOM Overview

The IAC-IMX95XX-CM core board uses an 8-layer PCB with high-precision gold immersion technology and high-TG (glass transition temperature) board material, which has reliable electrical performance and anti-interference performance. The board integrates CPU, LPDDR4, eMMC, power management chip, etc. It uses a board-to-board connector to lead out up to 260 pins, fully expanding the i.MX95 hardware resources. Different interface functions can be combined according to the pin situation to produce a baseboard that meets the needs.



- ◆ Onboard NXP i.MX95 processor;
- ◆ Onboard 8GB LPDDR4, 32GB eMMC (default configuration);
- ◆ The SOM adopts 8-layer PCB high precision gold immersion process;
- ◆ SOM size: 61.5mm x 49mm, it suits for various application scenarios;
- ◆ The core board uses two 80-pin and one 100-pin board-to-board connectors to lead out the core board resources;
- ◆ 5V power supply, onboard power management chip;
- ◆ Supports Linux6.12.

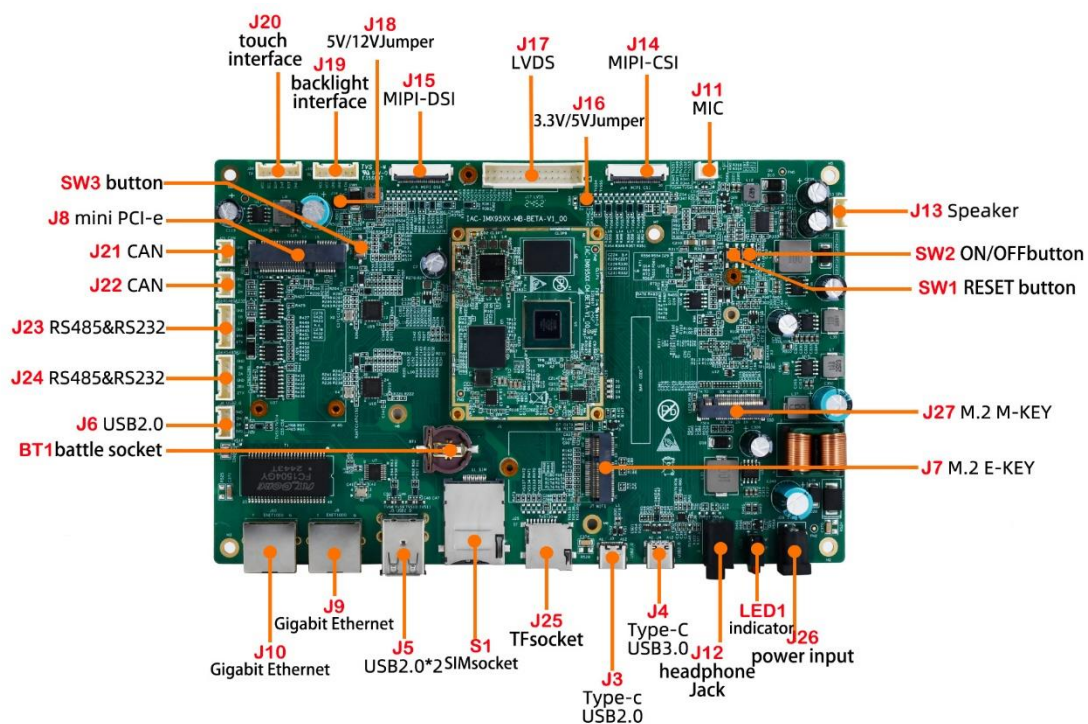
1.3. Development Board Resources

Hardware Resources	CPU	NXP i.MX95 processor
	Processor	Six ARM® Cortex™-A55 cores + Cortex™-M33 cores + Cortex™-M7 cores, i.MX95 clock speed up to 1.8GHz, Cortex®-M33 clock speed up to 333 MHz
	GPU	Arm Mali-G310 OpenGL® ES 3.2/Vulkan® 1.3/OpenCL 3.0
	NPU	Neural Processor Unit: Provides up to 2TOPS
	ISP	Resolution up to 4Kp60
	RAM	8GB LPDDR4
	Flash	32GB eMMC
	PMIC	NXP PPF0900 power management unit
	Ethernet	2-ch network chip adopts RGMII mode to perfectly support 10M/100M/1000M Ethernet
	Connectivity	1-ch USB to TTL debug serial port
		2-ch RS232 serial port (three-wire RS232 serial port)
		2-ch RS485 interface (MUX with RS232)
		2-ch CANFD interface
	Display	1-ch 4-lane MIPI_DSI display interface, resolution up to 4K30fps
		1-ch 2-lane LVDS display interface, resolution up to 1080P@60
	Audio	1-ch balanced stereo speaker, amplifier output
		MIC audio input
		1-ch single-ended stereo headphone
	USB	3-ch USB2.0 HOST interface
		1-ch USB Type-c interface
	Camera	1-ch 4 Lane MIPI-CSI
	Input Interface	Standard I2C capacitive touch screen interface
	Extension Interface	MINI-PCIE (USB2.0) interface, external 4G module
		M.2-MKEY (PCIE) interface, external SSD module
		M.2-EKEY (SDIO) interface, external WIFI6 module
	Storage	1 x TF card interface
	Other Features	Reset circuit, watchdog circuit, real-time clock
	Power Input	9 - 30V wide voltage power supply
Electric	Layer/Size	SOM size: 61.5mm x 49mm 8-layer high precision immersion gold technology
		Carrier board size: 202mm x 128mm 4-layer high precision immersion gold technology

Power Consumption	Power consumption of the whole board: 5W (no load)
Operation Temperature	-40°C - +85°C
Storage Temperature	-40°C - +85°C
Humidity	5% - 95%, non-condensation
SOM Options	Default configuration: 8GB DDR/32GB eMMC (-40°C - +85°C)

II. Development Board Interface Functions

Board interfaces – Top Side



2.1. Basic Interface Functions Description

Number	Functions
J3	TYPE-C USB2.0 (Debug)
J4	TYPE-C USB3.0
J12	Headphone jack
LED1	Indicator light
J26	Power input
J7	M.2 E-KEY
J27	M.2 M-KEY
S1	SIM-card slot
SW1	RESET
SW2	ON/OFF
J13	Speaker
J11	MIC interface
J14	MIPI-CSI interface
J16	LVDS voltage selection 3.3V/5V
J17	Dual channel LVDS
J15	MIPI-DSI interface
J18	Backlight voltage selection 5V/12V
J19	Backlight interface
J20	Touch interface
SW3	Button
J8	MINI-PCIE
J21	CAN bus interface

J22	CAN bus interface
J23	RS485 & RS232
J24	RS485 & RS232
J6	USB2.0
BT1	RTC battery
J10	Ethernet
J9	Ethernet
J5	USB2.0
J25	TF-card

2.2. Pin Definition

J1A: (Core board interface pins)

Multiplexing GPIO	Signal Name	PIN#	PIN#	Signal Name	Multiplexing GPIO
GPIO1_IO13	SAI1_TXD0	1	2	UART2_RXD	GPIO1_IO6
GPIO1_IO14	SAI1_RXD0	3	4	UART2_TXD	GPIO1_IO7
GPIO1_IO11	SAI1_TXFS	5	6	GND	
GPIO1_IO12	SAI1_TXC	7	8	UART1_RXD	
	GND	9	10	UART1_TXD	
	PCIE1_CLKIN_P	11	12	GND	
	PCIE1_CLKIN_N	13	14	I2C2_SCL	GPIO1_IO2
	GND	15	16	I2C2_SDA	GPIO1_IO3
	PCIE1_RX0P	17	18	GND	
	PCIE1_RX0N	19	20	NC	
	GND	21	22	NC	
	PCIE1_TX0P	23	24	GND	
	PCIE1_TX0N	25	26	NC	
	GND	27	28	NC	

	PCIE1_CLKOUT_P	29	30	GND	
	PCIE1_CLKOUT_N	31	32	CPU_ONOFF	
	GND	33	34	GND	
	USB1_SS_RX0N	35	36	USB2_DP	
	USB1_SS_RX0P	37	38	USB2_DN	
	GND	39	40	GND	
	USB1_SS_TX0N	41	42	GND	
	USB1_SS_TX0P	43	44	VDD_3V3	
	GND	45	46	GND	
	USB1_SS_RX1P	47	48	USB1_DN	
	USB1_SS_RX1N	49	50	USB1_DP	
	GND	51	52	GND	
	USB1_SS_TX1P	53	54	NC	
	USB1_SS_TX1N	55	56	USB1_VBUS_3V3	
	GND	57	58	GND	
	MIPI_CSI1_D0N	59	60	MIPI_DSICSI1_D0N	
	MIPI_CSI1_D0P	61	62	MIPI_DSICSI1_D0P	
	MIPI_CSI1_D1N	63	64	MIPI_DSICSI1_D1N	
	MIPI_CSI1_D1P	65	66	MIPI_DSICSI1_D1P	
	MIPI_CSI1_CLKN	67	68	MIPI_DSICSI1_CLKN	
	MIPI_CSI1_CLKP	69	70	MIPI_DSICSI1_CLKP	
	MIPI_CSI1_D2N	71	72	MIPI_DSICSI1_D2N	
	MIPI_CSI1_D2P	73	74	MIPI_DSICSI1_D2P	
	MIPI_CSI1_D3N	75	76	MIPI_DSICSI1_D3N	
	MIPI_CSI1_D3P	77	78	MIPI_DSICSI1_D3P	
	GND	79	80	GND	
	LVDS0_D3N	81	82	LVDS1_D0N	

	LVDS0_D3P	83	84	LVDS1_D0P	
	LVDS0_D2N	85	86	LVDS1_D1N	
	LVDS0_D2P	87	88	LVDS1_D1P	
	LVDS0_CLKN	89	90	LVDS1_CLKN	
	LVDS0_CLKP	91	92	LVDS1_CLKP	
	LVDS0_D1N	93	94	LVDS1_D2N	
	LVDS0_D1P	95	96	LVDS1_D2P	
	LVDS0_D0N	97	98	LVDS1_D3N	
	LVDS0_D0P	99	100	LVDS1_D3P	

J1B: (Core board interface pins)

Multiplexing GPIO	Signal Name	PIN#	PIN#	Signal Name	Multiplexing GPIO
	EXPIO_nINT	1	2	UART5_TXD	GPIO2_IO00
	GND	3	4	UART5_RXD	GPIO2_IO01
GPIO1_IO08	EXPIO_nRST	5	6	RS485_DIR1	GPIO2_IO02
GPIO1_IO09	HUB_nRST	7	8	RS485_DIR2	GPIO2_IO03
	GND	9	10	GND	
GPIO2_IO04	ENET1_nRST	11	12	UART8_TXD	GPIO2_IO12
GPIO2_IO05	ENET2_nRST	13	14	UART8_RXD	GPIO2_IO13
GPIO2_IO06	WDT_FEED	15	16	UART3_TXD	GPIO2_IO14
GPIO2_IO07	WDT_EN	17	18	UART3_RXD	GPIO2_IO15
	GND	19	20	GND	
GPIO2_IO22	AUD_AMP_nSD	21	22	EKEY_UART_TXD	GPIO2_IO08
GPIO2_IO23	LCD1_PWM_OUT	23	24	EKEY_UART_RXD	GPIO2_IO09
GPIO2_IO24	LCD2_PWM_OUT	25	26	EKEY_UART_nCTS	GPIO2_IO10
	GND	27	28	EKEY_UART_nRTS	GPIO2_IO11
GPIO2_IO25	CAN2_TXD	29	30	EKEY_WL_nDIS1	GPIO2_IO16

GPIO2_IO27	CAN2_RXD	31	32	EKEY_WL_nDIS2	GPIO2_IO17
GPIO2_IO26	CAN_STBY	33	34	EKEY_UART_nINT	GPIO2_IO18
	GND	35	36	MD_PWR_EN	GPIO2_IO19
GPIO2_IO28	CAN3_TXD	37	38	4G_nRST	GPIO2_IO20
GPIO2_IO29	CAN3_RXD	39	40	4G_nDIS	GPIO2_IO21
GPIO2_IO30	I2C4_SCL	41	42	GND	
GPIO2_IO31	I2C4_SDA	43	44	PCIE_nCLKREQ	GPIO5_IO12
	GND	45	46	PCIE_nPERST	GPIO5_IO13
GPIO3_IO6	SD2_DATA3	47	48	PCIE_nWAKE	GPIO5_IO14
GPIO3_IO5	SD2_DATA2	49	50	GND	
GPIO3_IO4	SD2_DATA1	51	52	EKEY_SDIO_nINT	GPIO5_IO3
GPIO3_IO3	SD2_DATA0	53	54	EKEY_SDIO_nRST	GPIO5_IO2
GPIO3_IO2	SD2_CMD	55	56	HP_DET	GPIO5_IO1
GPIO3_IO1	SD2_CLK	57	58	AMP_PWR_EN	GPIO5_IO0
GPIO3_IO0	SD2_nCD	59	60	EXT_PWR_EN	GPIO5_IO4
	GND	61	62	TYPEC_PWR_EN	GPIO5_IO5
GPIO3_IO25	SD3_DATA3	63	64	TYPEC_nINT	GPIO5_IO6
GPIO3_IO24	SD3_DATA2	65	66	TYPEC_PLUG_nDET	GPIO5_IO7
GPIO3_IO23	SD3_DATA1	67	68	RUN_LED	GPIO5_IO8
GPIO3_IO22	SD3_DATA0	69	70	CAM_PWR_EN	GPIO5_IO9
GPIO3_IO21	SD3_CMD	71	72	CAM_PWDN	GPIO5_IO11
GPIO3_IO20	SD3_CLK	73	74	CAM_nRST	GPIO5_IO10
	GND	75	76	GND	
GPIO4_IO14	ENET2_MDC	77	78	ENET1_MDC	GPIO4_IO0
GPIO4_IO15	ENET2_MDIO	79	80	ENET1_MDIO	GPIO4_IO1

J1C: (Core board interface pins)

Multiplexing GPIO	Signal Name	PIN#	PIN#	Signal Name	Multiplexing GPIO
GPIO4_IO16	ENET2_TD3	1	2	ENET1_TD2	GPIO4_IO3
GPIO4_IO19	ENET2_TD0	3	4	ENET1_TD3	GPIO4_IO2
GPIO4_IO17	ENET2_TD2	5	6	ENET1_TD1	GPIO4_IO4
GPIO4_IO18	ENET2_TD1	7	8	ENET1_TD0	GPIO4_IO5
GPIO4_IO20	ENET2_TX_CTL	9	10	ENET1_TX_CTL	GPIO4_IO6
GPIO4_IO21	ENET2_TXC	11	12	ENET1_TXC	GPIO4_IO7
	GND	13	14	GND	
GPIO4_IO27	ENET2_RD3	15	16	ENET1_RD3	GPIO4_IO13
GPIO4_IO26	ENET2_RD2	17	18	ENET1_RD2	GPIO4_IO12
GPIO4_IO25	ENET2_RD1	19	20	ENET1_RD1	GPIO4_IO11
GPIO4_IO24	ENET2_RD0	21	22	ENET1_RD0	GPIO4_IO10
GPIO4_IO22	ENET2_RX_CTL	23	24	ENET1_RX_CTL	GPIO4_IO08
GPIO4_IO23	ENET2_RXC	25	26	ENET1_RXC	GPIO4_IO09
	GND	27	28	GND	
GPIO3_IO26	LCD1_BL_EN	29	30	LCD2_BL_EN	GPIO3_IO30
GPIO3_IO27	LCD1_nRST	31	32	LCD2_BL_PWR_EN	GPIO3_IO29
GPIO3_IO28	LCD1_TP_nINT	33	34	LCD2_TP_nINT	GPIO3_IO31
GPIO3_IO29	LCD1_TP_nRST	35	36	LCD2_TP_nRST	GPIO3_IO28
	GND	37	38	GND	
	VDD_SOC_PG	39	40	VDD_1V8	
	VDD_ARM_PG	41	42	VDD_3V3	
	PMIC_nINT	43	44	VDD_3V3	
	PMIC_nRST	45	46	VCC_SD2_3V3	
	I2C1_SDA	47	48	VCC_SD2_3V3	
	I2C1_SCL	49	50	VCC_SD2	
	GND	51	52	GND	

	GND	53	54	GND	
	GND	55	56	GND	
	GND	57	58	GND	
	GND	59	60	GND	
	GND	61	62	GND	
	VCC_SYS_5V0	63	64	VCC_SYS_5V0	
	VCC_SYS_5V0	65	66	VCC_SYS_5V0	
	VCC_SYS_5V0	67	68	VCC_SYS_5V0	
	VCC_SYS_5V0	69	70	VCC_SYS_5V0	
	VCC_SYS_5V0	71	72	VCC_SYS_5V0	
	VCC_SYS_5V0	73	74	VCC_SYS_5V0	
	VCC_SYS_5V0	75	76	VCC_SYS_5V0	
	VCC_SYS_5V0	77	78	VCC_SYS_5V0	
	VCC_SYS_5V0	79	80	VCC_SYS_5V0	

J11: MIC input interface

PIN#	Signal Name
1	AUD_MIC+
2	AUD_MIC-

J13: Stereo balanced Speak output interface (amplifier output)

PIN#	Signal Name
1	AUD_AMP_OUTPL
2	AUD_AMP_OUTNL
3	AUD_AMP_OUTPR
4	AUD_AMP_OUTNR

J23: RS232 & RS485 serial ports

PIN#	Signal Name
1	COM1_TXD
2	COM1_RXD
3	GND
4	RS485_1A
5	RS485_1B
6	GND

J24: RS232 & RS485 serial ports

PIN#	Signal Name
1	COM2_TXD
2	COM2_RXD
3	GND
4	RS485_2A
5	RS485_2B
6	GND

J22/J21: CAN interface

PIN#	Signal Name
1	CANH
2	CANL
3	GND

J20: I2C interface (Capacitive touch screen)

PIN#	Signal Name
1	VCC_EXT_3V3

2	TP_I2C4_SCL
3	TP_I2C4_SDA
4	TP_nINT
5	TP_nRST
6	GND

J19: BL interface (LCD backlight interface)

PIN#	Signal Name
1	VCC_BL (5.0V/12.0V)
2	VCC_BL (5.0V/12.0V)
3	GND
4	GND
5	LED_EN
6	LED_PWM (PWM)

J18: Backlight voltage selection 5V/12V

Signal Name	PIN#	PIN#	Signal Name
VCC_EXT_12V0	1	2	VCC_BL
VCC_EXT_5V0	3	4	VCC_BL

J16: LVDS voltage selection 3.3V/5V

Signal Name	PIN#	PIN#	Signal Name
VCC_EXT_5V0	1	2	VCC_LCD2
VCC_EXT_3V3	3	4	VCC_LCD2

J15: MIPI-DSI interface

PIN#	Signal Name
------	-------------

1	VCC_EXT_5V0
2	VCC_EXT_5V0
3	VCC_EXT_5V0
4	VCC_EXT_5V0
5	GND
6	GND
7	DSI_TP_nINT
8	DSI_TP_nRST
9	DSI_TP_SDA
10	DSI_TP_SCL
11	GND
12	LCD1_BL_EN
13	LCD1_PWM_OUT
14	LCD1_nRST
15	GND
16	LCD1_DSI_D0N
17	LCD1_DSI_D0P
18	GND
19	LCD1_DSI_D1N
20	LCD1_DSI_D1P
21	GND
22	LCD1_DSI_CLKN
23	LCD1_DSI_CLKP
24	GND
25	LCD1_DSI_D2N
26	LCD1_DSI_D2P
27	GND

28	LCD1_DSI_D3N
29	LCD1_DSI_D3P
30	GND

J17: LVDS interface

Signal Name	PIN#	PIN#	Signal Name
VCC_LCD2	1	2	VCC_LCD2
GND	3	4	VCC_LCD2
GND	5	6	GND
LCD0_D0_P	7	8	LCD0_D0_N
LCD0_D1_P	9	10	LCD0_D1_N
LCD0_D2_P	11	12	LCD0_D2_N
GND	13	14	GND
LCD0_CLK_P	15	16	LCD0_CLK_N
LCD0_D3_P	17	18	LCD0_D3_N
LVDS1_D0P	19	20	LVDS1_D0N
LVDS1_D1P	21	22	LVDS1_D1N
LVDS1_D2P	23	24	LVDS1_D2N
GND	25	26	GND
LVDS1_CLKP	27	28	LVDS1_CLKN
LVDS1_D3P	29	30	LVDS1_D3N

J14: MIPI-CSI interface

PIN#	Signal Name
1	GND
2	CAM_MIPI_CLKP
3	CAM_MIPI_CLKN

4	GND
5	CAM_MIPID2P
6	CAM_MIPID2N
7	GND
8	CAM_MIPID0P
9	CAM_MIPID0N
10	GND
11	CAM_MIPID3P
12	CAM_MIPID3N
13	GND
14	CAM_MIPID1P
15	CAM_MIPID1N
16	GND
17	GND
18	GND
19	CAM_PWDN
20	CAM_nRST
21	CAM_I2C2_SDA_1.8
22	CAM_I2C2_SCL_1.8
23	VCC_CAM_1V2
24	GND
25	CAM_MIPID_MCLK
26	GND
27	VCC_CAM_1V8
28	GND
29	VCC_CAM_2V8
30	VCC_CAM_2V8

J6: USB2.0

PIN#	Signal Name
1	VCC_EXT_5V0 (VCC-5.0V)
2	HUB_USB1_DM
3	HUB_USB1_DP
4	GND

J8: MINI-PCIE socket

Signal Nam	PIN#	PIN#	Signal Name
NC	1	2	VCC_4G_3V3
NC	3	4	GND
NC	5	6	NC
NC	7	8	VCC_USIM
GND	9	10	4G_UIM_DATA
NC	11	12	4G_UIM_CLK
NC	13	14	4G_UIM_nRST
GND	15	16	NC
NC	17	18	GND
NC	19	20	4G_nDISEN
GND	21	22	4G_nRST
NC	23	24	VCC_4G_3V3
NC	25	26	GND
GND	27	28	NC
GND	29	30	NC
NC	31	32	NC
NC	33	34	GND
GND	35	36	4G_USB_D_N

GND	37	38	4G_USB_D_P
VCC_4G_3V3	39	40	GND
VCC_4G_3V3	41	42	4G_STATE
GND	43	44	NC
NC	45	46	NC
NC	47	48	NC
NC	49	50	GND
NC	51	52	VCC_4G_3V3

J7: M.2 M-KEY socket

Signal Nam	PIN#	PIN#	Signal Name
GND	1	2	VCC_EKEY_3V3
NC	3	4	VCC_EKEY_3V3
NC	5	6	VCC_EKEY_3V3
GND	7	8	NC
EKEY_SDIO_CLK	9	10	NC
EKEY_SDIO_CMD	11	12	NC
EKEY_SDIO_DAT0	13	14	NC
EKEY_SDIO_DAT1	15	16	VCC_EKEY_3V3
EKEY_SDIO_DAT2	17	18	GND
EKEY_SDIO_DAT3	19	20	EKEY_UART_nINT
EKEY_SDIO_nINT	21	22	EKEY_UART_RXD_1.8
EKEY_SDIO_nRST	23	...	NC
NC	...	32	EKEY_UART_TXD_1.8
GND	33	34	EKEY_UART_nCTS_1.8
EKEY_PCIE_TX0P	35	36	EKEY_UART_nRTS_1.8

EKEY_PCIE_TX0N	37	38	NC
GND	39	40	NC
EKEY_PCIE_RX0P	41	42	NC
EKEY_PCIE_RX0N	43	44	NC
GND	45	46	NC
EKEY_PCIE_CLKP	47	48	NC
EKEY_PCIE_CLKN	49	50	EKEY_CLK_32K
GND	51	52	EKEY_PCIE_nPERST
EKEY_PCIE_nCLKREQ	53	54	EKEY_WL_nDIS2
EKEY_PCIE_nWAKE	55	56	EKEY_WL_nDIS1
GND	57	58	NC
GND	59	60	NC
NC	61	62	NC
GND	63	64	NC
NC	65	66	NC
NC	67	68	NC
GND	69	70	NC
NC	71	72	VCC_EKEY_3V3
NC	73	74	VCC_EKEY_3V3
GND	75		

J27: M.2 M-KEY socket

Signal Name	PIN#	PIN#	Signal Name
GND	1	2	VCC_SSD_3V3
GND	3	4	VCC_SSD_3V3
NC	5	6	NC
NC	7	8	NC

GND	9	10	VCC_SSD_3V3
NC	11	12	VCC_SSD_3V3
NC	13	14	VCC_SSD_3V3
GND	15	16	VCC_SSD_3V3
NC	17	18	VCC_SSD_3V3
NC	19	20	NC
GND	21	22	NC
NC	23	24	NC
NC	25	26	NC
GND	27	28	NC
NC	29	30	NC
NC	31	32	NC
GND	33	34	NC
NC	35	36	NC
NC	37	38	NC
GND	39	40	VCC_MKEY_3V3
MKEY_PCIE_RX0N	41	42	VCC_MKEY_3V3
MKEY_PCIE_RX0P	43	44	NC
GND	45	46	NC
MKEY_PCIE_TX0N	47	48	5G_PCIE_nPEWAKE
MKEY_PCIE_TX0P	49	50	MKEY_PCIE_nPERST
GND	51	52	MKEY_PCIE_nCLKREQ
MKEY_PCIE_CLKN	53	54	MKEY_PCIE_nWAKE
MKEY_PCIE_CLKP	55	56	NC
GND	57	58	NC
NC	...	...	NC
NC	67	68	NC

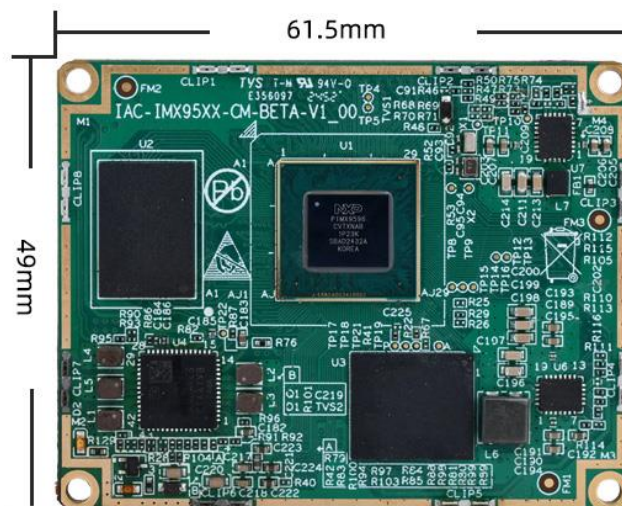
NC	69	70	VCC_SSD_3V3
GND	71	72	VCC_SSD_3V3
GND	73	74	VCC_SSD_3V3
GND	75		

III. Size & Structure

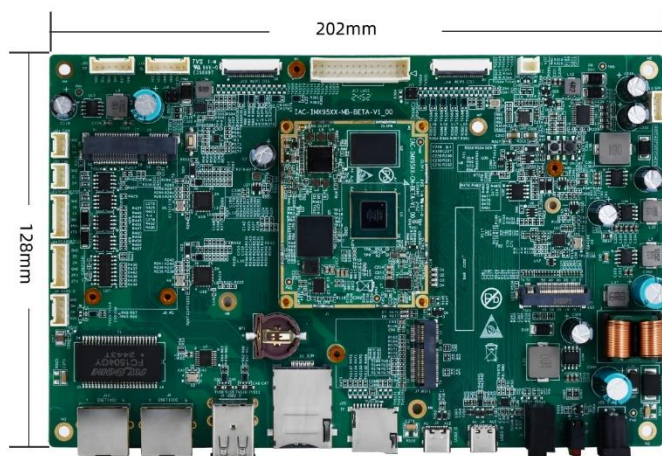
Unit: mm, if you need the size of the board to board receptacle, please email:

supports@qiyangtech.com

3.1. SOM Size

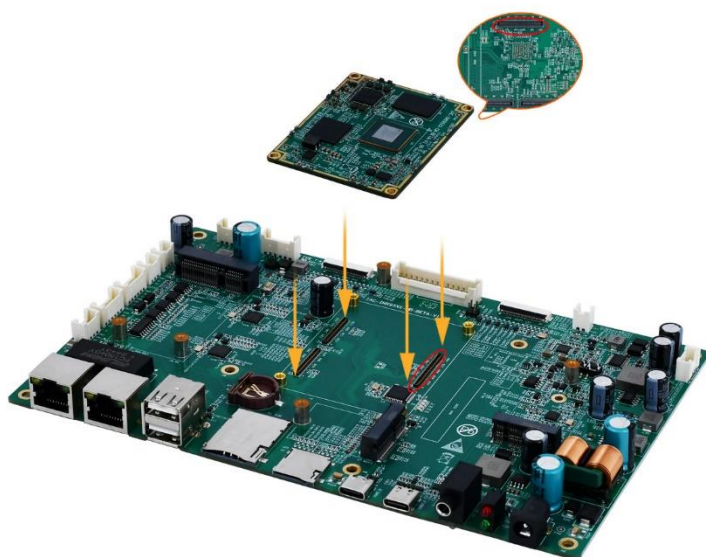


3.2. Development Board Size



IV. Board to Board Connection

Note the direction of the core board: (refer to the figure below)



V. Electrical Characteristics

Item	Features
Operation Temperature	-40°C - +85°C
Storage Temperature	-40°C - +85°C
Humidity	5% - 95%, non-condensation
SOM Size	61.5mm x 49mm, 8-layer high precision immersion gold process
Carrier Board Size	128mm x 202mm, 4-layer high precision immersion gold process
Power Consumption	<5W (non-loaded)
Power Supply	DC12V/2.5A

VI. Remarks

1. Before connecting the LCD, please confirm the power specifications of your LCD module.

2. Please use the company's original connectors to avoid damage to the motherboard due to misconnection.

3. Our company shall provide technical support services and lifelong maintenance services for our products via E-mail, telephone and other means of communication.

4. Our company promises to provide free maintenance service for our products within 6 months from the date of sale. If the users encounter a failure due to product quality problems during the use of our products, they can contact the seller or our company with the purchase receipt during the warranty period, and our company will be responsible for repairing the product or replacing it with a new one.

5. Under these circumstances, we do not offer free maintenance:

- expired warranty service period;
- no valid purchase receipt;
- the damage was caused by liquid, moisture or mold;
- failures and damages after purchase caused by reasons other than product quality, such as falling, strong vibration, unauthorized modification, misoperation, etc.;

- damage was caused by force majeure.

6. Our company reserves the intellectual property rights of all software and hardware technical materials developed for the IAC-IMX95XX-Kit product; users can only use them for teaching, experiments, and scientific research, and may not engage in any commercial purposes, distribute them on the Internet, or tamper with their copyright by intercepting, modifying, etc.

7. We accept batch orders and offer technical support and service.

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