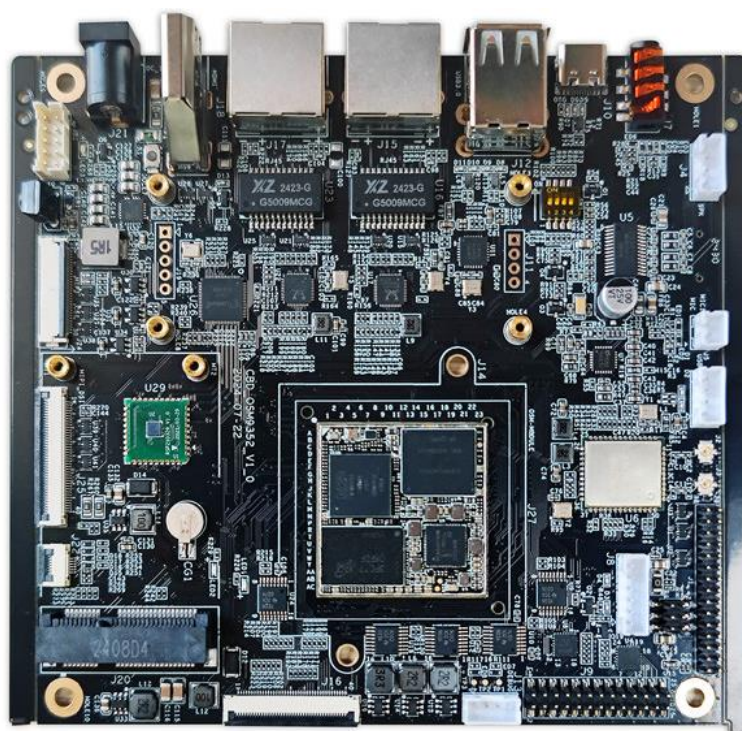


深圳金亚太科技有限公司

Shenzhen Geniatech Co.,Ltd.

SPECIFICATION

MODEL:DB-iMX93



Confirmation

REVISION HISTORY					
VERSION	DATE	BOARD ID	PAGE	DESCRIPTION	AUTHOR
V1.0			7	Initial Spec	

APPROVED BY GENIATECH		
PREPARED BY 编写	CHECKED BY 审核	APPROVED BY 批准

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Website: www.geniatech.com

Address: Room 02-04, 10 / F, Block A, Building 8, Shenzhen International Innovation Valley, Dashi Road, Nanshan District, Shenzhen, Guangdong, China.

Room 02-04, 10/F, Block A, Building 8, Shenzhen International Innovation Valley, Dashi Road,
Nanshan District, Shenzhen, Guangdong, China
Email: support@geniatech.com Tel: (+ 86) 755 86028588

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1. GENERAL DESCRIPTION

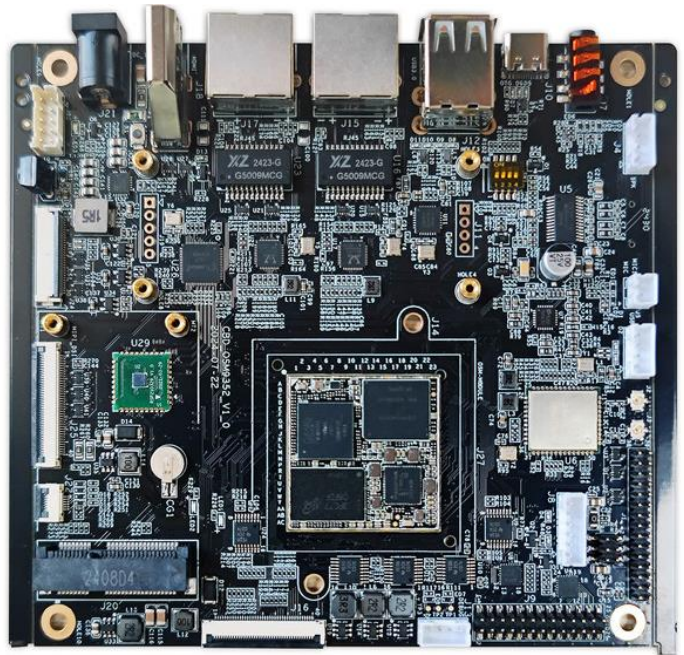
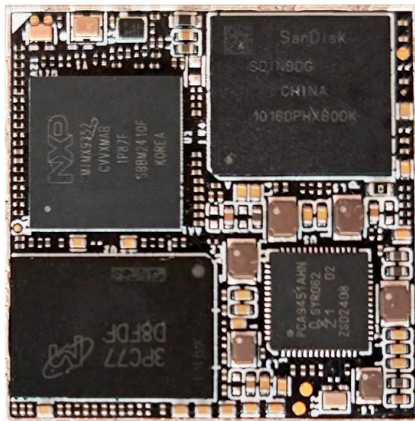
The DB-iMX93 is based on NXP' low-power, powerful and efficient i.MX93 SoC. Equipped with a 64-bit dual-core ARM Cortex-A55 processor, as well as an ARM Cortex-M33 real-time kernel, and Neural Network performance (256 MACs operating up to 1.0 GHz and 2 OPS/MAC), the DB-iMX93 is ideal for applications such as industrial control, data gateway and edge computing. industrial control, Industrial human machine interface (HMI), data gateway, edge computing and other application scenarios.

Below is the detailed specification:

- 64-bit dual-core ARM Cortex-A55 processor with ARM Cortex-M33 real-time core
- Neural Network performance (256 MACs operating up to 1.0 GHz and 2 OPS/MAC)
- References OSM-S standard pinout IO, LGA package, 30 x 30 mm size saves more valuable space
- 2GB RAM, 16GB eMMC flash memory
- Support MIPI-DSI output interface, dual Gigabit network interface
- Provides other interfaces such as I2C/ UART /SPI /PWM, etc.
- Support Linux Yocto system, stable and reliable performance.
- Industrial standard design, 7X24 hours long time stable operation.

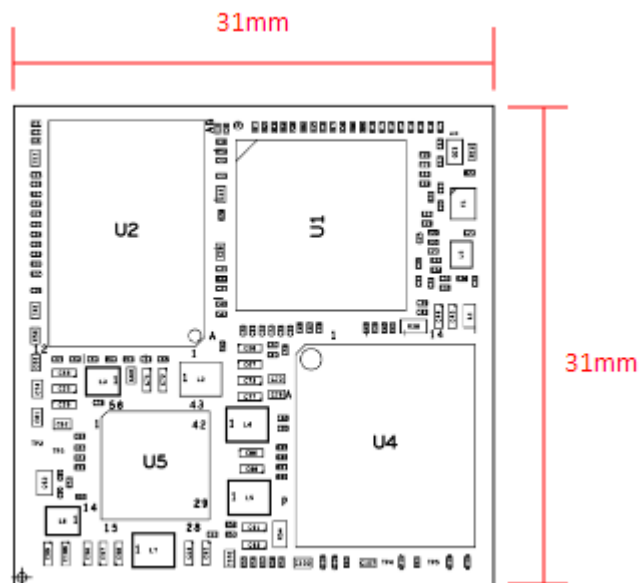
2. PRODUCT PICTURES

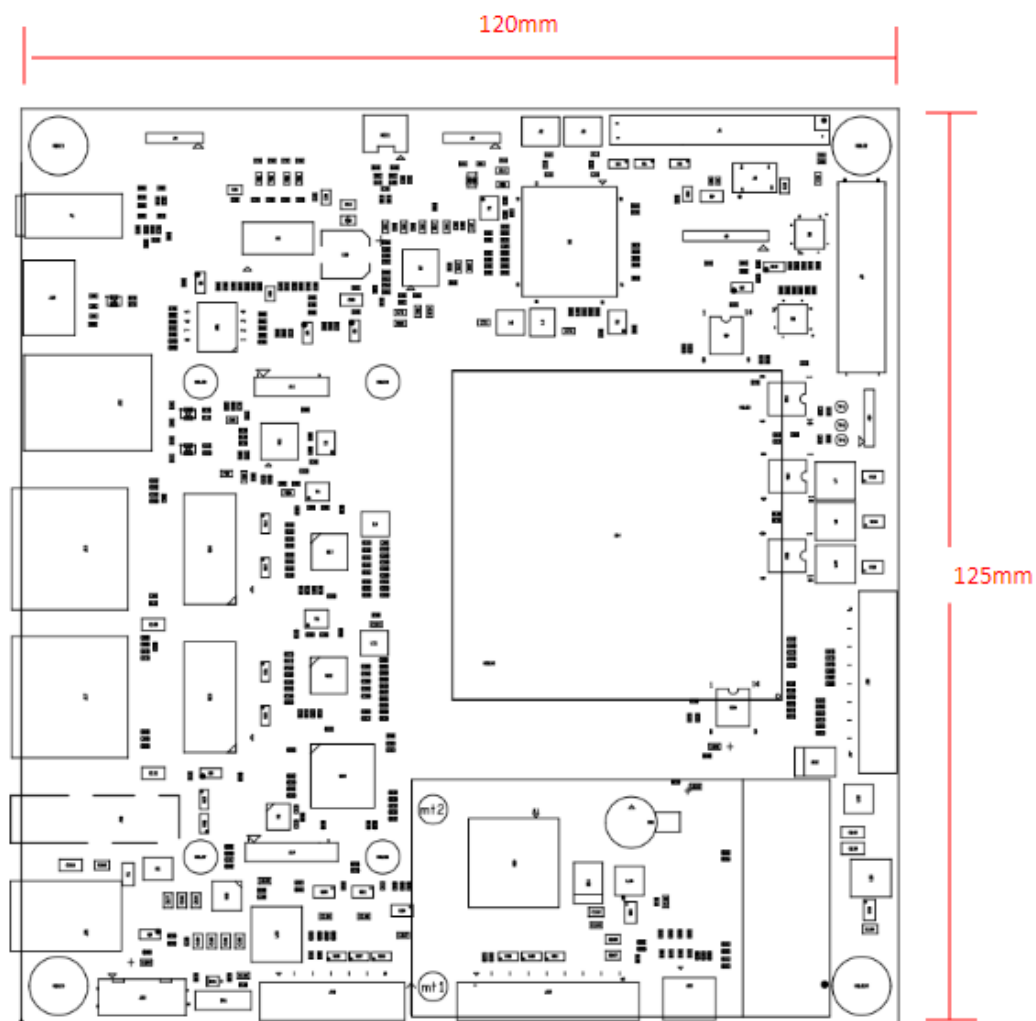
Below pictures are for reference only:



3. BOARD VIEW

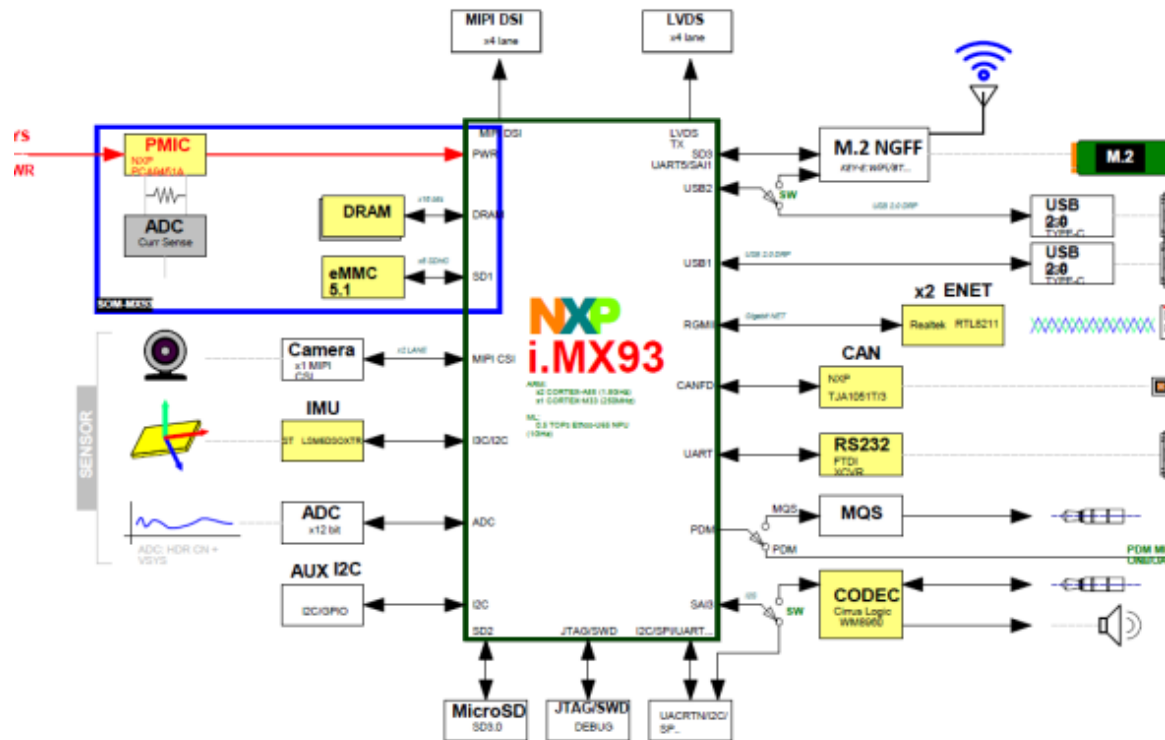
3.1 DIMENSION





3.2 BLOCK DIAGROM

BLOCK DIAGRAM

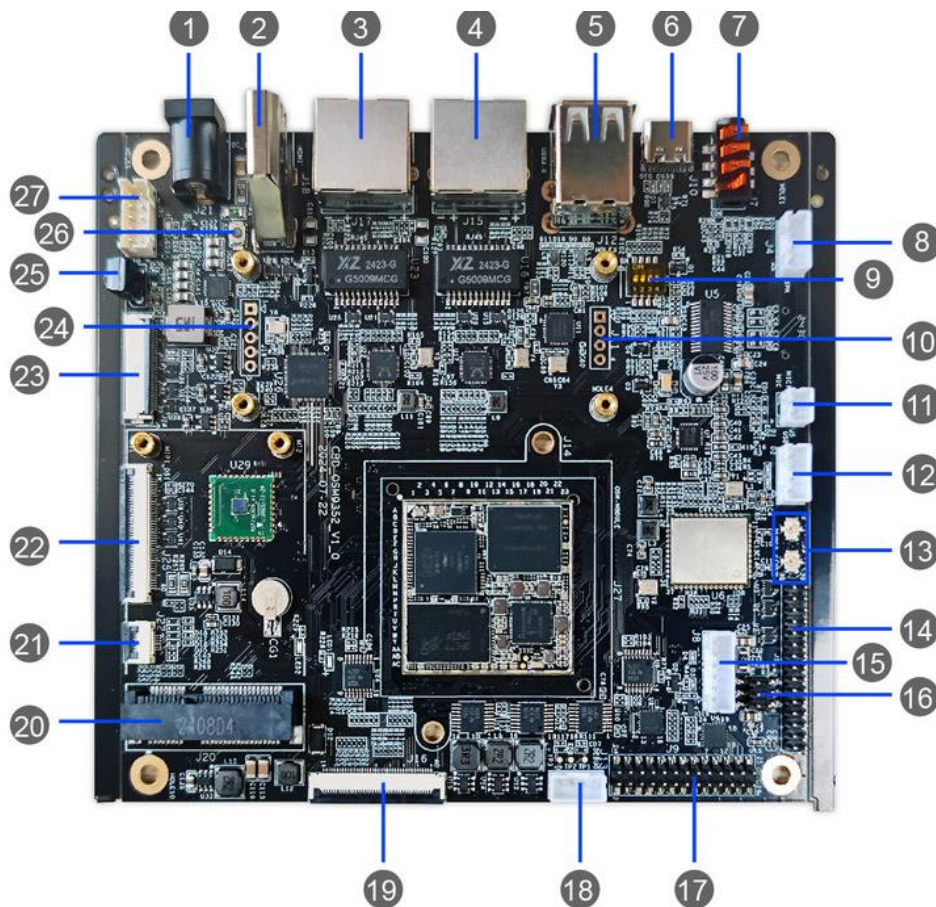


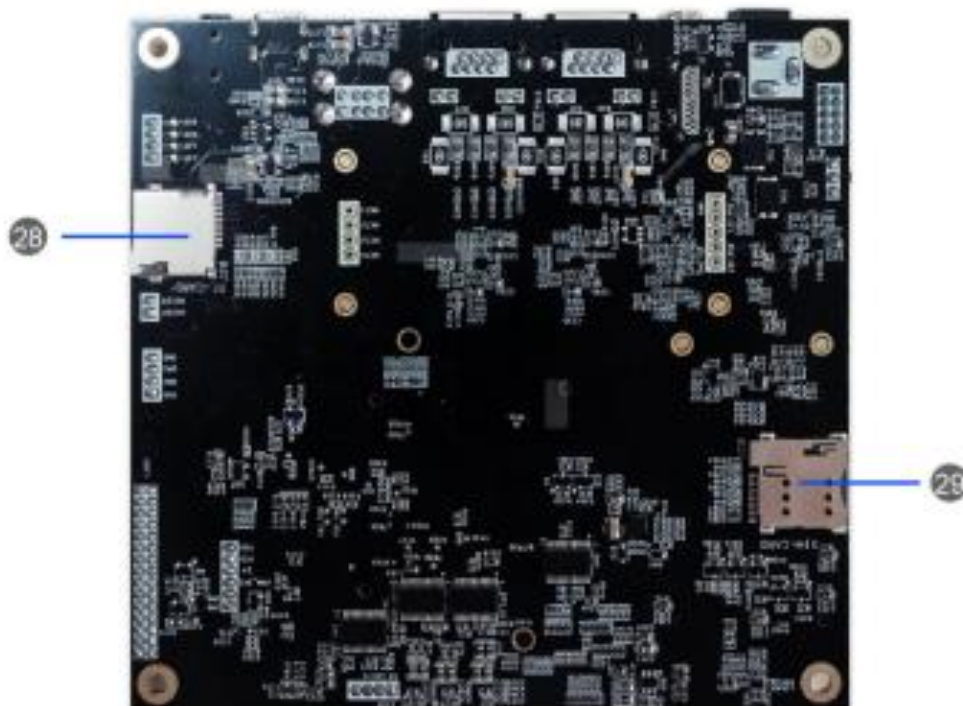
4. FEATURES

Chipset	NXP iMX93	
OSD Language	English/Chinese(multi language OSD)	
Processor	CPU	Dual-Core ARM Cortex-A55+ARM Cotex-M33
	NPU	Neural Network performance (256 MACs operating up to 1.0 GHz and 2 OPS/MAC)
	VPU	Supports 4K 60fps H.265/H.264/VP9 video decoding Supports 1080P 60fps H.265/H.264 video encoding
	RAM	2GB
	ROM	16GB (optional 8G/32G) eMMC
Network	Ethernet	2*RJ45 , 1000M

	WIFI	802.11a/b/g/n/ac/ax, 2T2R
External I/O	HDMI out *1, RJ45*2, USB 2.0*2, Type-C*1, Headphone Jack*1, DC IN	
Internal I/O	MIPI DSI *1, MIPI CSI *1, UART * 1, Debug *1, SPI1*1, SPK *1, MIC IN *1, PWM *3	
Dimensions	120mm*125mm	

5. PRODUCT INTERFACE DEFINITION





No.	Identifiers	Name	Description
1	J21	DC	12V/2A DC Power input
2	J18	HDMI OUT	1* HDMI OUT
3	J17	RJ45	1* 100M/1000M Ethernet
4	J15	RJ45-POE	1* 100M/1000M Ethernet (Support POE PD 12V)
5	J12	USB2.0	2* USB2.0
6	J10	Type C	USB Type-C Port
7	J7	Headphone	Headphone Jack(4-pole with DET & MIC)
8	J4	SPK	1x 4PinWhite Terminal Block, 2.0mm Spacing
9	SW1	BOOT MODE	
10	J11	POE PD Input	POE Power INPUT
11	MIC	MIC1	1* MIC input
12	J5	USB	
13	J2/J3	Antenna Slot	For Wifi and BT
14	J1	LVDS	

15	J8	LVDS BL	1 * LVDS Backlight
16	J6	LVDS Power Patchcord	For 3.3V/5V/12V
17	J9	Extension GPIO	
18	J13	Debug Connector	1*Debug Connector
19	J16	RGB Panel Slot	
20	J20	Mini PCIe Slot	For 4G/5G LTE
21	J22	I2C Slot	For Touch Panel
22	J25	MIPI_DSI	
23	J24	MIPI_CSI	
24	J19	POE PD 12V OUTPUT	5 Pin 2.0mm PH2.0
25		IR Receiver	
26	K1	Button	*1 (Recovery Key)
27	J23	Keypad Slot	For Key & LED
28	J26	Micro-SD	1 * Micro-SD
29	J28	SIM	1* SIM socket

6. PRECAUTIONS FOR USE

1. Do not squeeze, bend, or disassemble the board.
2. Keep circuit boards away from static electricity.
3. Do not allow water or other liquids to come into contact with the board
4. Clean the board with a soft, dry towel or brush.
5. Do not use long connection cables, which may affect performance and image quality