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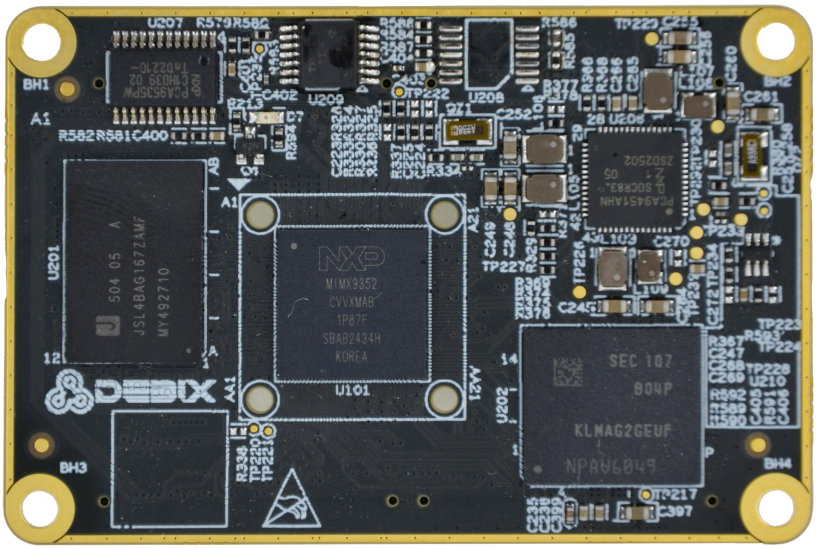
DEBIX SOM B



Industrial Computer

DEBIX SOM B i.MX 93 Core Board

Overview:

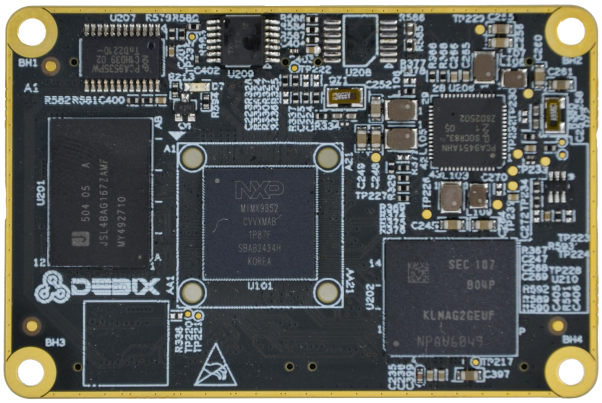
DEBIX SOM B is the second System-on-Module product of the DEBIX series. As with the DEBIX Model C SBC, it is based on NXP i.MX 93 CPU with a 0.5 TOPS microNPU, which brings us the same powerful system performance. This core board design has some notable benefits, such as design reutilization, reduction of development time of the carrier boards, and flexible integration into various embedded systems.

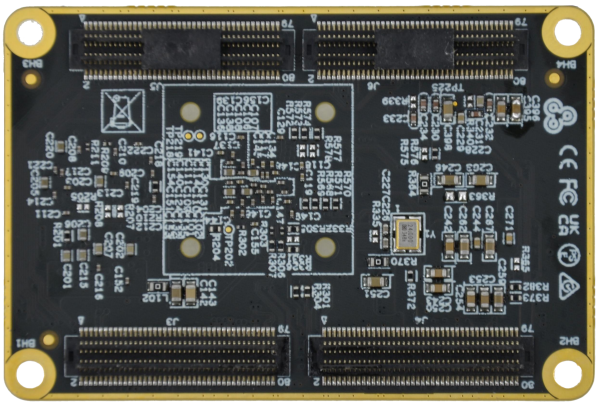
Main Features:

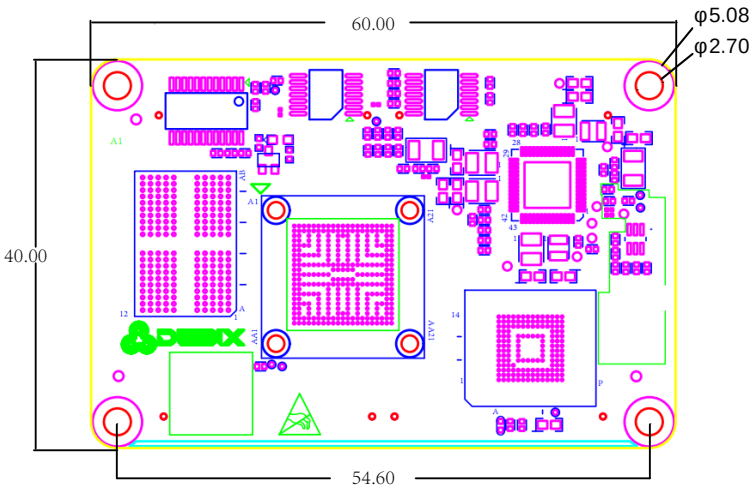
· **Industrial-grade performance:** Designed for demanding applications in Industry 4.0, IoT, smart home, building control and multimedia.

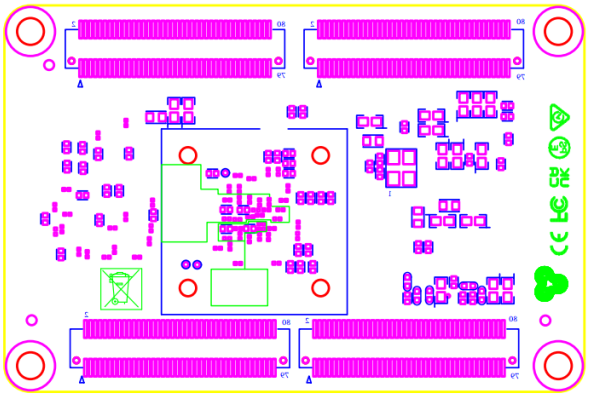
· **Comprehensive software support:** Includes Yocto, Ubuntu, Debian, OpenWRT and FreeRTOS operating systems.

· **Real-time control:** General-purpose Cortex-M33 up to 250MHz for real-time and low-power processing.









Specification:

System	
CPU	NXP i.MX 9352, 2 x Arm® Cortex®-A55 @1.7GHz, 1 x Arm® Cortex®-M33 @250MHz, 1 x Arm® Ethos™-U65 microNPU @0.5TOPS. (i.MX 93 series CPU optional)
Memory	2GB LPDDR4 (1GB optional)
Storage	Onboard 16GB eMMC (8GB/32GB/64GB/128GB/256GB optional)
OS	Ubuntu22.04, Yocto-L6.12.3_1.0.0, Debian 12 (also supports OpenWRT and FreeRTOS)
I/O Interfaces	
Gigabit Ethernet	Up to 2 x Gigabit Ethernet controller, one of which supports Time Sensitive Networking (TSN)
Display	1 x LVDS (4-lane), supports up to 1366x768@60Hz or 1280x800@60Hz 1 x MIPI DSI (4-lane), supports up to 1080@60Hz or 1920x1200@60Hz 1 x 24-bit parallel RGB, supports up to 1366x768@60Hz or 1280x800@60Hz
Camera	1 x MIPI CSI, supports up to 2 RX data lanes (plus 1 Rx clock lane). Compliant with MIPI CSI-2 v1.3 and MIPI D-PHY v1.2 specifications.
Audio	Up to 3 x SAI (synchronous audio interface), 1 x SPDIF OUT/IN, 1 x PDM
USB	2 x USB 2.0
UART	Up to 8 x UART
I2C	Up to 6 x I2C
SDIO	Up to 2 x SDIO3.0
CAN	Up to 2 x CAN
SPI	Up to 8 x SPI
ADC	Up to 4 x 12-bit ADC (4-channel)
JTAG	1 x JTAG
Power Supply	
Power Input	DC 3.5V~5V/1A
Operating Temperature	
Temp. Range	-40°C~85°C for default, -20°C~70°C optional
Mechanical	
Connector	4 x 2*40pin/0.5mm pitch board-to-board connector (PN: BB51024A-R80-10-32), matching sockets of various heights
Dimension	60mm(L) x 40mm(W) x 5.6mm(H) (±0.5mm)
Gross Weight	23g (±0.5g)
Net Weight	11g (±0.5g)

Certificates:

Ordering Codes:

RAM LPDDR4	eMMC Storage	PN (-20℃~70℃)	PN (-40℃~85℃)
1GB DDR	8GB	SOM B-D1E8	SOM B-I-D1E8
	16GB	SOM B-D1E16	SOM B-I-D1E16
	32GB	SOM B-D1E32	SOM B-I-D1E32
	64GB	SOM B-D1E64	SOM B-I-D1E64
2GB DDR	8GB	SOM B-D2E8	SOM B-I-D2E8
	16GB	SOM B-D2E16	SOM B-I-D2E16
	32GB	SOM B-D2E32	SOM B-I-D2E32
	64GB	SOM B-D2E64	SOM B-I-D1E64

Compatible with DEBIX's Accessories:

Product	Model
SOM A I/O Board	BMB-08
Camera Adapter Board	EMB-AS-08
DEBIX Camera Module	Camera 200A
	Camera 500A
	Camera 1300A
DEBIX Display Screen	DEBIX TD050A
	DEBIX TD070A
	DEBIX TD101A

Safety Instruction and Warnings:

General:

• Avoid exposure to water, moisture, and conductive surfaces while operating.
• Handle with care to avoid mechanical or electrical damage to the circuit board and connectors.
• Only handle the board by the edges when powered on to minimize the risk of electrostatic discharge damage.

Power:

• Use the product with a carrier board and connect it to a 3.5V~5V/1A external power supply.

Environment:

• Operate in a well-ventilated environment, even if using a case.
• Place on a stable, flat, non-conductive surface and avoid contact with conductive items.

Connections:

• Use peripherals that comply with relevant standards for the country of use and ensure proper insulation and operation.

Additional notes:

• This summary is not exhaustive, please refer to the full User Manual for details.
• If you are unsure about any aspect of safety or operation, consult a qualified professional.

Contact Us:

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