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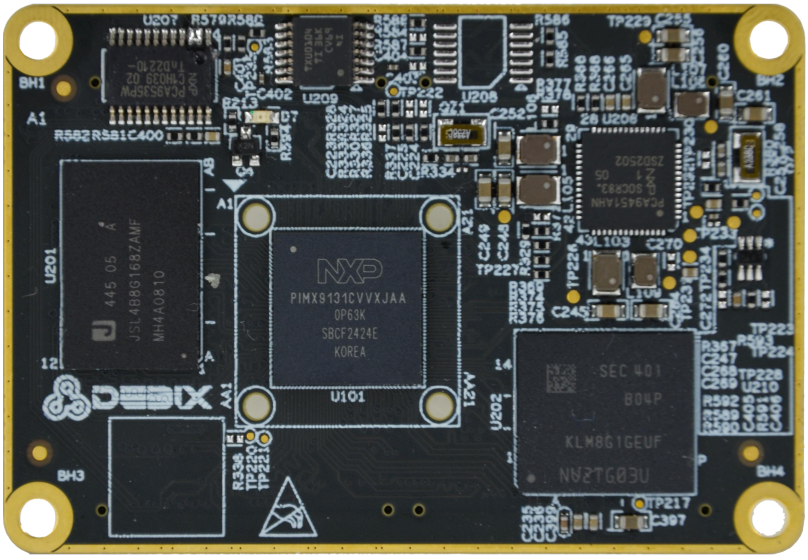
DEBIX SOM C



DEBIX Industrial Computer

DEBIX SOM C i.MX 91 Core Board

Overview:

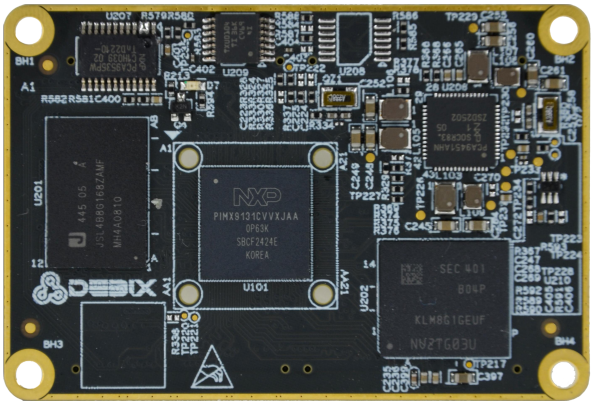
DEBIX SOM C is a cost-optimized System-on-Module based on the NXP i.MX 91 processor, featuring a single-core ARM Cortex-A55 CPU (up to 1.4GHz) and optimized for lightweight embedded systems. By integrating the processor, memory and storage into a compact module, it significantly simplifies carrier board development and accelerates deployment in industrial control, IoT edge devices, smart home and other low-power scenarios.

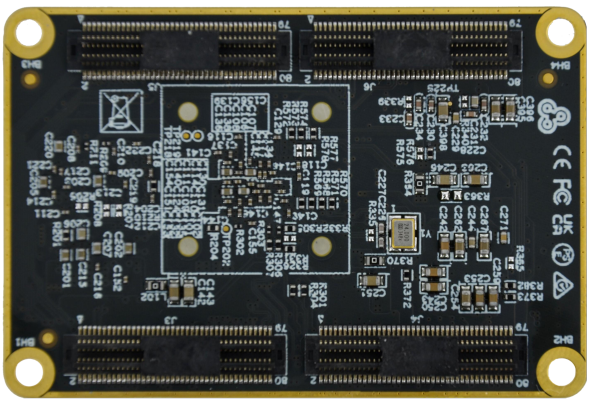
Main Features:

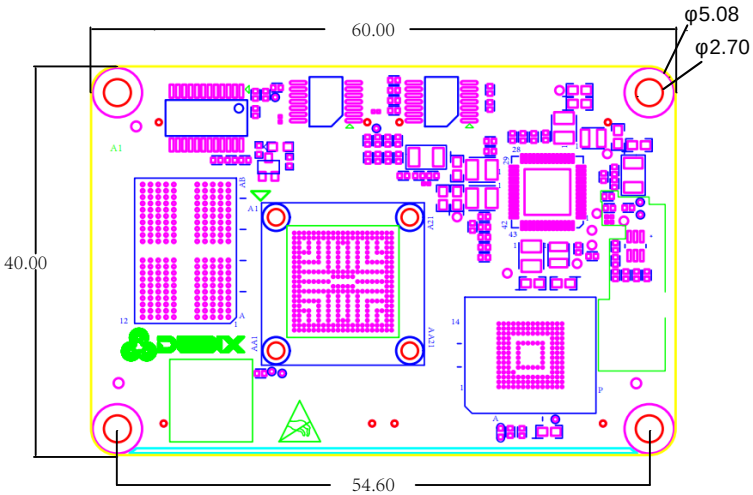
· Industrial-grade Reliability: Operates in extreme environments from -40°C~85°C, ideal for harsh industrial use cases.

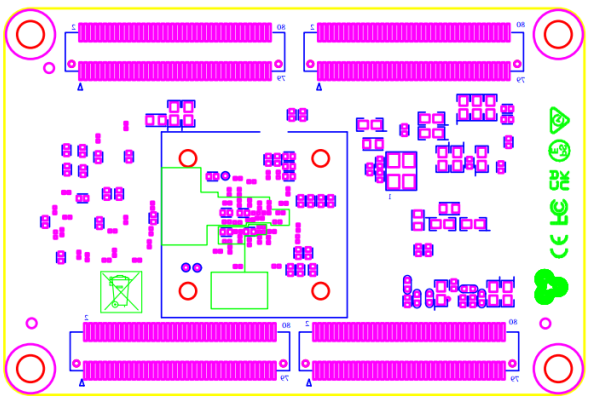
· Flexible System Integration: Standardized board-to-board connectors accelerate carrier board development.

· Low Power Operation: Single-core Cortex-A55 (1.4GHz) focuses on essential tasks, eliminating unnecessary hardware complexity and power waste. Maximum power consumption as low as 1.24W.









Specification:

System	
CPU	NXP i.MX 9131, 1 x Cortex-A55 @1.4GHz. The maximum power consumption is 1.24W (i.MX 91 series CPU optional)
Memory	1GB LPDDR4 (2GB optional)
Storage	Onboard 8GB eMMC (16GB/32GB/64GB/128GB/256GB optional)
OS	Yocto, Zephyr
Internal I/O	
Gigabit Ethernet	Up to 2 x Independent MAC Gigabit Ethernet port
Display	1 x 24-bit-per-pixel parallel RGB, supports up to 1366x768@60Hz or 1280x800@60Hz
Camera	1 x 8-bit parallel CSI
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 8 x I2C
SDIO	Up to 3 x SDIO3.0
CAN FD	UP to 2 x CAN FD
SPI	Up to 8 x SPI
ADC	Up to 1 x 12-bit ADC (4-channel)
Power Supply	
Power Input	DC 3.5V-5V/1A
Operating Temperature	
Temp. Range	-40℃~85℃ for default, -20℃~70℃ optional
Mechanical & Environmental	
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)

Product Compliance and Safety:

CE | FCC | UKCA | RoHS | C-Tick | PSE
For more information see the Certificates in the DEBIX Knowledge Center.

Ordering Codes:

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

Compatible with DEBIX's Accessories:

Product	Model
SOM A I/O Board	BMB-08

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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