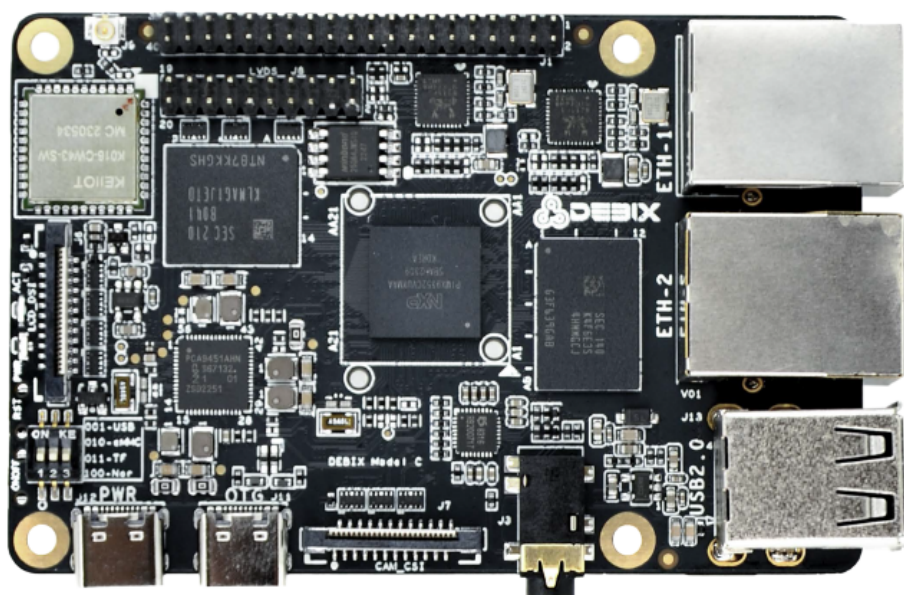


DEBIX Model C



DEBIX Model C i.MX 93 Single Board Computer

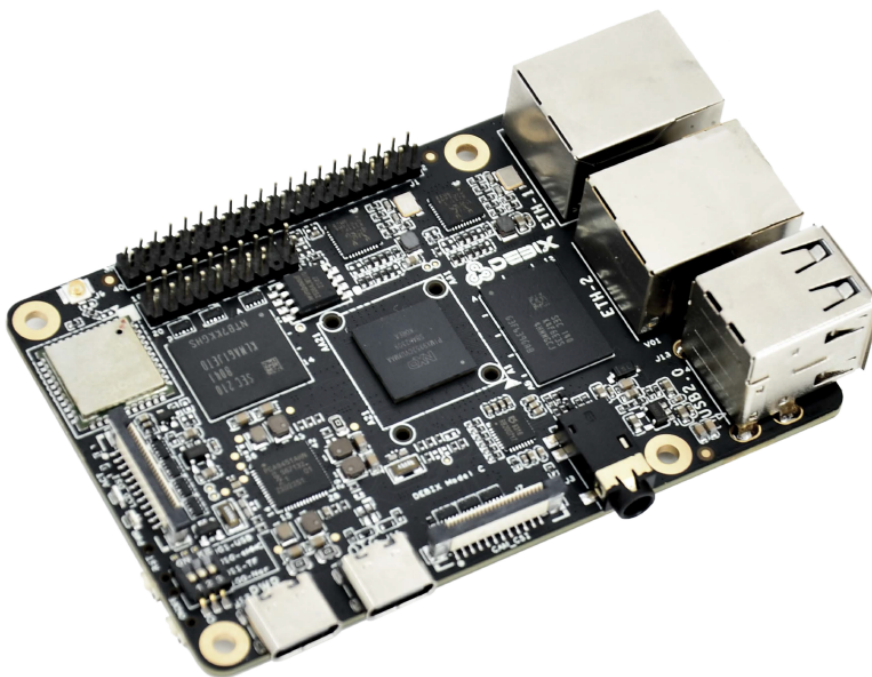
Overview:

DEBIX Model C is the first DEBIX single board computer to feature the NXP i.MX 93, a power-optimized processor rating up to 1.7GHz with only 1 watt of power at full load consumption, and the Arm Ethos™-U65 microNPU enables developers to create more capable ML applications.

Engineered to deliver more energy-efficient and cost-effective solutions for intelligent edge computing, DEBIX Model C provides multiple extensible interfaces for IoT edge, contactless HMI, smart home, building control and industrial applications.

Main Features:

- NXP i.MX 93 processor: 1.7GHz, 1W (extended industrial grade, industrial grade and consumer grade processors for options);
- Advanced security with integrated EdgeLock® secure enclave;
- Ethos-U65 microNPU to bring MCU-class ML efficiency;
- General-purpose Cortex-M33 up to 250MHz for real-time and low-power processing;
- Supports system switching between Ubuntu 22.04 Server, Yocto-L6.1.36, Debian 12 Server;
- Supports cooperative work on FreeRTOS and Linux dual systems.



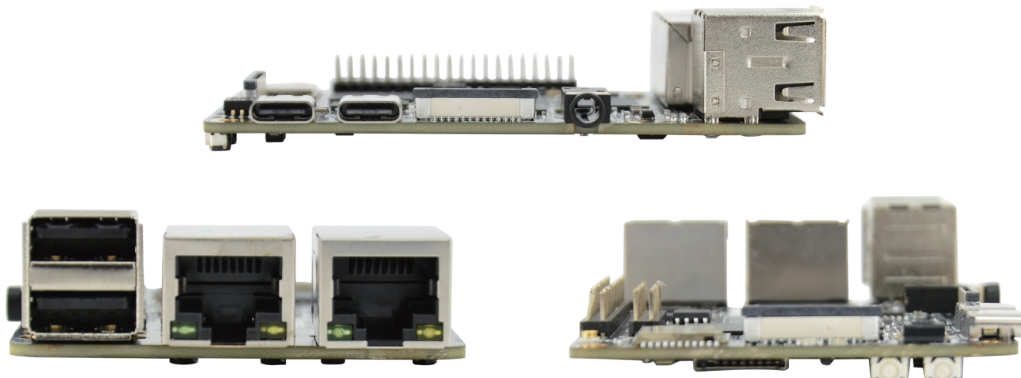
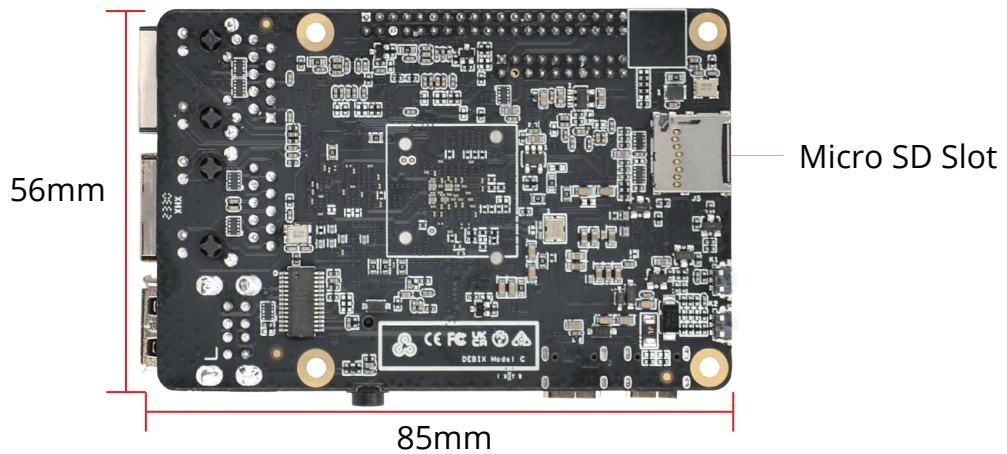
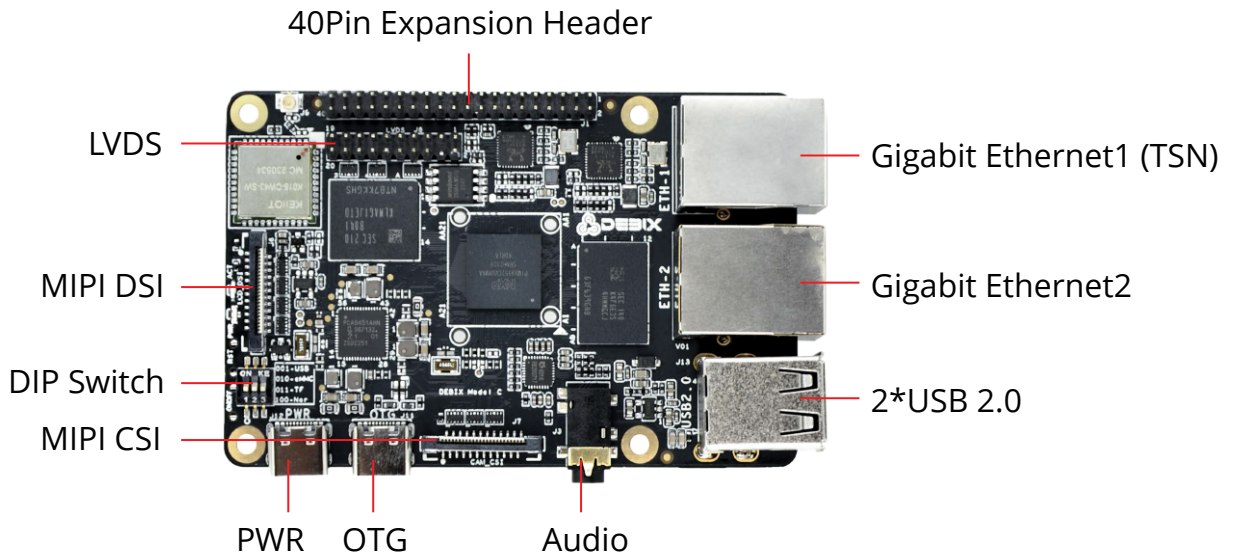
Specification:

System	
CPU	NXP i.MX9352, 2 x Arm® Cortex®-A55 @1.7 GHz, 1 x Arm® Cortex®-M33 @250MHz, 1 x Arm® Ethos™-U65 microNPU @0.5TOPS. (i.MX 93 series CPU optional)
Memory	1GB LPDDR4X (2GB optional)
Storage	Default: Micro SD card (8GB/16GB/32GB/64GB/128GB/256GB optional) and onboard 8MB Nor Flash (Onboard 8GB/16GB/32GB/64GB/128GB/256GB eMMC optional)
OS	Ubuntu 22.04 Server, Yocto-L6.1.36, Debian 12 Server (also supports OpenWRT and FreeRTOS)
I/O Interfaces	
Gigabit Ethernet	1 x Gigabit Ethernet port, support TSN and PoE power supply (need PoE power device module) 1 x Gigabit Ethernet port (POE power supply is not supported)
WIFI & BT	2.4GHz & 5GHz WIFI IEEE 802.11 a/b/g/n, BT5.2, external Wi-Fi SMA antenna connector (IPEX-1)
USB	2 x USB 2.0 Host 1 x USB 2.0 OTG
Audio	1 x Headphone and Mic combo port
Slot	1 x Micro SD card slot
Expansion	
40-Pin Double-Row Header	(1) 1 x I2C, 2 x USB 2.0 Host, 4 x 12bit ADC in, 1 x UART for system debug. (2) 6 x GPIO for default, can be reused as PWM, UART, SPI, I2C and CAN through software configuration. (3) 5V power supply in/out, 1.8V/3.3V@300mA power out, system reset, ON/OFF
LVDS	1 x 720p60 LVDS, single channel 8bit
MIPI CSI	1 x 1080p60 MIPI CSI (2-lane)
MIPI DSI	1 x 1080p60 MIPI DSI (4-lane)
DIP Switch	1 x 3-bit DIP Switch
Power Supply	
Power Supply	DC 5V/2A Type-C
Mechanical & Environmental	
Size	85.0mm x 56.0mm (±0.5mm)
Operating Temp.	-20°C to 70°C (-40°C to 85°C optional)
Net Weight	43g(±0.5g)

Certificates:



I/O Interfaces:



Ordering Codes:

RAM LPDDR4X	eMMC Storage	PNforModelC-20°C ~ 70°C	PNforModelC-40°C ~ 85°C
1GB DDR	N/A		Model C-I-D1E0
	8GB	Model C-D1E8	Model C-I-D1E8
	16GB	Model C-D1E16	Model C-I-D1E16
	32GB	Model C-D1E32	Model C-I-D1E32
	64GB	Model C-D1E64	Model C-I-D1E64
2GB DDR	N/A		Model C-I-D2E0
	8GB	Model C-D2E8	Model C-I-D2E8
	16GB	Model C-D2E16	Model C-I-D2E16
	32GB	Model C-D2E32	Model C-I-D2E32
	64GB	Model C-D2E64	Model C-I-D2E64

Compatible with DEBIX's Accessories:

Product	Model
DEBIX Fanless Aluminum Enclosure	EMC-7090B Model C
SBC POE Board	EMB-AS-06
DEBIX Camera Module	Camera 200A Camera 500A
DEBIX Display Screen	DEBIX TD050A DEBIX TD070A DEBIX TD101A DEBIX TD080B

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 only a 5V/2A DC minimum external power supply that complies with relevant regulations and standards for your country.

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:

- Only connect compatible devices to the GPIO ports to avoid damage and warranty voiding.
- 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.

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Community: <https://discord.com/invite/adaHHaDkH2>

