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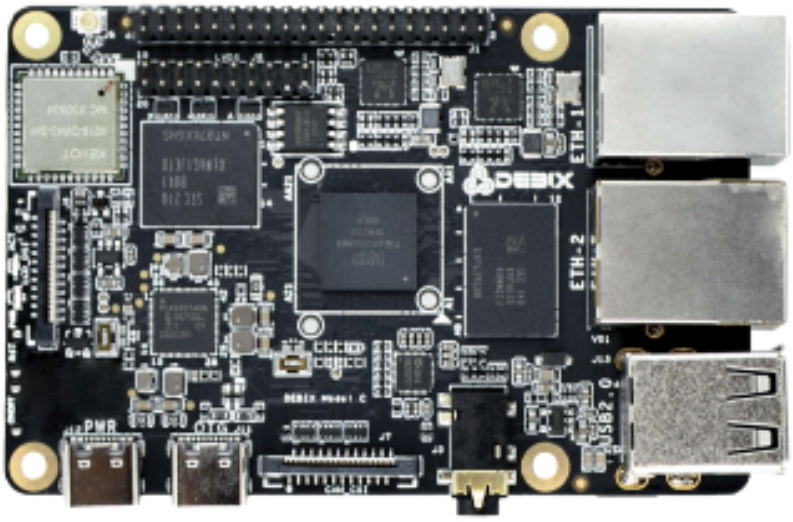
DEBIX Model C



DEBIX Industrial Computer

DEBIX Model C i.MX 93 Single Board Computer

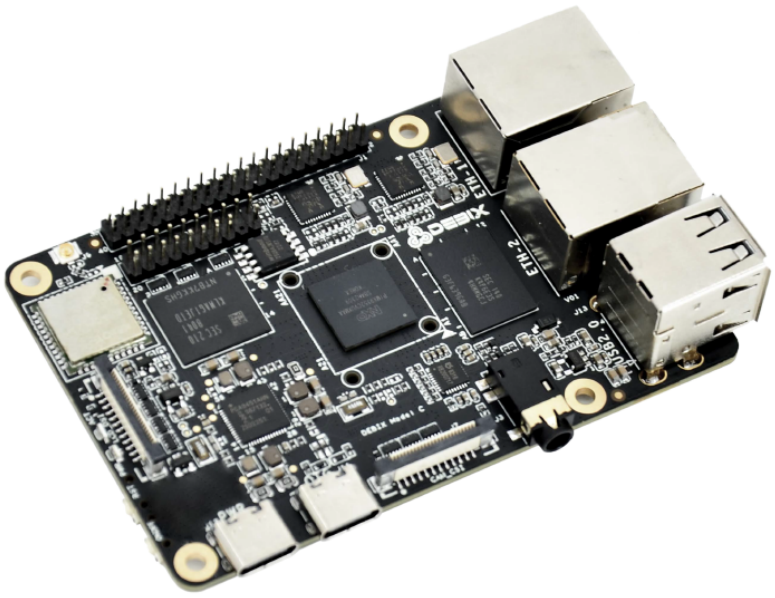
Overview:

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:

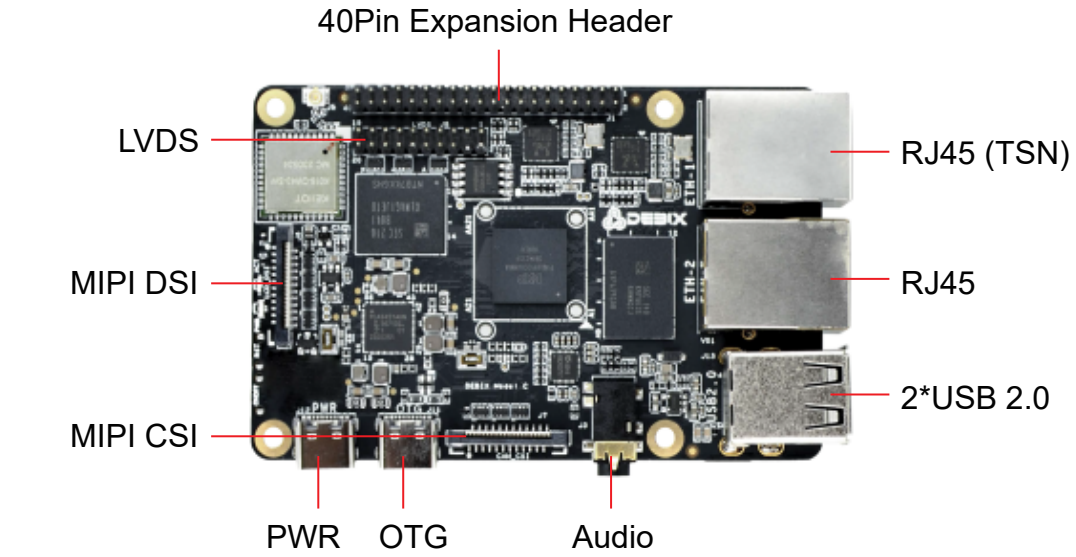
- NXP i.MX 93 processor: 1.7GHz, 1W (extended industrial grade, industrial grade and consumer grade processors for options);
- Advanced security with integrated EdgeLock® secure enclave;
- Ethos-U65 microNPU to bring MCU-class ML efficiency;
- General-purpose Cortex-M33 up to 250MHz for real-time and low-power processing;
- Supports system switching between Ubuntu 20.04 Server, Yocto 4.2, Debian 10 Server and Windows 10 IoT;
- Supports cooperative work on FreeRTOS and Linux dual systems;

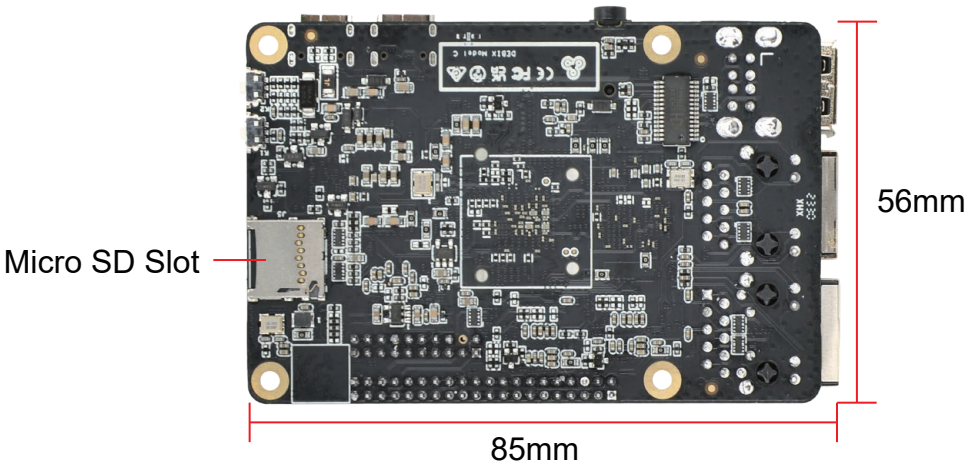


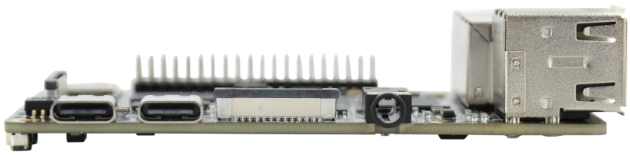
Specification:

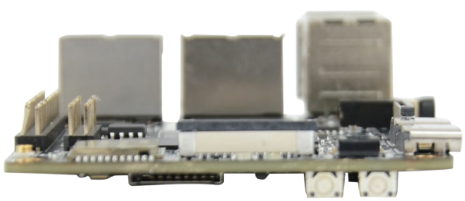
System	
CPU	NXP i.MX9352, 2 x Arm® Cortex®-A55 @1.7 GHz, 1 x Arm® Cortex®-M33 @250MHz, 1 x Arm® Ethos™-U65 microNPU. (i.MX 93 series CPU optional)
Memory	1GB LPDDR4 (2GB optional)
Storage	Default: Micro SD card (Onboard 8GB/16GB/32GB/64GB/128GB/256GB eMMC optional)
OS	Ubuntu Server, Yocto 4.2-L6.1.22_2.0.0, Windows 10 IoT Enterprise (2GB LPDDR4 version)
I/O Interfaces	
Gigabit Network	1 x RJ45, support POE power supply (need POE power device module) 1 x RJ45 (POE power supply is not supported)
WIFI & BT	2.4GHz & 5GHz WIFI IEEE 802.11a/b/g/n, BT5.2
USB	2 x USB 2.0 Host Type-A 1 x USB 2.0 OTG Type-C
Audio	1 x Headphone and Mic combo port
Expansion	
40-Pin Double-Row Headers	(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, 2 x 10-Pin double-row headers
MIPI CSI	1 x 1080p60 MIPI CSI, support 2-lane 24-Pin 0.5mm Pitch FPC socket
MIPI DSI	1 x 1080p60 MIPI DSI, support 4-lane 24-Pin 0.5mm Pitch FPC socket
Power Supply	
Power Supply	DC 5V/2A Type-C
Mechanical & Environmental	
Size	85.0mm x 56.0mm
Operating Temp.	-20°C to 70°C (-40°C to 85°C optional)

I/O Interfaces:









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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