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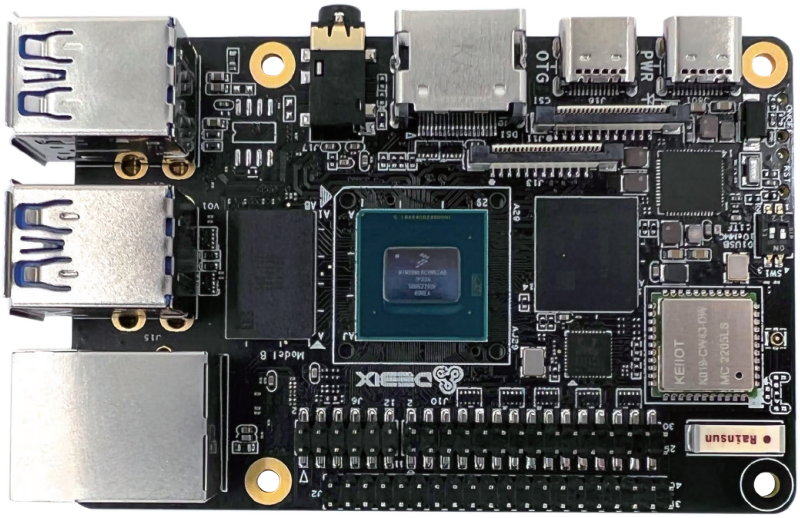
DEBIX Model B



DEBIX Industrial Computer

DEBIX Model B Industrial Single Board Computer

Overview:

DEBIX Model B is a high-performance, industrial-grade single-board computer designed for challenging and demanding applications. It boasts superior features compared to its predecessor, DEBIX Model A, making it a compelling choice for projects operating in extreme temperature conditions.

Main Features:

· **Wider Operating Temp.:** DEBIX Model B confidently operates in -40°C to 85°C environment. This enhanced resilience makes it ideal for industrial applications with extreme temperatures.

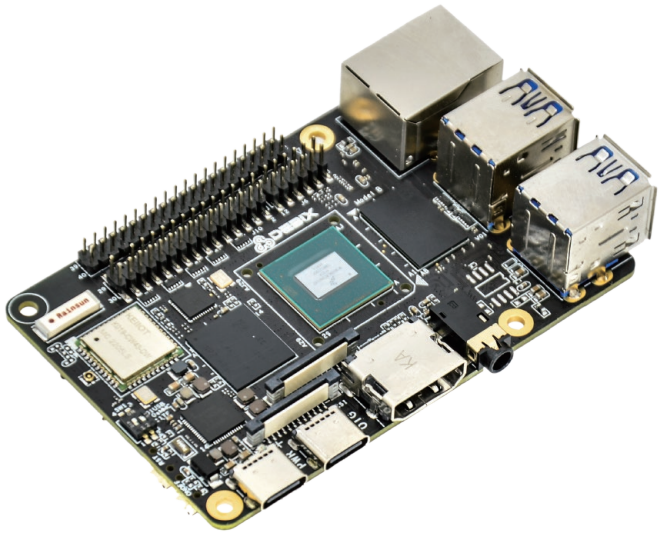
· **Shared DNA with DEBIX Model A:** Both share the same powerful i.MX 8M Plus CPU with 2.3 TOPS NPU and identical PCB design, contributing to their similar appearance. They also offer the same type and number of interfaces.

· **Targeted Upgrade:** Upgrade individual chips and components on the board, it is convenient for customers to choose a board according to the temperatures of their real-world application environment.

· **Powerful Connectivity:** A full suite of connectivity options, including Gigabit network, 2.4GHz & 5GHz Wi-Fi, Bluetooth 5.0, high-speed USB 3.0, and PCIe support.

· **Advanced Multimedia:** Multimedia capabilities are equally impressive, featuring 1080p60 video encode and decode (including H.265 and H.264), 3D/2D graphic acceleration, and advanced audio and voice functionalities.

· **Software Compatibility:** Support Android 11, Yocto-L5.10.72_2.2.0, Ubuntu 22.04 and Windows 10 IoT Enterprise operating systems.



Specification:

System	
CPU	NXP i.MX 8M Plus (default), 4 x ARM Cortex-A53, comes with an integrated neural processing unit (NPU) that delivers up to 2.3 TOPS. Industrial grade CPU runs at 1.6GHz. (i.MX 8M Plus series CPU optional)
Memory	4GB LPDDR4 (1GB/2GB optional)
Storage	16GB eMMC (32GB/64GB/128GB/256GB optional), support Micro SD card
OS	Android 11, Yocto-L5.10.72_2.2.0, Ubuntu 22.04, Windows 10 IoT Enterprise Note: Model B with 4GB LPDDR4 supports Windows 10 IoT Enterprise
I/O Interfaces	
Gigabit Ethernet	1 x RJ45, support POE power supply (need POE power device module) 1 x pin header (without network transformer)
WIFI & BT	2.4GHz & 5GHz WIFI, BT5.0
USB	4 x USB 3.0 Host Type-A, 1 x USB 2.0 OTG Type-C
Audio	1 x Headphone and Mic combo port
HDMI	1 x HDMI OUT
Expansion	
40-Pin Double-Row Headers	(1) 3 x UART, 2 x I2C, 2 x SPI, 2 x CAN, 6 x GPIO for default, can be reused as I2S, PWM, SPDIF and GPIO through software configuration. (2) 5V power supply, system reset, ON/OFF
LVDS	1 x LVDS, single & dual channel 8bit, 2 x 15-Pin double-row headers
MIPI CSI	1 x MIPI CSI, support 4-lane 24-Pin 0.5mm Pitch FPC socket
MIPI DSI	1 x MIPI DSI, support 4-lane 24-Pin 0.5mm Pitch FPC socket
PCIe	1 x PCIe, support PCIe x1, 19-Pin 0.3mm Pitch FPC socket
Power Supply	
Power Supply	DC 5V/3A Type-C
Mechanical & Environmental	
Size	85.0mm x 56.0mm
Operating Temp.	-40℃ to 85℃

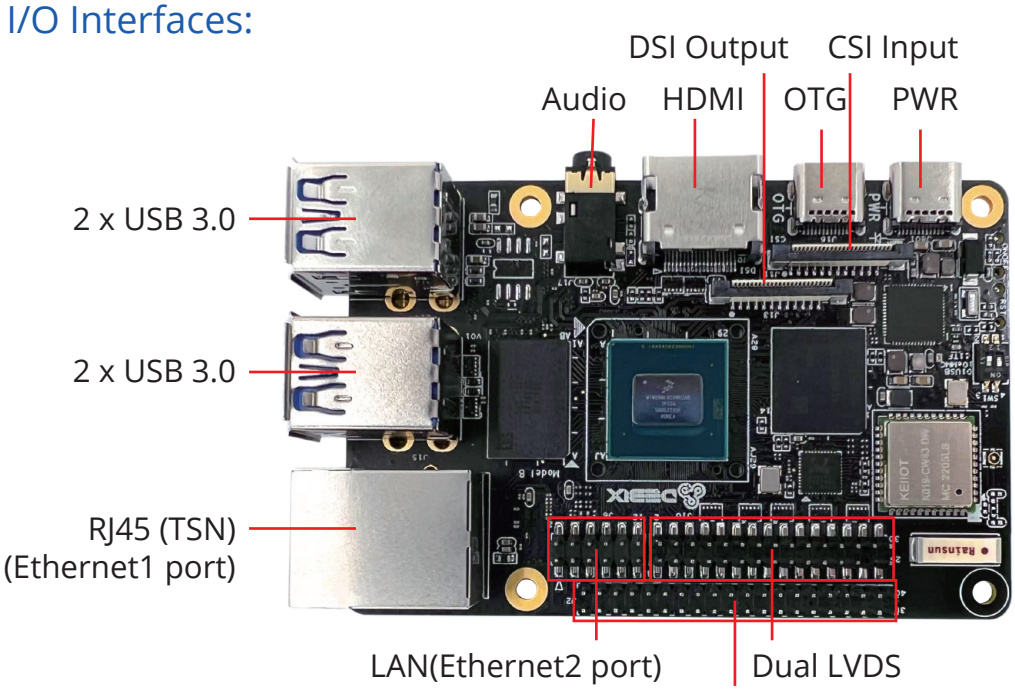
Product Version:

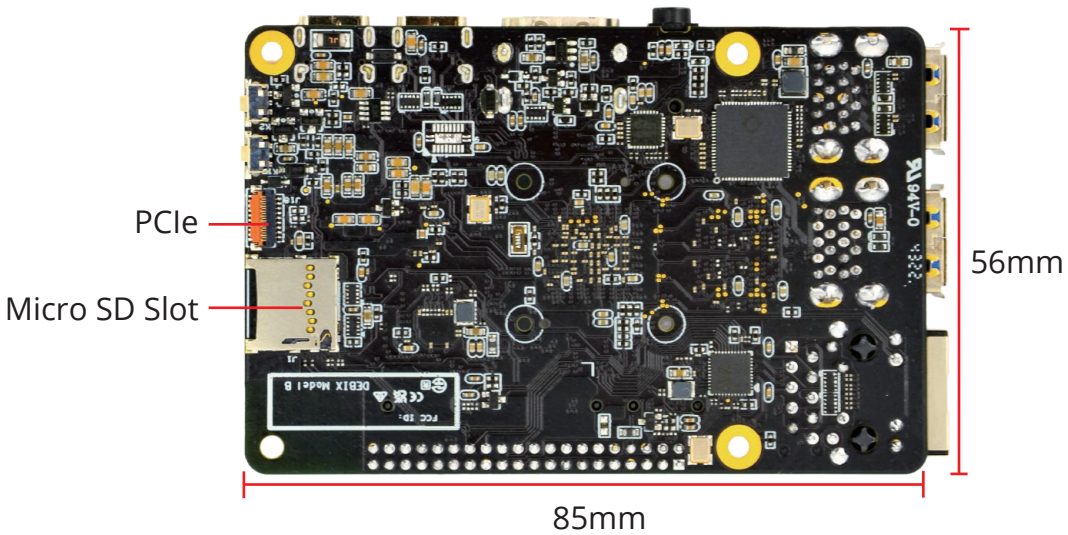
DEBIX Model B has two versions, the standard and SE version. Their differences lie in the CPU modules, see the table below for details.

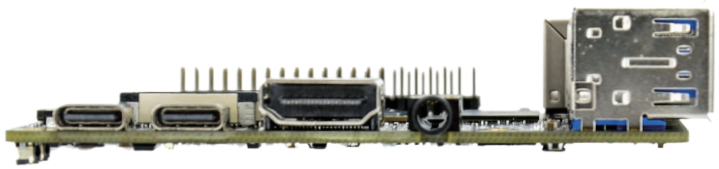
Version	NPU	VPU	ISP	HiFi 4
DEBIX Model B Standard	1	1	1	1
DEBIX Model B SE	N/A	N/A	N/A	N/A

Certificates:

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/3A 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.

Contact Us:

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