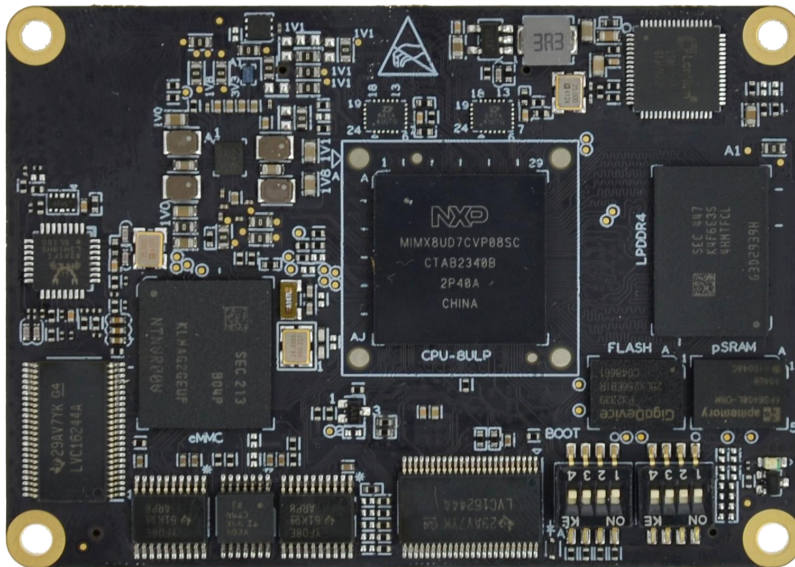


# DEBIX SOM D



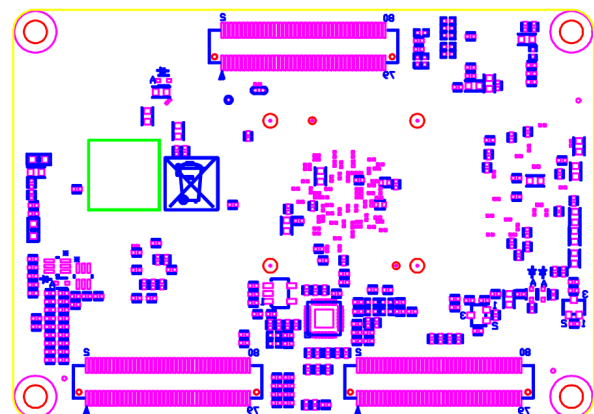
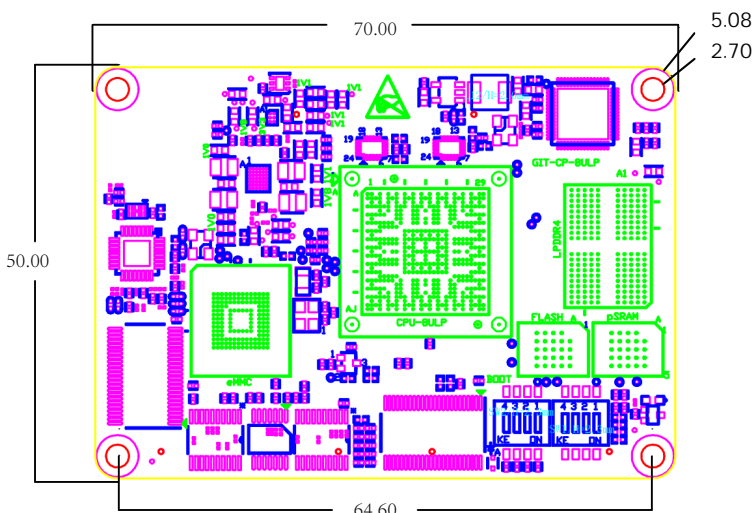
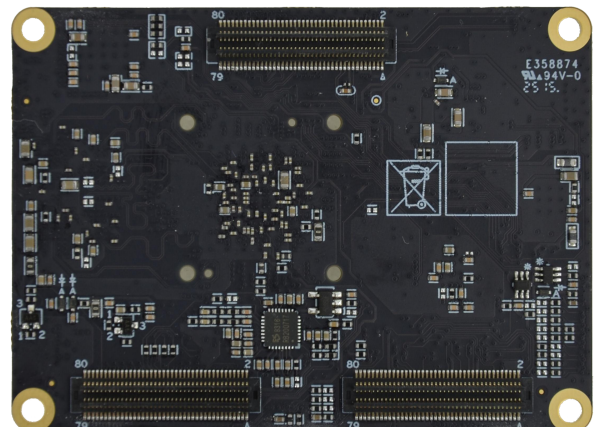
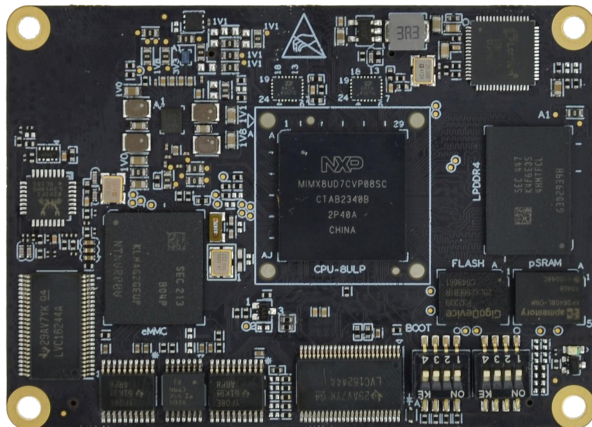
## DEBIX SOM D i.MX 8ULP Core Board

### Overview:

DEBIX SOM D is a power-efficient System-on-Module product based on the NXP i.MX 8ULP process, featuring a dual-core ARM Cortex-A35 CPU (up to 800MHz) and an integrated Cortex-M33 real-time core. Designed for ultra-low-power embedded applications, it combines processing, memory, and storage in a compact form factor, streamlining carrier board development and accelerating deployment in wearables, edge computing, smart healthcare, and other power-sensitive scenarios.

### Main Features:

- Ultra-low Power Consumption: Advanced power management and energy-efficient architecture make it ideal for always-on and battery-operated applications.
- Scalable and Flexible Design: Compact module with versatile interface support, enabling easy integration into a wide range of embedded applications.
- Real-time Performance: Integrated ARM Cortex-M33 core enables real-time processing, secure operations, and efficient task offloading from the main application processor.



## Specification:

System	
CPU	NXP i.MX 8ULP, 2 x Arm® Cortex®-A35 @800MHz, 1 x Arm® Cortex®-M33 @216MHz. The maximum power consumption is 0.738W. (i.MX 8ULP series CPU optional)
Memory	2GB LPDDR4 (1GB optional)
Storage	Onboard 16GB eMMC (8GB/32GB/64GB/128GB/256GB optional)
OS	Yocto-L6.12.3_1.0.0, Debian 12, Android 15 (also supports FreeRTOS)
I/O Interfaces	
Ethernet	Up to 1 x Ethernet controller (10/100Mbps)
Display	1 x MIPI DSI (4-lane) Up-to 24-bit RGB (DBI/DPI)
Camera	1 x MIPI CSI (2-lane), supports up to 2MP
Audio	1 x SAI (synchronous audio interface), 1 x SPDIF OUT/IN, 1 x PDM
USB	2 x USB 2.0
LPUART	Up to 8 x LPUART
LPI2C	Up to 7 x LPI2C
SDIO	Up to 2 x SDIO
CAN/CAN-FD	Up to 1 x CAN/CAN-FD
LPSPi	Up to 5 x LPSPi
ADC	Up to 2 x ADC (12bit)
DAC	Up to 2 x DAC (12bit)
Analog Comparator	Up to 2 x Analog Comparators
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	3 x 2*40pin/0.5mm pitch board-to-board connector (PN: BB51024A-R80-40-32), matching sockets of various heights
Dimension	70mm(L) x 50mm(W) (±0.5mm)
Net Weight	17g (±0.5g)
Gross Weight	29g (±0.5g)

## 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:

Headquarters: DEBIX Technology Inc., 8345 Gold River Ct., Las Vegas, NV 89113, USA

Factory: 5-6/F., East Zone, Shunheda A2 Building, Liuxiandong Industrial Park, Xili, Nanshan Dist., Shenzhen, China

Email: [info@debix.io](mailto:info@debix.io)

Website: [www.debix.io](http://www.debix.io)

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

