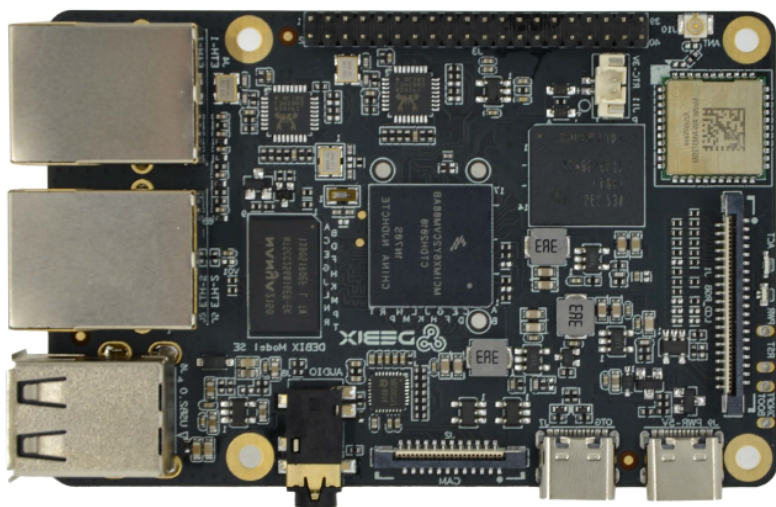# DEBIX Model S

Industrial Computer

DEBIX

DEBIX Model S Industrial Single Board Computer

Overview:

DEBIX Model S is the first DEBIX single board computer to feature the NXP i.MX 6ULL, a low-power processor rating up to 792MHz with only 0.53 watt of power at full load consumption.

Designed to provide a more energy-efficient and cost-effective solution for smart edge computing, DEBIX Model S mainly provides 2 x RJ45 100Mbps ports, 2.4GHz WiFi, BT5.1, 2 x USB 2.0, 1 x 24bit RGB Display Output, 1 x 8bit DVP CSI Camera, and 40Pin expansion ports for IoT, Non-contact HMI, smart home, building control and industrial applications.
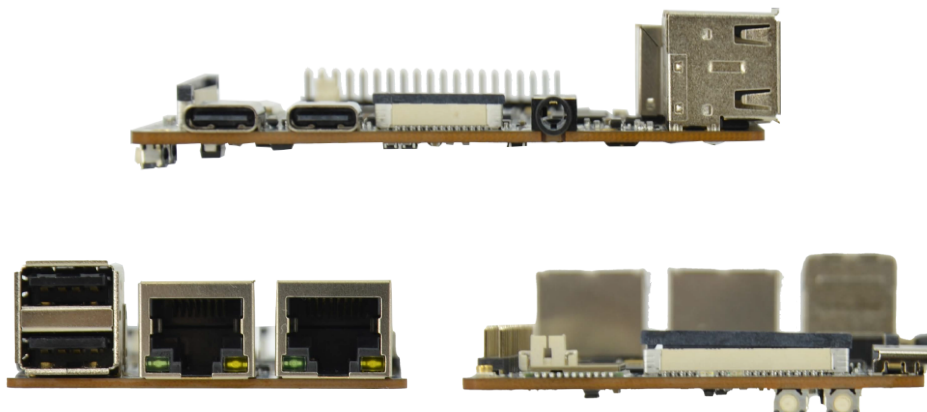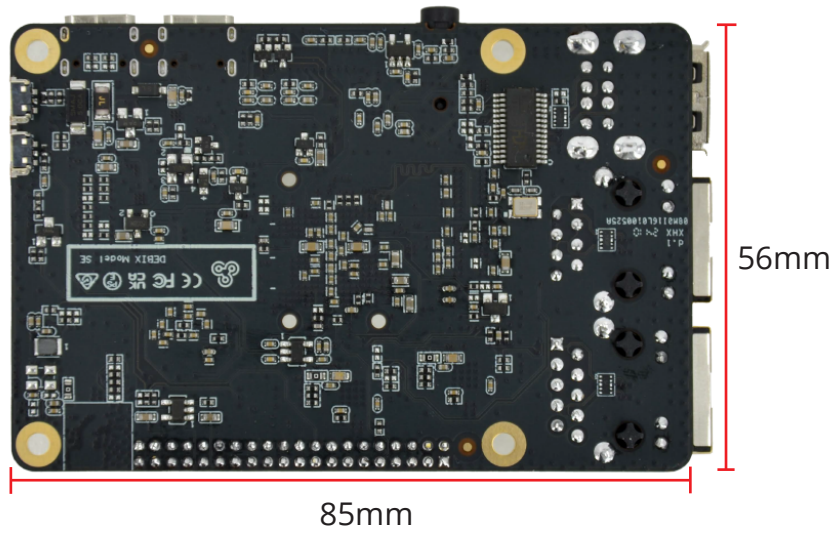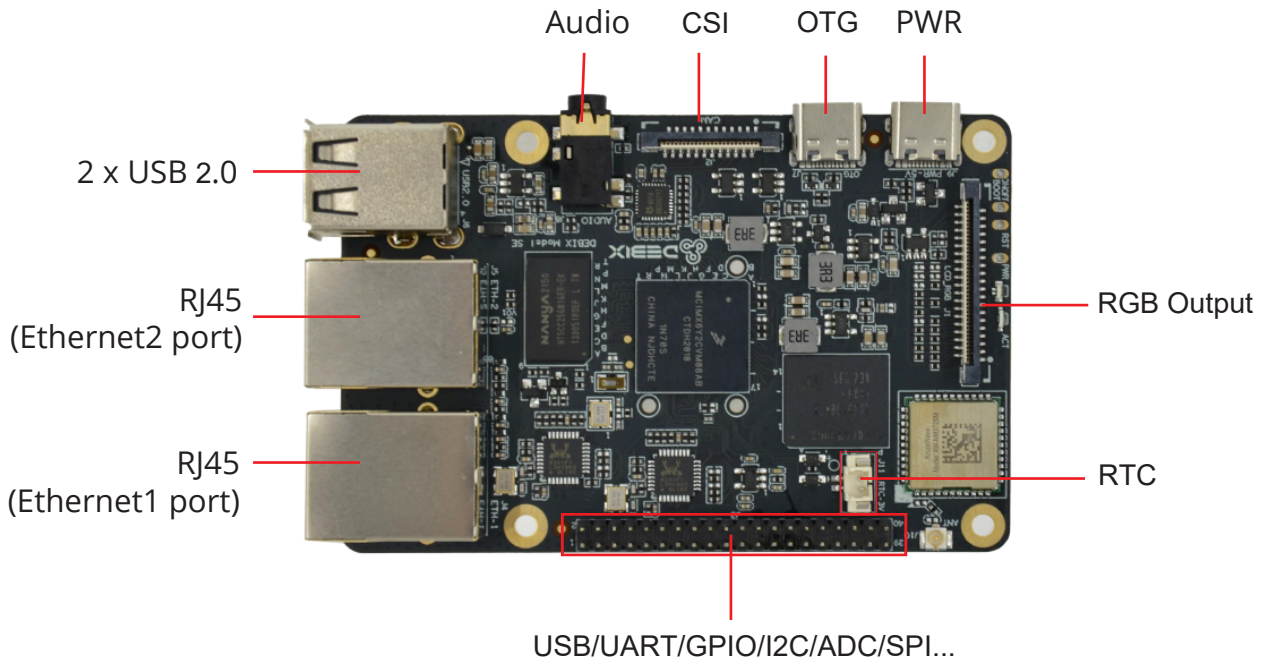
Main Features:

· Low-power processor with NXP i.MX 6ULL, consuming only 0.53 watts at full load (Extended Industrial grade, Industrial grade and Commercial grade processor optional).
· Feature an advanced implementation of a single Arm® Cortex®-A7 core, which operates at speeds up to 792 MHz.
· High security with support for secure encryption, tamper-proof monitoring, secure boot, and more.
· Rich and extensible interfaces: 2 x USB 2.0 Host, 1 x 24bit RGB, 1 x 8bit DVP CSI, 40Pin dual-row headers etc. to enhance scalability.
· Compatible with DEBIX PoE module and DEBIX 5"/7" LCD monitors.

Specification:

System	
CPU	NXP i.MX 6ULL/MCIMX6Y2CVM08AB, 1 x Arm® Cortex®-A7 @792MHz i.MX 6ULL series CPU optional, commercial grade up to 900MHz
Memory	512MB DDR3/DDR3L (128MB/256MB optional)
Storage	On board 8GB eMMC (16GB/32GB/64GB/128GB/256GB optional)
OS	Yocto, OpenWRT
I/O Interfaces	
Network	2 x 10/100Mbps RJ45, (1) 1 x RJ45, support POE power supply (need POE power device module) (2) 1 x RJ45 (POE power supply not supported)
WIFI & BT	2.4GHz WIFI, BT5.1, external WIFI&BT SMA antenna (IPEX-1) connector
USB	2 x USB 2.0 Host Type-A, 1 x USB OTG
Audio	1 x 3.5mm Headphone and Mic combo port
Expansion	
40-Pin Double-Row Headers	(1) 2 x USB 2.0 Host, 1 x UART Debug (2) Default 12 x GPIO, up to 3 x UART, 6 x ADC, 1 x SPI, 2 x I2C, 1 x CAN, 3 x PWM through software configuration. (3) 5V power input/output, 1.8V/3.3V@300mA power output, system reset, ON/OFF
RGB Display	1 x 24bit RGB, 40Pin 0.5mm Pitch FPC socket
CSI	1 x 8bit DVP CSI, 24Pin 0.5mm Pitch FPC socket
LED & KEY	1 x ACT LED (Green) 1 x Power LED (Red and Blue) 1 x ON/OFF (eMMC firmware USB upgrade button) 1 x Reset
Power Supply	
Power Supply	DC 5V/2A Type-C
Mechanical & Environmental	
Size	85.0mm x 56.0mm
Operating Temp.	-20℃ to 70℃ (-40℃ to 85℃ optional)

I/O Interfaces:

Audio   CSI   OTG   PWR

2 x USB 2.0

RJ45
(Ethernet2 port)

RJ45
(Ethernet1 port)

RGB Output

RTC

USB/UART/GPIO/I2C/ADC/SPI...

56mm

85mm

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.

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

Website: www.debix.io

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