

Features

Performance

- NXP® i.MX8M Industrial Processor @ 1.3 GHz
- Dual and Quad arm Cortex®-A53
- Cortex-M4 core processor for low-power processing
- Up to 4GB LPDDR4 RAM

Environment

- -40°C to +85°C Operating Temperature Range
- Pico-ITX Form Factor (102 x 73 mm)
- Wide Range Power Input (9 - 36 DC)

Connectivity and I/O for Embedded Systems

- 2x Gigabit Ethernet (GbE)
- 1x USB 3.1 Gen 1
- 3x USB 2.0
- 2x RS-232/422/485 Serial ports
- 6 x General Purpose Input/Output (GPIO)
- 1x MIPI-CSI (4-Lanes)
- 1x SPI bus
- 1x I2C bus
- HD Audio Interface

Graphics Support

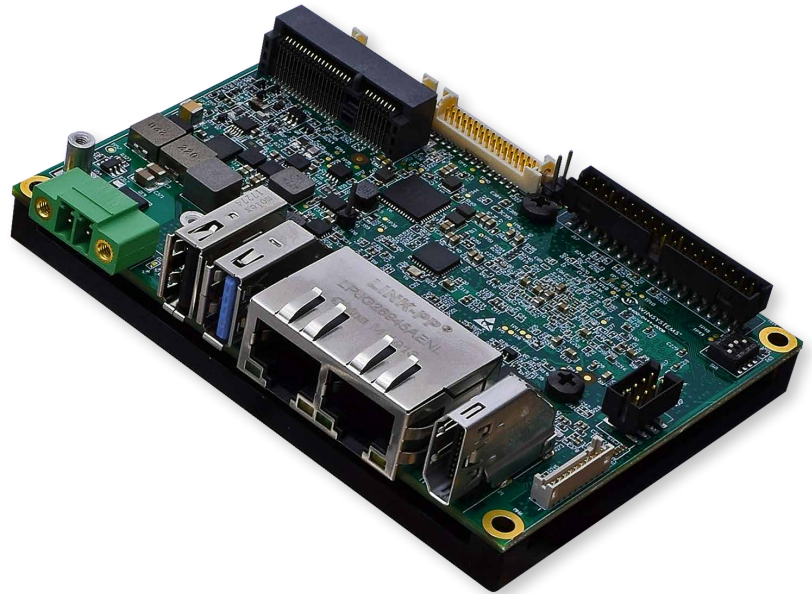
- HDMI output with 4K UltraHD resolution and HDR capability
- Single channel LVDS output with backlight

Storage

- Up to 32GB onboard eMMC
- MicroSD Socket

Expansion Options

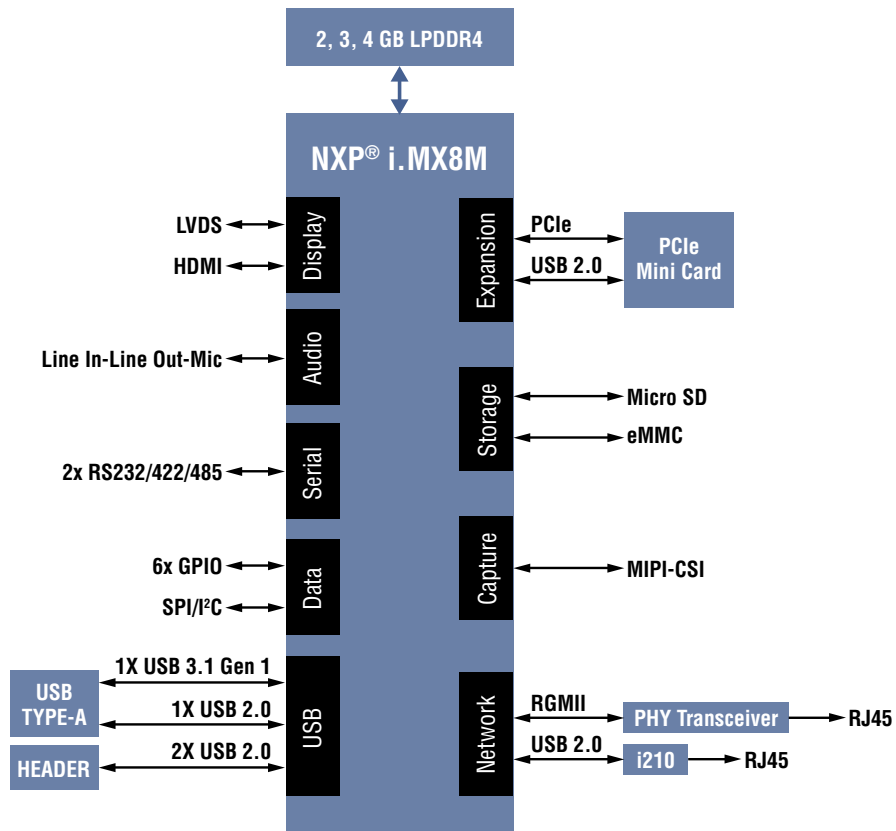
- PCIe Mini Card (mPCIe)



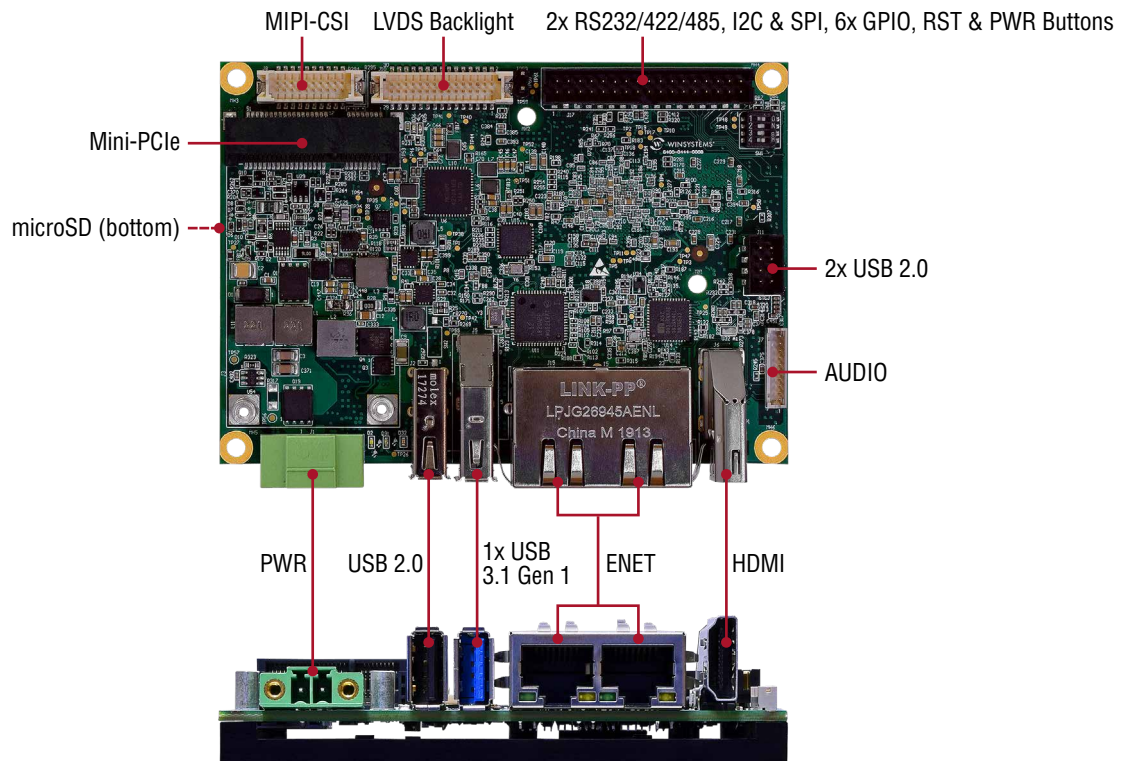
Product Description

The ITX-P-444 SBC (Single Board Computer) is based upon NXP's i.MX8M application processor. The processor is built with industry-leading audio, voice and video processing that is ideal for applications scaling from consumer home audio to industrial building automation and mobile computers. The i.MX8M is optimized for fanless operation, low thermal system cost, and long battery life. It is fully supported on NXP's 10 and 15-year Longevity Program.

Block Diagram



Connectors



ITX-P-444

Technical Specifications

PROCESSOR	NXP i.MX8M Processor
OS COMPATIBILITY	<ul style="list-style-type: none">• Compatible with Linux, Android, Windows 10 IoT Core
MEMORY	<ul style="list-style-type: none">• Embedded LPDDR4 (up to 4GB)
BIOS	<ul style="list-style-type: none">• AMI BIOS
DISPLAY	<ul style="list-style-type: none">• HDMI 2.0a<ul style="list-style-type: none">– 4096 x 2160 at 60 Hz– HDR10– Audio Return Channel (ARC) support• Single channel LVDS output with backlight (18 and 24 bpp color panel support)• MIPI/CSI Capture• Hardware acceleration utilized for video playback
STORAGE	<ul style="list-style-type: none">• eMMC• MicroSD
NETWORK INTERFACE	2x Gigabit Ethernet ports (Front Panel I/O)
ONBOARD I/O	<ul style="list-style-type: none">• 1x USB 3.1 Gen 1 (Front Panel I/O)• 3x USB 2.0 (1x Front Panel I/O)• 2x RS-232/422/485 Serial ports• 6x General Purpose Input/Output (GPIO)• 1x MIPI-CSI (4-Lane)• 1x SPI bus• 1x I2C bus• HD Audio Interface (Line Out, Line In, Mic In)
EXPANSION BUS	PCIe Mini Card (mPCIe)
POWER	+9 to 36 VDC
ENVIRONMENTAL	<ul style="list-style-type: none">• Operational from -40°C to +85°C (-40°F to +185°F)• RoHS compliant
MECHANICAL	Dimensions: 3.93 in x 2.83 in (100 mm x 72mm) Weight: 5.95 oz (168.5 g) Board thickness: 0.078 inches

Order Information

SBC PART NUMBER	ITX-P-444P-R-M P = CPU (D = Dual-Core, Q = Quad-Core) R = RAM (2, 3, 4) M = eMMC (0, 16, 32)
CABLES	
OPTIONAL BATTERY	

Expansion and Customization Options

WinSystems provides additional cables, expansion cards, power supplies, and solid state drives to complete your embedded computing solution including data acquisition, communications, location, and other features via PC/104-Plus interfaces. Our Application Engineers are available to guide you through product selection and customized options.

Contact an Application Engineer or visit our website for more information.



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