

## 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

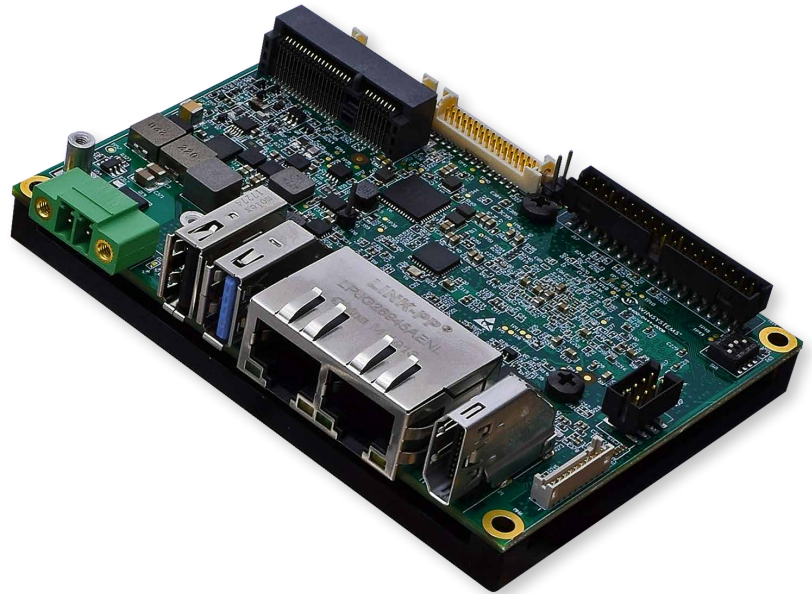
- HDMI output with 4K UltraHD resolution and HDR capability
- Single channel LVDS output with backlight

### Storage

- Up to 32GB onboard eMMC
- MicroSD Socket

### Expansion Options

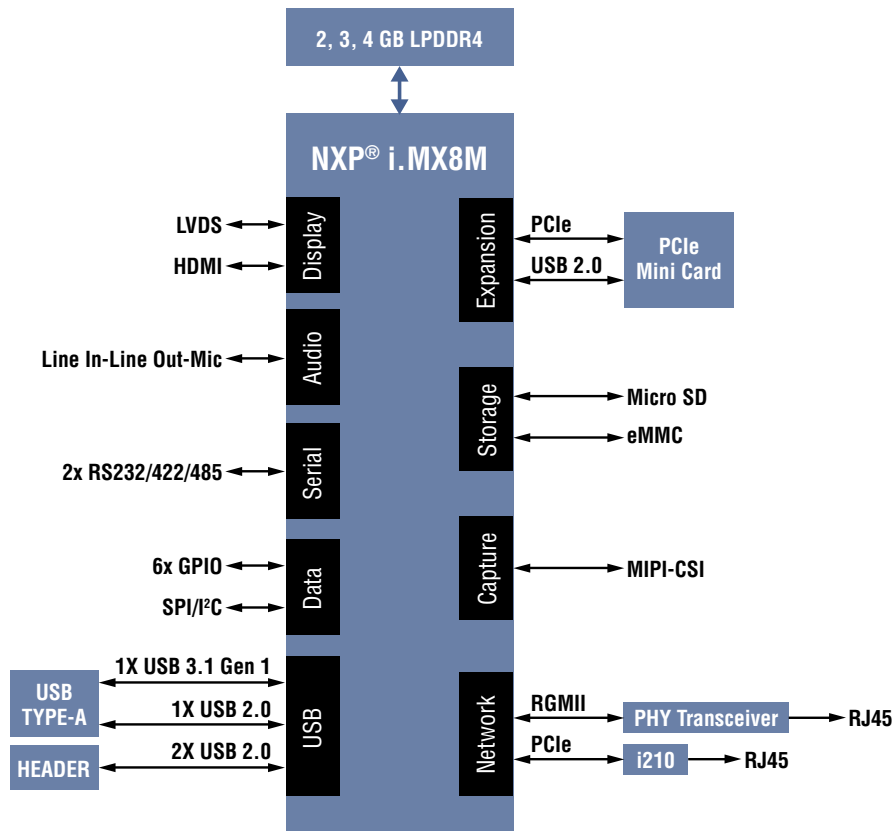
- PCIe Mini Card (mPCIe)



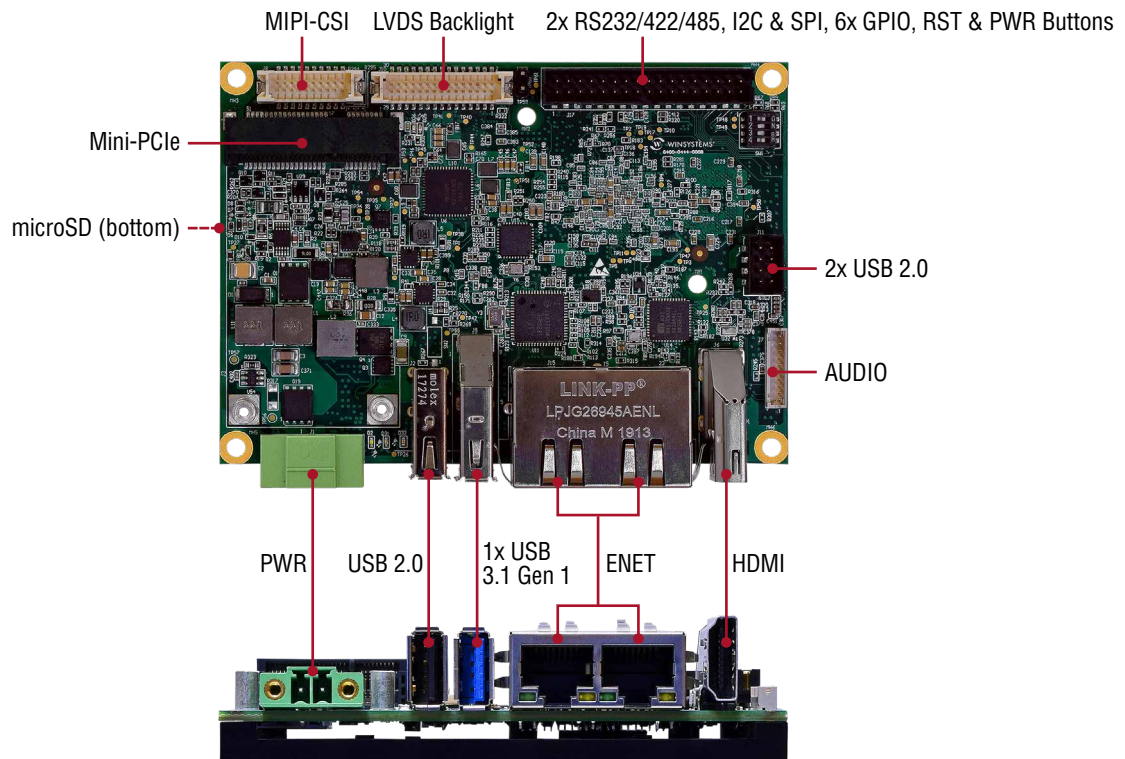
## Product Description

The ITX-P-C444 is an industrial Pico-ITX single board computer (SBC) based upon NXP's i.MX8M application processor and packed with dual Ethernet, industrial I/O, and expansion options. The processor supports industry-leading video processing along with M4 microcontroller for real-time subsystems making it an ideal fit for industrial IoT applications requiring performance in harsh conditions such as digital signage, industrial automation, energy, building automation and others.

## Block Diagram



## Connectors



# ITX-P-C444

## Technical Specifications

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

<b>SBC PART NUMBER</b>	<b>ITX-P-444P-R-M</b> P = CPU (D = Dual-Core, Q = Quad-Core) R = RAM (2, 3, 4) M = eMMC (0, 16, 32)
<b>CABLES</b>	<ul style="list-style-type: none"><li>• CBL-AUDIO-001-20 AUDIO</li><li>• CBL-USB2-006-12 USB</li><li>• CBL-LVDSB-021-20 LVDS and Backlight to AUO panel</li></ul>
<b>OPTIONAL BATTERY</b>	<ul style="list-style-type: none"><li>• BAT-LPC-BR2330 3V 255 mAH Removable Battery -40°C to +85°C</li></ul>

## 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 expansion 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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