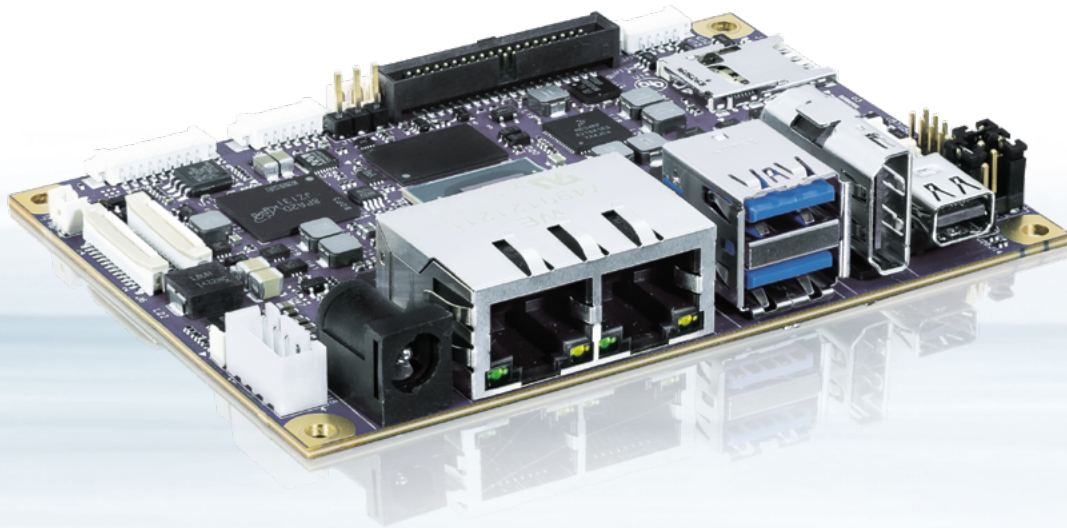


pITX-imx8m



Embedded pITX Single Board Computer with NXP Arm® Cortex®-A53 CPU

- ▶ 1x M.2 B-Key Half-size Connector with PCIe, USB 3.0 and micro SIM interface
- ▶ 1x Dual-Stacked USB 3.0 Rear Port, 1x USB OTG microUSB Type AB socket
- ▶ 2x 10/100/1000 Gigabit Ethernet Rear Port
- ▶ 12 V DC Power Supply, 2x Internal MIPI-CSI (2 lanes each) Headers
- ▶ Memory LPDDR4 (32 bit) 3200 MT/s, up to 4 GByte

POSSIBILITIES START HERE

pITX-imx8m

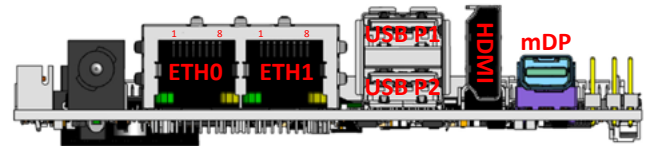
Single Board Computer

Kontron's pITX-iMX8M motherboard features NXP's dual or quad core CPUs based on the Arm® Cortex®-A53 architecture with up to 1.5 GHz. The Cortex®-M4 coprocessor and full 4K UltraHD resolution make the board the perfect foundation for sophisticated applications. It offers enhanced connectivity through two Gigabit Ethernet interfaces as well as superior graphics performance.

Thanks to its small form factor and M.2 half-size connector, offering PCIe, USB 3.0 and a Micro SIM interface, Kontron's pITX-iMX8M is a cost-optimized Arm® SBC solution, specifically for embedded applications in the manufacturing industry, and a cross-market IoT gateway for small server solutions.

► PRODUCT HIGHLIGHTS

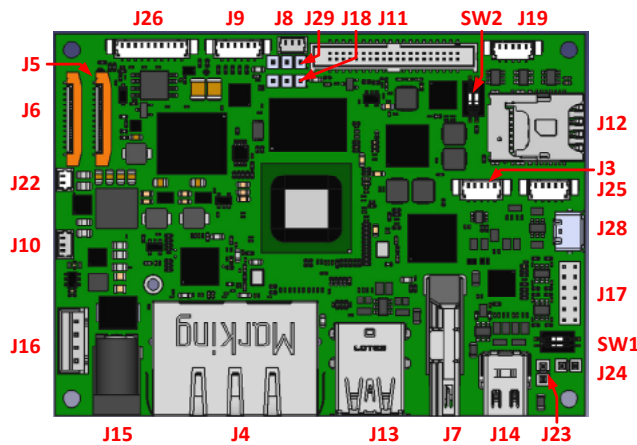
- ▶ Embedded pITX Single Board Computer with NXP i.MX8 M Arm® Cortex®-A53 multi-core processor architecture
- ▶ Design is prepared for any NXP i.MX8 M flavour; Quad/Dual/QuadLiteIndustrial and Commercial temperature grade.
- ▶ Scalable LPDDR4 (up to 4 GByte) and eMMC Memory (up to 128 GByte) options
- ▶ Excellent graphic performance on HDMI, mini eDP or dual LVDS
- ▶ Dual Gigabit Ethernet Network connectivity
- ▶ M.2 Key B (2242) with PCIe Gen 2,
- ▶ USB 3.0 and microSIM for Wireless or Storage modules
- ▶ 12 V DC Power Supply (lockable)
- ▶ NXP promotes the device for applications like Streaming Media Clients, Wireless Networked Speakers, Soundbars, AV Receiver, Consumer, Industrial and General Embedded Clients.
- ▶ Ready to use QuadLite Starter Kit with Power Supply, Serial Adapter and preinstalled Linux



► TECHNICAL INFORMATION

FORM FACTOR	pico ITX family with 100 mm x 72 mm x 1.6 mm (PCB)
PROCESSOR	Arm® Cortex®-A53 - i.MX 8M Quad 1.3 GHz, GPU, VPU, HDR10 encoding, ind. temp. - i.MX 8M Quad 1.5 GHz, GPU, VPU, HDR10 encoding, com. temp. - i.MX 8M Quad Lite 1.5 GHz, GPU only, com. temp. - i.MX 8M Dual 1.3 GHz, GPU, VPU, HDR10 encoding, ind. temp. - i.MX 8M Dual 1.5 GHz, GPU, VPU, HDR10 encoding, com. temp.
SYSTEM MEMORY	Up to 4 GByte LPDDR4 3200 MTps Memory Down
STORAGE	Up to 128 GByte eMMC Memory v5.1 as MLC, or up to 64 GByte pseudoSLC
GRAPHICS	1x HDMI 2.0a ; 1x mini eDP ; 1x Internal Dual Channel LVDS Header
CAMERA INTERFACE	2x Internal MIPI-CSI (Pin-Header FCP 24-Pin 0.5 mm pitch)
EEPROM	Atmel AT24C32 for board information
USB	2x USB 3.0 at rear I/O, 1x USB 2.0 internal, 1x USB OTG side I/O
ETHERNET	2x 10/100/1000 Gigabit Ethernet at rear I/O
LVDS	Dual Channel LVDS (WTB 2x 20 Pin-Header, 1.27 mm pitch)
SPI I²C	Winbond W25Q128/Macronix MX25L128/Micron N25Q128 1x SPI/I²C internal header, optional 16 MByte on-board SPI Flash
GPIO	8x GPIO internal header (WTB 2x 6 Pin Header, 2.0 mm pitch)
AUDIO	1x SPDIF internal headers, 1x Line-In, Line-Out and Microphone-In internal header (WTB 6-Pin Header, 1.25 mm pitch)
THERMAL SENSOR	LM75B onboard
POWER	12 V DC/1x Locking barrel-type DC Power Jack, 1x Internal 4-pin Power connector
SECURITY	TPM 2.0 Infineon SLB9670XQ2.0
EXPANSION SLOT	M.2 Key B size 2242 with PCIe, USB 3.0, USB 2.0, microSD Card/micro SIM combo Connector
BOOTLOADER	Kontron U-Boot Bootloader
OS-SYSTEM	Linux Yocto BSP, Win10 IoT Core (only on NXP Homepage)
OPERATION TEMPERATURE	Commercial Temp.: 0 °C - +60 °C Industrial Temp.: -40 °C - +85 °C
STORAGE TEMPERATURE	Industrial Temp.: -40 °C - +85 °C
CERTIFICATIONS	CE, RoHS II, REACH

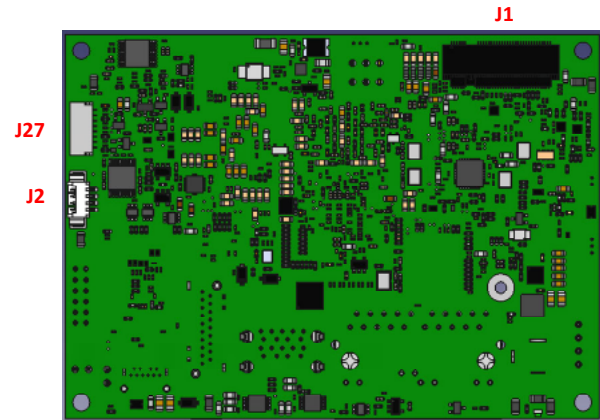
BOARD OVERVIEW



J3 RS-232/UART P2
J4 Dual Gigabit Ethernet RJ45
J5 Camera 1
J6 Camera 2
J7 HDMI
J8 FAN
J9 Audio Codec
J10 SPDIF
J11 LVDS Header
J12 MicroSD/MicroSIM
J13 Dual USB 3.0
J14 mini DP Connector
J15 Power Jack
J16 Power Socket
J17 GPIO

J18 LVDS IO Voltage Select Jumper
J19 RS232 P3
J22 RTC Battery Pictail
J23 External Reset
J24 External ON/OFF Button
J25 RS232/UART P1
J26 SPI/I2C3
J28 USB OTG
J29 LVDS Backlight Select Jumper

SW1: 1-4 Boot Select 0
SW1: 2-3 Boot Select 1
SW2: 1-4 MicroSD Card Write Protection
SW2: 2-3 PCIe Spread Spectrum Clocking -0.5%



J1 M.2 Socket Key B
J2 USB 2.0 P4
J27 IMX8M JTAG Debug Header

ORDERING INFORMATION

ARTICLE	PART NO.	DESCRIPTION
plTX-imx8m QUAD CORE IND.	44011-0408-13-4	plTX-imx8m with NXP Arm® Cortex®-A53 Quad Core™ Industrial, 1300 Mhz, 4 GByte LPDDR4, 8 GByte eMMC (pSLC), Ind. Temp. without mDP.
plTX-imx8m QUAD CORE COM.	44011-0416-15-4	plTX-imx8m with NXP Arm® Cortex®-A53 Quad Core Commercial, 1500 Mhz, 4 GByte LPDDR4, 16 GByte eMMC (MLC), Com. Temp. without LVDS
plTX-imx8m QUAD LITE COM.	44011-0416-15-4lit	plTX-imx8m with NXP Arm® Cortex®-A53 Quad Lite Commercial, 1500 Mhz, 4 GByte LPDDR4, 16 GByte eMMC (MLC), Com. Temp. without LVDS, without Hardware Acceleration for Video Decoding.
plTX-imx8m DUAL CORE IND.	44011-0208-13-2	plTX-imx8m with NXP Arm® Cortex®-A53 Dual Core Industrial, 1300 Mhz, 2 GByte LPDDR4, 8 GByte eMMC (pSLC), Ind. Temp. without mDP.
plTX-imx8m DUAL CORE COM.	44011-0216-15-2	plTX-imx8m with NXP Arm® Cortex®-A53 Dual Core Commercial, 1500 Mhz, 2GByte, LPDDR4, 16 GByte eMMC (MLC), Ind. Temp. without LVDS.
ACCESSORY (OPTIONAL)		
ACTIVE COOLING SOLUTION	1064-8396	Active Cooling Solution with integrated FAN
PASSIVE COOLING SOLUTION	1064-7069	Passiv Cooling Solution
POWER SUPPLY - 12 V	1067-1755	Lockable 12 V, 60 W Power Supply for plTX-APL V2.0 and plTX-imx8m

GLOBAL HEADQUARTERS

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