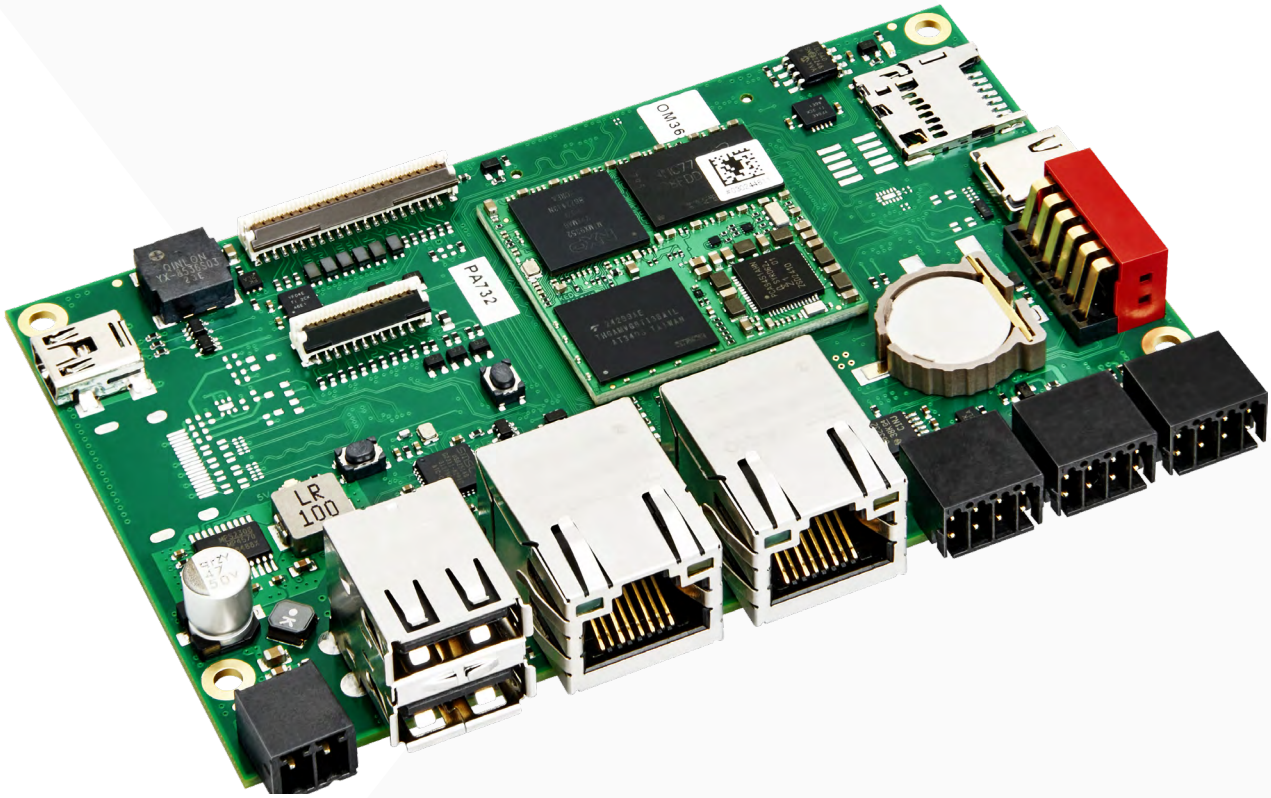
BL i.MX93

Board-Line



OPEN STANDARD MODULE™

Powerful and cost-effective baseboard for machine learning

- NXP i.MX93, 2x Arm® Cortex®-A55 @1.7 GHz with Neural Processing Unit (NPU)
- Display Support (LVDS), Camera Support (2-lane CSI)
- Dual GbE, 1x USB 2.0 Type-C UFP, 2x USB 2.0
- Yocto Mainline Kernel BSP

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The Power of IoT

Technical Informationen

FUNKTION		STANDARD	OPTIONS
MICROPROCESSOR	CPU	NXP i.MX93, 2x Arm® Cortex®-A55 @1.7 GHz, 1x Arm® Cortex®-M33 @250 MHz, 1x Arm® Ethos™ U-65 microNPU	
MEMORY SOM	LPDDR4-RAM eMMC	2 GByte 32 GByte	512 Mbyte / 1 GByte 4 GByte up to 64 GByte
MEMORY BASEBOARD	EEPROM SD-CARD NV MEMORY	8 kByte 1x microSD-Slot 8 kByte EERAM	
COMMUNICATION	ETHERNET USB DIO SERIAL INTERFACE CAN	2x 1 Gbit/s 2x USB 2.0 Host, 1x USB 2.0 Type-C UFP 4x DIO (24 V/up to 800 mA) 1x RS232, 1x RS485 1x CAN FD	
DISPLAY/TOUCH	LCD INTERFACE TOUCH	1x LVDS (up to 1366 x 768 @60 fps) 1x I²C, 1x USB	
CAMERA	CAMERA INTERFACE	1x MIPI CSI (2-lane)	
SOFTWARE	OPERATING SYSTEM BOOTLOADER	Embedded Linux (Yocto Distribution) U-Boot	
OTHER	POWER SUPPLY POWER CONSUMPTION TEMPERATURE RANGE FORM FACTOR RTC RTC BUFFERING DEBUG EXPANSION PORTS AUDIO APPROVAL	24 V DC ±20 % TBD -25 °C … +85 °C, ambient, non-condensing 105,5 x 67 mm (4,3") 1x RV-3028-C7 CR 1220 1x Console 1x SDIO (4-bit), 1x I²C, 1x SPI, 1x SAI, 1x USB, 1x UART 1x Buzzer CE	
SECURITY		EdgeLock® Secure Enclave Trusted Resource Domain Controller (TRDC), supports 16 domains Arm® TrustZone® (TZ) architecture, including both Trustzone-A and Trustzone-M On-chip RAM (OCRAM) secure region protection using OCRAM controller Battery Backed Security Module (BBSM), secure real-time clock (RTC) - Secure JTAG	

Product Highlights

The BL i.MX93 extends the Board Line series with a versatile and energy-efficient CPU board that is ideal for a wide range of applications. At the heart of the board is the Dual Core Arm® Cortex®-A55 microprocessor with 1.7 GHz, which delivers outstanding performance for demanding tasks.

The LVDS display interface enables the connection of display with a resolution of up to 1366 x 768 pixels, making it ideal for digital signage and interactive kiosk systems. The MIPI-CSI interface allows camera modules to be connected, making the board ideal for surveillance systems and visual inspection.

With two Gigabit Ethernet ports, the BL i.MX93 is ideal for data-intensive applications such as industrial automation and IoT gateways. The Arm® Ethos™-U65 microNPU provides a powerful environment for machine learning applications, ideal for edge computing and smart devices. The 250 MHz Arm® Cortex®-M33 co-processor supports real-time control of machine-level processes, making it an excellent choice for industrial control systems.

The BL i.MX93 offers developers a modern and flexible platform for realizing sophisticated applications in a wide range of fields, from industrial to smart home solutions.

Client Benefits

- Complex processor solutions can be realized quickly and easily
- Powerful platform for machine learning applications
- Complete Linux toolchain available free of charge
- Short time-to-market

Applications

- IoT/Industry 4.0
- Control and automation technology
- Medical technology
- HMI, Touch Panel
- Artificial intelligence in Edge devices

About Kontron

Kontron AG is a leading IoT technology company. For more than 20 years, Kontron has been supporting companies from a wide range of industries to achieve their business goals with intelligent solutions. From automated industrial operations, smarter and safer transport to advanced communications, connectivity, medical, and energy solutions, the company delivers technologies that add value for its customers. With the acquisition of Katek SE in early 2024, Kontron significantly strengthens its portfolio with the new GreenTec division, focusing on solar energy and eMobility, and grows to around 8,000 employees in over 20 countries worldwide. Kontron is listed on the SDAX® and TecDAX® of the German Stock Exchange.

For more information, please visit: **www.kontron.com**

About Kontron Electronics

Kontron Electronics GmbH is a full-service provider in the field of electronics, development and manufacturing services. Our business portfolio includes proprietary and client-specific products, development and design services for complex electronics components, modules and systems, as well as production and assembly services for entire devices. The company is part of the technology corporation Kontron AG.

For more Information please visit: **www.kontron-electronics.com**

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