

# Control Units CU & CU Mini 6x



## Compact, powerful controller with multiple connectivity

- ▶ High performance thanks to powerful Quad Core CPU i.MX8M Plus
- ▶ Various interfaces for maximum flexibility
- ▶ Compact fanless design for DIN rail mounting
- ▶ Industrial quality, 10 years of availability
- ▶ Optional with CODESYS® SoftPLC

## CU Control Unit 6X - powerful, fanless, compact

This powerful controller series combines industrial compact design with a wide range of interfaces. The series is based on the long-term available NXP i.MX8M Plus Quad Core Arm® processor, offers high performance in a compact package and is well-suited for cost-sensitive control and IoT gateway applications. Thanks to its compact, fanless design, these controllers are also ideal for installation in limited space conditions. The numerous interfaces enable communication with various fieldbuses and cloud connections.

Furthermore, the control unit offers a wide range of adaptation options to meet a wide range of requirements thanks to its internal M.2 slot, expansion ports and a "Time-Sensitive Networking" (TSN) capable Ethernet interface. CODESYS® SoftPLC is optionally available for the fast and efficient implementation of sophisticated automation and visualization solutions. The control units are designed for long-term availability (> 10 years) and can also be customized and optimized to your individual requirements.

## Technical Information

PRODUCT		Control Unit CU Mini 6x	Control Unit CU 6x
PROCESSOR	CPU	NXP Arm® i.MX8M Plus Quad Core, 1.6 GHz	NXP Arm® i.MX8M Plus Quad Core, 1.6 GHz
MEMORY	DRAM DDR4 eMMC NOR FLASH FRAM SD-CARD	2 GByte, soldered (up to 4 GByte) 8 up to 32 GByte 2 MByte (up to 16 MByte) 32 kByte (up to 512 kByte) microSD slot (up to SDXC-format)	2 GByte, soldered (up to 4 GByte) 8 up to 32 GByte 2 MByte (up to 16 MByte) 128 kByte (up to 512 kByte) microSD slot (up to SDXC-format)
INTERFACES	USB ETHERNET  CAN SERIAL PORTS  DISPLAY INTERNAL, PLUGGABLE EXTENSIONS (OPTIONAL)	2x USB 2.0 (Host) 2x Ethernet (10/100/1000) independent, 1x TSN capable  1x RS485 (isolated) 2x GPO 1x HDMI 1.4	2x USB 2.0 (Host) 2x Ethernet (10/100/1000) independent, 1x TSN capable 1x CAN-FD (isol.), optional: 2x CAN FD 1x RS485 (isol.), optional: 2x RS485 1x RS232 1x HDMI 1.4 GPIO, HDMI, SPI, i²C, Audio 2x 2W, MIPI CSI 4-lane, M.2 Slot (Key E, B)
MORE FEATURES	SECURITY REAL TIME CLOCK SYSTEM	TPM RTC with SuperCAP (>5 days) 2x status LED, Reset-button	TPM RTC with SuperCAP (>20 days) 2x status LED, Reset-button
MECHANICAL	CONSTRUCTION COOLING DIMENSION (HxWxD) MOUNTING	IP20, aluminium Fanless 130 x 89 x 26 mm For mounting on 35mm mounting rail acc. to EN 60715	IP20, aluminium Fanless 165 x 78 x 27 mm For mounting on 35mm mounting rail acc. to EN 60715
ENVIRONMENT	CERTIFICATION POWER SUPPLY EMC  OPERATING TEMPERATURE STORAGE TEMPERATURE SHOCK (EN 60068-2-27) VIBRATION (EN 60068-2-6) HUMIDITY ALTITUDE	CE, UL/cUL 24 VDC +/- 20 % (optional PoE) EN 61000-6-2 (immunity), EN 61000-6-4 (emission) 0 °C ... +55 °C (optional -20 °C ... +55 °C) -20 °C ... +70 °C 15G 11ms (half sine) 10-500Hz 1G/3 axis 10%-90%, non-condensing Up to 9.800 ft (3000 m)	CE, UL/cUL 24 VDC +/- 20 % EN 61000-6-2 (immunity), EN 61000-6-4 (emission) 0 °C ... +55 °C (optional -20 °C ... +55 °C) -20 °C ... +70 °C 15G 11ms (half sine) 10-500Hz 1G/3 axis 10%-90%, non-condensing Up to 9.800 ft (3000 m)
SOFTWARE	OPERATING SYSTEM SOFTPLC (OPTIONAL) PROTOCOLS (OPTIONAL)	Embedded Linux (Yocto Distribution) CODESYS® V3 EtherCAT, Modbus TCP/RTU, Profinet, Ethernet IP, OPC UA, IIoT Libraries (MQTT, HTTPS; Azure, AWS, Google..)	Embedded Linux (Yocto Distribution) CODESYS® V3 EtherCAT, Modbus TCP/RTU, Profinet, Ethernet IP, CANopen, OPC UA, IIoT Libraries (MQTT, HTTPS; Azure, AWS, Google..)



## 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](http://www.kontron.com)

## About Kontron Electronics

Kontron Electronics AG acts as a provider of automation solutions. The enterprise is at home in a variety of sectors, such as industrial machinery and device manufacturing, medical technology and building automation. Our 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](http://www.kontron-electronics.com)

## Your Contact

### Kontron Electronics AG

Riedstrasse 1  
CH-6343 Rotkreuz  
Tel.: +41 41 799 47 99  
[info@kontron.ch](mailto:info@kontron.ch)

[www.kontron-electronics.com](http://www.kontron-electronics.com)

## Global Headquarters

### Kontron Europe GmbH

Gutenbergstraße 2  
85737 Ismaning, Germany  
Tel.: +49 821 4086-0  
[info@kontron.com](mailto:info@kontron.com)

[www.kontron.com](http://www.kontron.com)