

# E1/K1 Controller



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Powerful ARM-based 32-bit controller with integrated fieldbus and panel interface

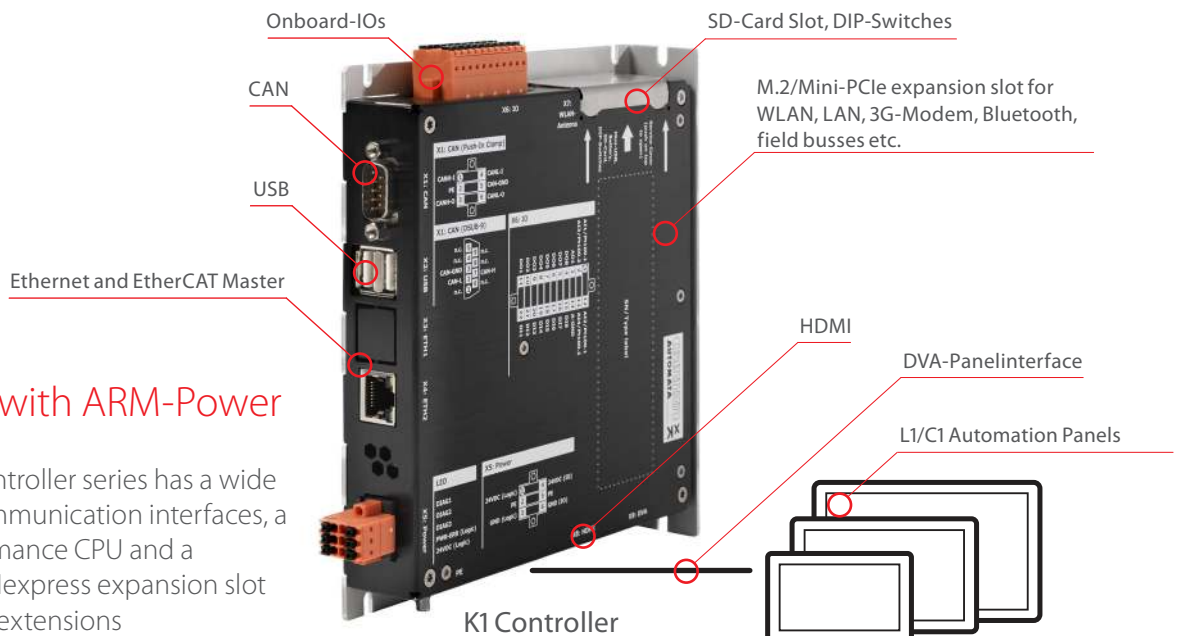
- ARM® Cortex®-A9 Multicore CPU
- EtherCAT® Master Interface, CAN and Onboard IOs
- Standalone or combinable with L1/C1 Automation Panels
- CODESYS IEC 61131-3



E1 Controller

Thanks to its powerful 32-bit ARM® Cortex-A9® Multicore CPU, the E1/K1 Controller series covers a wide range of applications. It is suitable for universal PLC applications as well as for applications with high demands on processing power, graphic performance and communication capability.

Ready for Industry 4.0 - various communication interfaces, supported by standardized protocols and functional libraries, enable easy integration into SmartFactory structures.



K1 Controller

## Versatile with ARM-Power

The E1/K1 Controller series has a wide range of communication interfaces, a high-performance CPU and a M.2/Mini-PCIexpress expansion slot for function extensions



## Control and Visualization

E1/K1 Controllers are programmed with CODESYS in the common IEC 61131-3 languages. This proven engineering tool is also used to create visualizations.

The integrated OPC-UA server allows ERP, MES and SCADA systems the access to application data and serves as an interface for M2M communication.

Qt is available for the realization of graphical user interfaces. This graphics library can be used in combination with CODESYS PLC programs or applications programmed in C/C++.



## E1/K1 Controller - Standalone or as System Unit for L1/C1 Automation Panels

The DVA-Panelinterface enables remote operation of L1/C1 panels on the K1 controller. Video, touchscreen, USB and power supply are routed over a up to 5 meter long single cable.



DVA-Panelinterface  
(max. 5 meters)




K1 Controller with  
DVA-Panelinterface



In addition to the standalone versions for mounting in electric cabinets, the E1/K1 Controllers are also available as system units for L1/C1 automation panels. In this combination, the E1/K1 Controllers can be used as Touch-PLC or web panel.

The xE/xK system units are simply mounted on the back of the panel. Display, touchscreen, USB and power supply are routed over a standardized mechanical and electrical interface.

Technical Information		E1 Controller	K1 Controller
CPU		ARM® Cortex®-A9 Multicore CPU (Single-, Dual- or Quad-Core), 1GHz	
Memory		>= 1 GB DDR3 RAM	>= 1 GB DDR3 RAM, >= 1 GB Flash (optional), >= 8 kB NVRAM
Ports	Serial	over CA-Expansionslot	2 x over Onboard PIN-Header
	USB	2 x USB over Type A Stecker	2 x USB over Type A Stecker, 1 x USB OTG
	Ethernet	1 x 10/100 MBit/s, 1 x 10/100/1000 MBit/s (Intel i210, optional)	
	Kbd/Mouse	over USB	
	Video	1 x HDMI	1 x HDMI, 1 x DVA-Panelinterface
	Expansionslots	M.2 (WLAN, Modem, Field busses, Bluetooth, etc.) CA-Expansionslot (IOs, serial ports, CAN, etc.)	Mini-PCIe (WLAN, Modem, Field busses, Bluetooth, etc.)
Storage		SD-Card Slot	
Field busses		1 x EtherCAT Master (opt.), 2 x CAN (over CA-Expansionslot)	1 x EtherCAT Master (optional), 1 x CAN
Onboard I/Os		-	8 x DI, 8 x DO, 2/4 x AI, 1 x AO
Dimension	H x D x W	170 x 83 x 28 mm	170 x 155 x 28 mm
Power supply		24VDC	
Cooling		passive	
Housing		metal	
Mounting		wallmount or as xE/xK-Systemunit on L1/C1 automation panels	
Operating temperature		0°C ÷ +55°C	
Protection class		IP20	
Operating system		Linux, Windows WEC7 (others on request)	
Software		CODESYS IEC-61131 V3, OPC-UA Server, CODESYS Target-/Web visualization, Qt (others on request)	
Certifications		CE, RoHS	



## PRODUCTS

Components for industrial automation.

- ✓ PAC - PROGRAMMABLE AUTOMATION CONTROLLER
- ✓ I/O MODULES
- ✓ AUTOMATION SOFTWARE

- ✓ FIELDBUS & INDUSTRIAL ETHERNET
- ✓ HMI - HUMAN MACHINE INTERFACE
- ✓ DRIVES




## APPLICATIONS

Hardware and software solutions for specific user applications.

- ✓ REMOTE MONITORING & ASSISTANCE
- ✓ ENVIRONMENTAL MONITORING
- ✓ PREVENTIVE MAINTENANCE

- ✓ MACHINE CONTROL & PRODUCTION
- ✓ MOTION & ROBOTICS
- ✓ ENERGY EFFICIENCY



## ENGINEERING

Services for engineering projects.

35 years of experience in the automotive, energy, oil & gas and water treatment sectors enable Cannon Automata to present itself as complete and perfect partner for the development of industrial engineering and process projects. Systems are characterized by their high performance, thanks to an approach that is fully oriented to achieve tailored solutions to specific needs.

For the best results in terms of quality and customer satisfaction, Cannon-Automata follows an operative scheme that is widely experienced and successful, from the study to the implementation, and with a constant technical support.

 **Cannon Automata**

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