



i CX5000 | Embedded PC series with Intel® Atom™ processor

The CX5000 series devices are DIN rail-mountable, fanless Embedded PCs with direct connection for Beckhoff Bus Terminals or EtherCAT Terminals. In contrast to the other CX device families, the CX5000 series has a fixed, non-expandable number of system interfaces. The housing design for this series is optimised for robustness and compactness. No modular expandability for the left-hand side is provided. However, EtherCAT integration offers a wide range of expansion capability. Further master/slave fieldbus connections (PROFIBUS, CANopen, DeviceNet)

or communication interfaces (RS232, RS422/RS485) and all other signal types accessible via EtherCAT can be directly connected as EtherCAT Terminals.

Two independent Gigabit Ethernet ports and four USB 2.0 interfaces are available. A Beckhoff Control Panel or a standard DVI monitor can be connected to the DVI-I interface. Optionally, the device can be equipped with a serial RS232 or RS422/RS485 interface.

An interchangeable Compact Flash card located behind a flap that is accessible from outside is used as boot and storage medium.

Date and time are buffered via a replaceable battery.

The operating system can be Windows CE or Windows XP Embedded. The TwinCAT automation software transforms a CX5000 system into a powerful PLC and Motion Control system that can be operated with or without visualisation.

The order identifier of the CX5000 devices is derived as follows:

CX50x0-x1xx	
0	= without TwinCAT
1	= with TwinCAT PLC run-time
2	= with TwinCAT PLC/NC run-time
0	= without operating system
1	= operating system Windows CE
2	= operating system Windows XP Embedded
0	= E-bus interface for EtherCAT Terminals
1	= K-bus interface for Bus Terminals
1	= CPU Intel® Atom™ processor 1.1 GHz
2	= CPU Intel® Atom™ processor 1.6 GHz

Since not all combinations make sense, the table "Ordering information" contains a breakdown of the permissible combinations.

Technical data	CX5010-x1xx	CX5020-x1xx
Processor	processor Intel® Atom™ Z510, 1.1 GHz clock frequency	processor Intel® Atom™ Z530, 1.6 GHz clock frequency
Flash memory	64 MB Compact Flash card	
Internal main memory	512 MB RAM (internal, not expandable)	1 GB RAM (internal, not expandable)
Interfaces	2 x RJ 45, 10/100/1000 Mbit/s, DVI, 4 x USB 2.0, optional 1 x RS232/RS422/RS485	
Diagnostics LED	1 x power, 1 x TC status, 1 x flash access, 2 x bus status	
Clock	internal battery-backed clock for time and date (battery exchangeable)	
Operating system	Microsoft Windows CE or Microsoft Windows XP Embedded	
Control software	TwinCAT PLC run-time or TwinCAT NC PTP run-time	
Power supply	24 V DC (-15 %/+20 %)	
Dielectric strength	500 V _{rms} (supply/internal electronics)	
Power supply I/O terminals	2 A (E-bus), 1.75 A (K-bus)	
Max. power loss	8 W (including the system interfaces)	
Dimensions (W x H x D)	100 mm x 100 mm x 91 mm	
Weight	approx. 355 g	
Operating/storage temperature	0...+55 °C/-25...+85 °C	
Relative humidity	95 %, no condensation	
Vibration/shock resistance	conforms to EN 60068-2-6/EN 60068-2-27/29	
EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4	
Protection class	IP 20	

Ordering information	E-bus	K-bus	Windows CE	Windows XP Embedded	TwinCAT PLC run-time	TwinCAT NC run-time
CX5010-0100	x	–	–	–	–	–
CX5010-0110	x	–	x	–	–	–
CX5010-0111	x	–	x	–	x	–
CX5010-0112	x	–	x	–	x	x
CX5010-0120	x	–	–	x	–	–
CX5010-0121	x	–	–	x	x	–
CX5010-0122	x	–	–	x	x	x
CX5010-1100	–	x	–	–	–	–
CX5010-1110	–	x	x	–	–	–
CX5010-1111	–	x	x	–	x	–
CX5010-1112	–	x	x	–	x	x
CX5010-1120	–	x	–	x	–	–
CX5010-1121	–	x	–	x	x	–
CX5010-1122	–	x	–	x	x	x

Ordering information	E-bus	K-bus	Windows CE	Windows XP Embedded	TwinCAT PLC run-time	TwinCAT NC run-time
CX5020-0100	x	–	–	–	–	–
CX5020-0110	x	–	x	–	–	–
CX5020-0111	x	–	x	–	x	–
CX5020-0112	x	–	x	–	x	x
CX5020-0120	x	–	–	x	–	–
CX5020-0121	x	–	–	x	x	–
CX5020-0122	x	–	–	x	x	x
CX5020-1100	–	x	–	–	–	–
CX5020-1110	–	x	x	–	–	–
CX5020-1111	–	x	x	–	x	–
CX5020-1112	–	x	x	–	x	x
CX5020-1120	–	x	–	x	–	–
CX5020-1121	–	x	–	x	x	–
CX5020-1122	–	x	–	x	x	x

i **Product announcement** estimated market release 2nd quarter 2009