



i CX5010, CX5020 | Embedded PC series with Intel® Atom™ processor

The CX5010 and CX5020 are Embedded PCs from the CX5000 series based on Intel® Atom™ processors and differ only by the CPU version. The CX5010 has a 1.1 GHz Intel® Atom™ Z510 processor, while the CX5020 has a 1.6 GHz Intel® Atom™ Z530 processor. Apart from the clock speed, the two processors also differ by the fact that the Z530 features hyperthreading technology, i.e. it has two virtual CPU cores for more effective execution of software.

Depending on the installed TwinCAT runtime environment, the CX5010/ CX5020 can be used for the implementation of PLC or PLC/Motion Control projects (with or without visualisation).

The extended operating temperature range between -25 and +60 °C enables application in climatically demanding situations.

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

CX50x0-x1xx	Optional interfaces:
0 = without TwinCAT	CX50x0-N020 = audio interface
1 = with TwinCAT 2 PLC run-time	CX50x0-N030 = RS232, D-sub plug
2 = with TwinCAT 2 PLC/NC run-time	CX50x0-N031 = RS422/RS485, D-sub socket
0 = without operating system	CX50x0-M310 = PROFIBUS master, D-sub socket, 9-pin
1 = operating system Windows CE	CX50x0-B310 = PROFIBUS slave, D-sub socket, 9-pin
2 = operating system Windows Embedded Standard	CX50x0-M510 = CANopen master, D-sub plug, 9-pin
0 = E-bus interface for EtherCAT Terminals	CX50x0-B510 = CANopen slave, D-sub plug, 9-pin
1 = K-bus interface for Bus Terminals	CX50x0-M930 = PROFINET RT, controller
1 = CPU Intel® Atom™ processor 1.1 GHz	CX50x0-B930 = PROFINET RT, device, Ethernet (2 x RJ 45 switch)
2 = CPU Intel® Atom™ processor 1.6 GHz	CX50x0-B950 = EtherNet/IP slave, Ethernet (2 x RJ 45 switch)
	CX50x0-B110 = EtherCAT slave, EtherCAT IN and OUT (2 x RJ 45)

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 (optionally extendable)	
Internal main memory	512 MB RAM (internal, not expandable)	512 MB RAM (optionally 1 GB installed ex factory)
Persistent memory	integrated 1-second UPS (1 MB on Compact Flash card)	
Interfaces	2 x RJ 45, 10/100/1000 Mbit/s, DVI-D, 4 x USB 2.0, 1 x optional interface	
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 Embedded Standard	
Control software	TwinCAT 2 PLC runtime or TwinCAT 2 NC PTP runtime	
Power supply	24 V DC (-15 %/+20 %)	
Dielectric strength	500 V (supply/internal electronics)	
Current supply I/O terminals	2 A	
Max. power loss	12 W (including the system interfaces)	12.5 W (including the system interfaces)
Dimensions (W x H x D)	100 mm x 100 mm x 91 mm	
Operating/storage temperature	-25...+60 °C/-40...+85 °C	
Relative humidity	95 %, no condensation	
Vibration/shock resistance	conforms to EN 60068-2-6/EN 60068-2-27	

EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4
Protection class	IP 20
TC3 performance class	performance (40); please see here for an overview of all the TwinCAT 3 performance classes

Ordering information	E-bus	K-bus	Win CE	Windows Embedded Standard	TwinCAT 2 PLC runtime	TwinCAT 2 NC runtime
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
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

Options	
CX1900-0204	1 GB DDR2 RAM for CX5020, instead of 512 MB DDR2 RAM; pre-assembled ex factory
CX1800-0400	Windows Embedded Standard 7 E instead of Windows XPe; requires at least 1 GB RAM and 4 GB Compact Flash; supported devices: CX5020
CX1800-0401	Windows Embedded Standard 7 P instead of Windows XPe; requires at least 1 GB RAM and 4 GB Compact Flash; supported devices: CX5020

i Product announcement	CX50x0-x1xx, CX50x0-N0xx, CX50x0-x310, CX50x0-x510, CX50x0-B110: available CX50x0-x930, CX50x0-B950: estimated market release 4th quarter 2012
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*CX50x0 systems with Microsoft Embedded Standard require Compact Flash with a capacity of at least 2 GB (must be ordered separately).