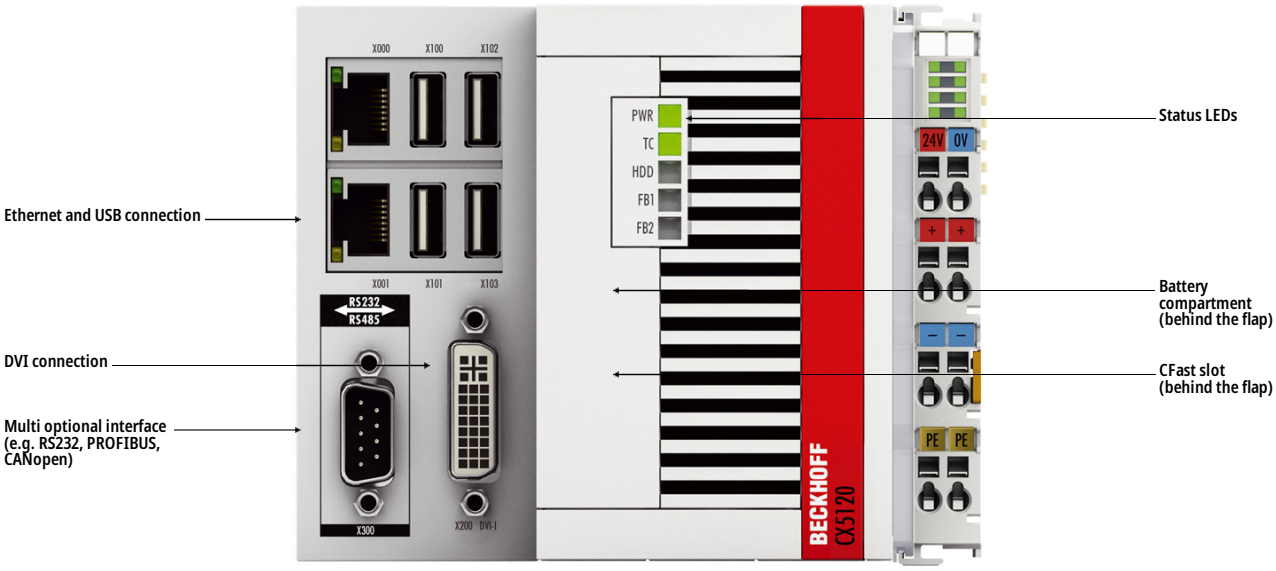
CX5120 | Embedded PC with Intel Atom® processor



Product status: Regular delivery

The CX5120 has an Intel Atom® single-core processor with a clock rate of 1.46 GHz. The hardware interfaces in this series are oriented and implemented identically to those of the existing CX5000 series. Two independent, Gigabit-capable Ethernet interfaces as well as four USB 2.0 and a DVI-I interface are available. A multitude of further connection options or gateway functions are created by an option interface, which can be pre-fitted in the factory, as well as the I/O level, which can selectively consist either of E-bus or K-bus terminals.

The CX5120 is characterised by low power consumption and fanless design.

Depending on the installed TwinCAT runtime environment, the CX5120 can be used for implementing PLC or PLC/motion control projects with or without visualisation. The execution of motion control applications with interpolating axis movements is also possible.

Like the CX5000, the CX5100 series has a compact design; a modular device with extension modules like in the CX2000 series is not available.

Product information

Technical Data

Technical data	CX5120
Processor	Intel Atom® E3815, 1.46 GHz
Number of cores	1
Flash memory	slot for CFast card and microSD card, cards not included

Main memory	2 GB DDR3 RAM (not expandable)
Persistent memory	integrated 1-second UPS (1 MB on CFast card)
Interfaces	2 x RJ45 10/100/1000 Mbit/s, 1 x DVI-I, 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	Windows Embedded Compact 7, Windows Embedded Standard 7 P, Windows 10 IoT Enterprise 2016 LTSB, Windows 10 IoT Enterprise 2019 LTSC, TwinCAT/BSD
Control software	TwinCAT 2 runtime TwinCAT 3 runtime (XAR)
I/O connection	E-bus or K-bus, automatic recognition
Power supply	24 V DC (-15 %/+20 %)
Current supply E-bus/K-bus	2 A
Max. power consumption	11 W
Max. power consumption (with loading UPS)	18 W
Dimensions (W x H x D)	124 mm x 100 mm x 92 mm
Weight	approx. 860 g
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
Approvals/markings	CE, UL, ATEX, IECEx, cFMus
Ex marking	ATEX: II 3 G Ex nA IIC T4 Gc II 3 D Ex tc IIIC T135 °C Dc IECEx: Ex nA IIC T4 Gc Ex tc IIIC T135 °C Dc cFMus: Class I, Division 2, Groups A, B, C, D Class I, Zone 2, AEx ec IIC T4 Gc
TwinCAT 3 platform level	Performance (40); please see here for an overview of all the TwinCAT 3 platform level

Ordering Information

Ordering information	
CX5120-0100	no operating system, no TwinCAT
CX5120-0110	Windows Embedded Compact 7, no TwinCAT
CX5120-0111	Windows Embedded Compact 7, TwinCAT 2 PLC runtime
CX5120-0112	Windows Embedded Compact 7, TwinCAT 2 NC PTP runtime
CX5120-0113	Windows Embedded Compact 7, TwinCAT 2 NC I runtime

CX5120-0115	Windows Embedded Compact 7, TwinCAT 3 runtime (XAR)
CX5120-0120	Windows Embedded Standard 7 P 32 bit, no TwinCAT
CX5120-0121	Windows Embedded Standard 7 P 32 bit, TwinCAT 2 PLC runtime
CX5120-0122	Windows Embedded Standard 7 P 32 bit, TwinCAT 2 NC PTP runtime
CX5120-0123	Windows Embedded Standard 7 P 32 bit, TwinCAT 2 NC I runtime
CX5120-0125	Windows Embedded Standard 7 P 32 bit, TwinCAT 3 runtime (XAR)
CX5120-0130	Windows Embedded Standard 7 P 64 bit, no TwinCAT
CX5120-0135	Windows Embedded Standard 7 P 64 bit, TwinCAT 3 runtime (XAR)
CX5120-0140	Windows 10 IoT Enterprise 2016 LTSB 32 bit, no TwinCAT
CX5120-0141	Windows 10 IoT Enterprise 2016 LTSB 32 bit, TwinCAT 2 PLC runtime
CX5120-0142	Windows 10 IoT Enterprise 2016 LTSB 32 bit, TwinCAT 2 NC PTP runtime
CX5120-0143	Windows 10 IoT Enterprise 2016 LTSB 32 bit, TwinCAT 2 NC I runtime
CX5120-0150	Windows 10 IoT Enterprise 2016 LTSB 64 bit, no TwinCAT
CX5120-0155	Windows 10 IoT Enterprise 2016 LTSB 64 bit, TwinCAT 3 runtime (XAR)
CX5120-0160	Windows 10 IoT Enterprise 2019 LTSC 32 bit, no TwinCAT
CX5120-0161	Windows 10 IoT Enterprise 2019 LTSC 32 bit, TwinCAT 2 PLC runtime
CX5120-0162	Windows 10 IoT Enterprise 2019 LTSC 32 bit, TwinCAT 2 NC PTP runtime
CX5120-0163	Windows 10 IoT Enterprise 2019 LTSC 32 bit, TwinCAT 2 NC I runtime
CX5120-0170	Windows 10 IoT Enterprise 2019 LTSC 64 bit, no TwinCAT
CX5120-0175	Windows 10 IoT Enterprise 2019 LTSC 64 bit, TwinCAT 3 runtime (XAR)
CX5120-0185	TwinCAT/BSD, TwinCAT 3 runtime (XAR)

CX51x0-016x: only 4 GB RAM can be used with Windows 10 IoT Enterprise 2019 LTSC 32 Bit

Windows Embedded Compact 7 and TwinCAT/BSD require a CFast flash card with a minimum capacity of 20 GB

Other operating systems require a CFast flash card with a minimum capacity of 40 GB.

TwinCAT 3 runtime (XAR) is preinstalled, without licenses. Please order TwinCAT 3 licenses separately from the TwinCAT 3 Price List.

Options

Options	
CX2900-0107	Device modification for CX5120, CX5130, CX5140 and CX9020 Embedded PCs according to the requirements for ATEX, IECEx and FM certification. The modification is mandatory for the usage of CX5120, CX5130, CX5140 and CX9020 in hazardous areas, Zone 2/22 respectively Class I, Div. 2. It includes the modification and repositioning of the device label as well as a mounting bracket installed ex works for mechanical locking of the connectors. Product labeling: ATEX: II 3 G Ex nA IIC T4 Gc and II 3 D Ex tc IIIC T135 °C Dc IECEx: Ex nA IIC T4 Gc and Ex tc IIIC T135 °C Dc cFMus: CL I, DIV 2. GP A, B, C, D und CL I, Zn 2 AEx/Ex ec IIC T4 Gc Read the device documentation for use in hazardous areas carefully.

Optional interfaces	
CX5120-N020	audio interface, 3 x 3.5 mm jack sockets, Line In, Mic In, Line Out or 5.1 Surround
CX5120-N030	RS232 interface, D-sub plug, 9-pin (RXD, TXD, RTS, CTS)
CX5120-N031	RS485 interface, D-sub socket, 9-pin, configuration as an end point, without echo, termination on
CX5120-N031-0001	RS485 interface, D-sub socket, 9-pin, configuration as an end point, with echo, termination on
CX5120-N031-0002	RS485 interface, D-sub socket, 9-pin, configuration as drop point, without echo, termination off
CX5120-N031-0003	RS485 interface, D-sub socket, 9-pin, configuration as drop point, with echo, termination off
CX5120-N031-0004	RS422 interface, D-sub socket, 9-pin, configuration as full duplex end point, termination on
CX5120-M112	2 x EtherCAT master interface
CX5120-B110	EtherCAT slave interface, EtherCAT IN and OUT (2 x RJ45)
CX5120-M310	PROFIBUS master interface, D-sub socket, 9-pin
CX5120-B310	PROFIBUS slave interface, D-sub socket, 9-pin
CX5120-M510	CANopen master interface, D-sub plug, 9-pin
CX5120-B510	CANopen slave interface, D-sub plug, 9-pin
CX5120-M930	PROFINET RT, controller interface, Ethernet (2 x RJ45 switch)
CX5120-B930	PROFINET RT, device interface, Ethernet (2 x RJ45 switched)
CX5120-B950	EtherNet/IP adapter interface, Ethernet (2 x RJ45 switched) Availability: on request

Accessories

Accessories	
CX1900-0101	DVI-to-VGA passive adaptor for connecting a standard desktop VGA monitor to the CX system (singles out the VGA signals of the DVI-I interface).
CX1900-0102	Spare battery suitable for CX10x0, CX81x0, CX50x0, CX51x0, CX52x0, CX90x0, CX20xx – lithium button cell type CR2032, 3V/225 mAh – follow polarity when installing
CX1900-0122	512 MB microSD card
CX1900-0124	1 GB microSD card
CX1900-0126	2 GB microSD card
CX1900-0128	4 GB microSD card
CX1900-0130	8 GB microSD card
CX2900-0026	20 GB CFast card, 3D flash, extended temperature range (only for Windows CE or TwinCAT/BSD operating systems)
CX2900-0038	40 GB CFast card, 3D flash, extended temperature range
CX2900-0040	80 GB CFast card, 3D flash, extended temperature range

CX2900-0042	160 GB CFast card, 3D flash, extended temperature range