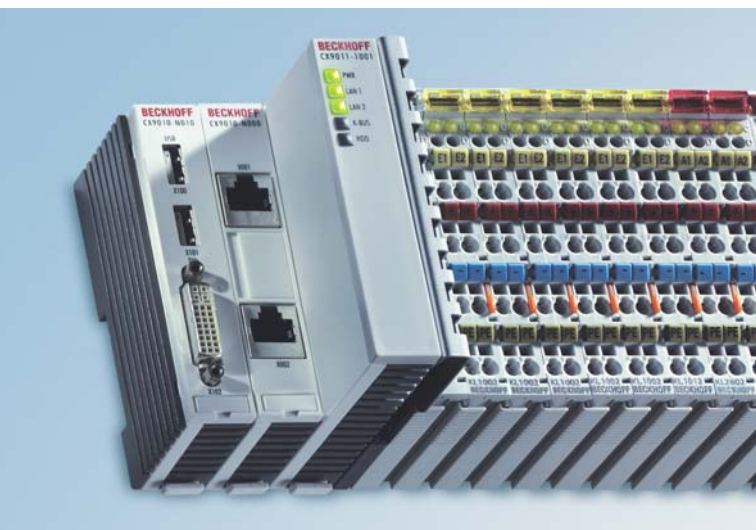


Product extension for
Beckhoff Embedded PCs

The CX series grows into an even bigger family

→ In April 2002 the first Beckhoff Embedded PC was launched at the Hanover Fair and started its successful advance through the world of IT and automation. PCs from the CX series are now used worldwide and offer a high-performance and modular alternative to IPCs, PLCs and Motion Controllers. Five years on, the system has grown into an extended family with six different CPU types.

The Embedded PC range from Beckhoff has been extended with three new high-performance devices. The range now enables even more precise adaptation of the control system to the task in hand. The existing CX9000, CX1000 and CX1020 devices are complemented by the new CX9010, CX1010 and CX1030 models that offer higher-performance CPUs with maximum hardware and software compatibility with the earlier models.



Embedded PC CX9010

The only difference between the CX9010 and the CX9000 is a faster 533 MHz CPU. Like in the CX9000 it is an ARM-based Intel® CPU with XScale® technology, and Windows CE is used as the operating system. All system interfaces of the CX9010 are identical with the CX9000 interfaces. The CX9010 controller is always equipped with a heat sink, regardless of whether a DVI/USB interface is installed. The CX9010 is fully software-compatible with the CX9000, while the CX9010 has higher memory capacity with 32 MB internal flash and 128 MB RAM.



Embedded PC CX1010

The CX1010 is the successor model of the CX1000. The latter continues to be available, although for new projects the CX1010 is recommended. With integral 256 MB RAM and higher clock frequency (500 MHz) than the CX1000, the CX1010 is suitable for Windows XP Embedded or Windows CE applications. The system interfaces have been extended compared with the CX1000. The new model supports up to four serial RS232 or RS485 interfaces. In contrast to the CX1000, the CX1010 is EtherCAT-capable via the CX1100-0004 power supply unit.

The table provides an overview of embedded controllers:

Embedded PCs	CPU	Clock frequency	Memory	I/O
CX9000	Intel® IXP420	266 MHz	16/32 MB flash (internal), 64/128 MB RAM	K-bus, E-bus
CX9010	Intel® IXP420	533 MHz	32 MB flash (internal), 128 MB RAM	K-bus, E-bus
CX1000	AMD Geode SC2200	266 MHz	64 MB flash (external CF), 64/128 MB RAM	K-bus, IP-Link
CX1010	AMD Geode LX800	500 MHz	64 MB flash (external CF), 64/128 MB RAM K-Bus,	K-bus, E-bus, IP-Link
CX1020	Intel® Celeron® M	1,0 GHz	64 MB flash (external CF), 256 MB RAM	K-bus, E-bus, IP-Link
CX1030	Intel® Pentium® M	1,8 GHz	64 MB flash (external CF), 256 MB RAM	K-bus, E-bus, IP-Link

Embedded PC CX1030

The CX1030 is equipped with a 1.8 GHz Intel® Pentium® M and is now the most powerful device in the Beckhoff Embedded PC range. Apart from the fan tray (which is required due to the higher processor performance), the CX1030 and CX1020 feature identical hardware and software.

The CX1030 basic CPU module offers Pentium® M power on a DIN rail. The CPU is cooled via the cooling module and an easily exchangeable fan cartridge located on the underside of the heat sink. The high-quality fan is supported by dual ball bearings and is mounted in a tray so that it can be replaced in the field without tools or wiring, if required. The fan speed is monitored and can be queried via software. The passive cooling module is included in the scope of supply.

In addition to the CPU and chipset, the CX1030 module also contains the RAM, which is available in different sizes: 256 MB DDR RAM as standard, expandable to 512 MB or 1 GB. The controller boots from the Compact Flash.

The basic configuration of the CX1030 includes a 64 MB Compact Flash card and two Ethernet RJ 45 interfaces. These are connected to an internal switch and offer a simple option for creating a line topology without the need for additional Ethernet Switches.

The operating system can be Windows CE or Windows XP Embedded. In contrast to the CX1010, the CX1030 can also be used for interpolating axis movements with TwinCAT NC I. The CX1100-0004 power supply unit offers a direct interface



between the CX1030 and the EtherCAT Terminals. The combination of CX1030, EtherCAT and TwinCAT enables very fast control processes in the sub-millisecond range (eXtreme Fast Machine Control).

→ www.beckhoff.com/cx

i Product announcement estimated market release 2nd quarter 2007