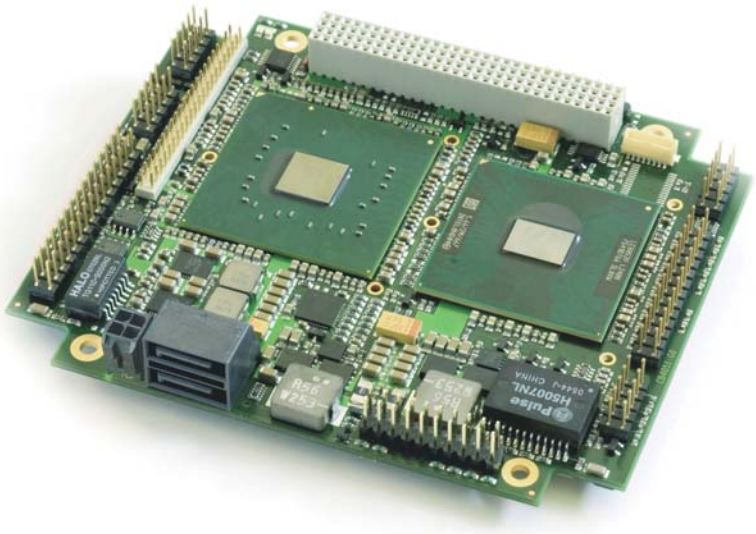
CB4051 PCI-104 board extends Industrial Motherboard series

New Core™ Duo Motherboards in PC/104 form factor



In the new CB4051, Beckhoff presents a high-tech Industrial Motherboard with a powerful Intel® 945GM(E) chipset and Intel® Core™ Duo or Intel® Core™2 Duo processors. The board complies with the PC/104 consortium's current PCI-104 standard and already offers PCI-Express functionality as an option. It is the first motherboard in this performance class to be designed as a compact solution in single board design (SBC).

As a pioneer in PC-based control technology, Beckhoff has many years of experience in the development of industrial motherboards. Thanks to the company's in-house development of motherboards and also BIOS, Beckhoff can react very quickly to new technologies in the PC market. The results of this consistent in-house development are high-quality and innovative technical solutions, in which the new CB4051 PCI-104 motherboard in single board design now takes its place.
The main features of the new Industrial Motherboard are a powerful chipset with modern Intel® processors, large RAM and numerous high-speed interfaces. The CB4051 is equipped with the Intel® 945GM(E) chipset and can be built with current Intel® processors from the Celeron® M, Core™ Duo and Core™2 Duo series. These are specified for operation at enclosure temperatures of between 0 and 85 °C (32 °F and 185 °F), ensuring the greatest possible safety even in harsh environments. The processors have a second-level cache of up to 4 Mbyte currently. SoDIMM200 RAM modules (DDR2-667), as commonly used in notebooks, are installed on the CB4051 PCI-104 board. A memory extension up to 2 Gbyte is possible using currently available SoDIMM modules.
Thanks to its numerous interfaces, the CB4051 Industrial Motherboard is prepared for a large number of applications. It has two Ethernet ports (one of which is a gigabit port) and eight fast USB 2.0 interfaces. In addition, the CB4051 is equipped with two serial interfaces, COM1 and COM2, an IDE interface, two SATA connections with a data transfer rate of up to 3 Gbit per second, a PS2 interface for keyboard and mouse and an LPT interface. Sound input and output as well as CRT and TFT connectors are similarly provided.
The PCI bus is made available in the form of a PC/104-Plus socket for expansion cards such as SCSI, IEEE1394, etc. A maximum of four PCI slots can be controlled. Although the relevant sections of the PCI-104 standard have not yet been approved, the CB4051 already provides the user with the opportunity to use a PCI-Express interface in an Industrial Motherboard. For this purpose, the CB4051 can optionally be fitted with a PCIe socket, through which three PCIe lanes can be fed.
At just 96 x 90 (115) mm, the dimensions of the CB4051 motherboard are very compact. Compliance with the PC/104 form factor enables variable expansion using additional plug-in modules. This makes the CB4051 a universally usable, extremely powerful computing unit in the embedded sector. In addition to general industrial applications, the board is also suitable for applications requiring greater CPU power such as image processing or the fast processing of measured data. Thanks to the presence of the Ethernet ports, the CB4051 is also innately suited for use in ultra high performance EtherCAT-based applications.