

CyBox_8

Industrial PC for Long-Term Applications

- Standard PC hardened for industrial use
- Optimized thermal performance
- Celeron 2 GHz CPU

→ preliminary

III Industrial PC for Long-Term Applications

- Industrial grade stainless-steel case
- Standard PC
- Operating system Windows XP or XP Embedded
- Extended temperature range

III The Application

Industrial control applications in most cases must cover a control part and a user-interface part. The user interface preferably complies to the look and feel of Windows or Linux, which does not suit the real-time part best; although there are embedded versions of Windows and Linux, hard real-time can be used only with specialized software add-ins. Thus, real-time fits the need of a sleek user interface only with the burden of these add-ins or on a separate computer, dedicated only to real-time

III Dedicated User-Interface Computer

There are several pros for a separate user-interface computer: there is always a certain risk that this computer crashes due to configuration errors or to erroneous actions of the user - keep in mind that the well-known appearance of these computers invites users to play around. If this computer crashes, the real-time application keeps running. Furthermore, the computing power available for the user interface - and that might well include data base operations feeding the real-time application with data - is known a priori. In single-computer applications, the user interface gets only what the real-time application does not need. Additionally, a spatial separation is easier: user I/O directly in front of the operator, real-time where the PLCs are located. There are no problems with long monitor cables or widely distributed process I/O. The interface between both computers is a single 100 Mb Ethernet link.

III The CyBox_8

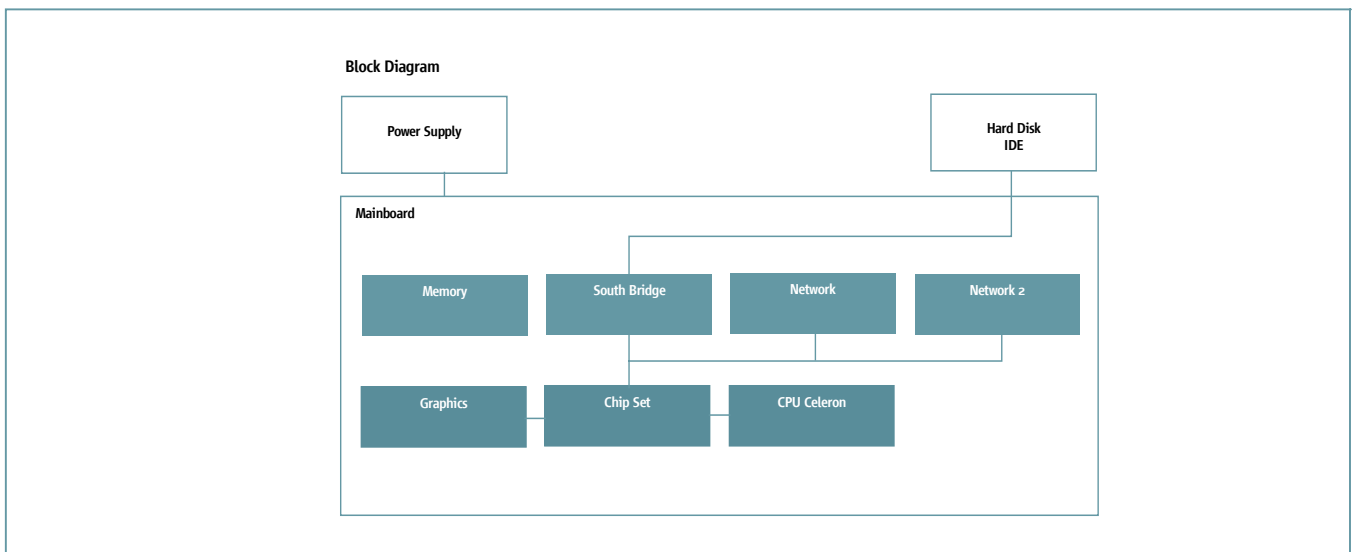
ELTEC's CyBox_8 is an industrial PC, housed in a compact stainless-steel case, with a standard motherboard with 2 GHz clock. The operating systems Windows XP and Windows XP Embedded are available for the CyBox_8.

III Long-Term Strategy

ELTEC's goal for the development of the CyBox_8 was to combine the latest developments in motherboards with long-term availability, which seem contradictory at first. However, ELTEC crafted a family concept, that makes future upgrades possible, while keeping the software unchanged - even with complete setup parameters of applications. The aim was to make the same software suite running on a changed hardware platform - with minimum user interaction. The reason for changing the hardware can be either the wish (or need) to upgrade in production to a later motherboard with different features or a field upgrade to repair after a device failure.

III The Migration Process

Between family members, defined by ELTEC and running under Windows XP Embedded, a migration process is initiated with the aim of running the same software on an upgraded hardware. Since most software products store user settings in the registry, the migration process takes care of keeping the application's registry entries. The other main component makes the operating system XP Embedded, which is able of plug&play support by itself and thus will not run on a changing platform, run as before; this task is achieved by carefully including the right drivers for the new hardware on the new system and then cleaning this system from any old drivers that were needed for the old configuration. The result is the possibility to install a backup image of the old installation on the new system nearly without user interaction - a process that would take many hours for re-installation of software otherwise.

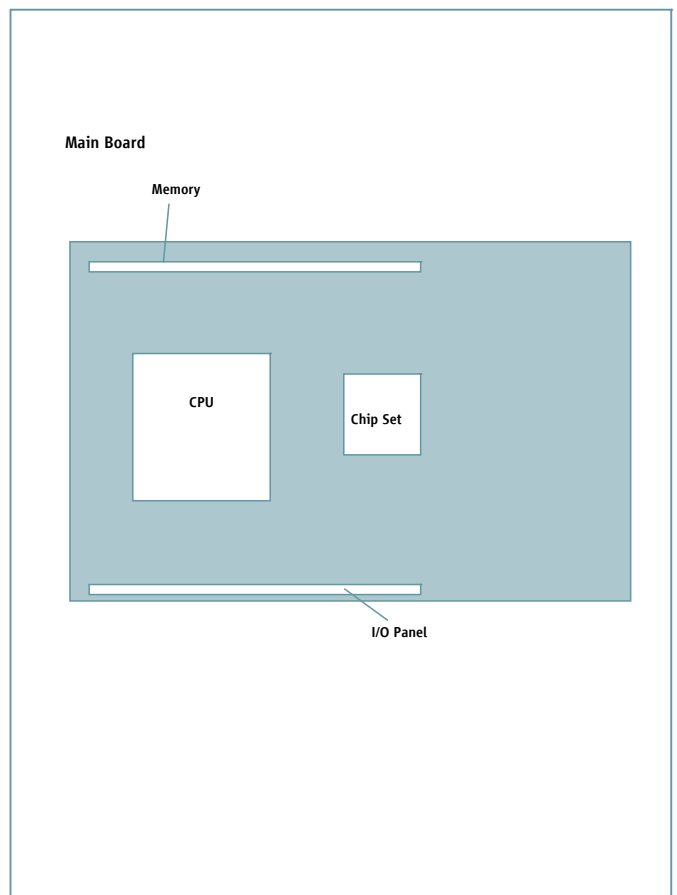
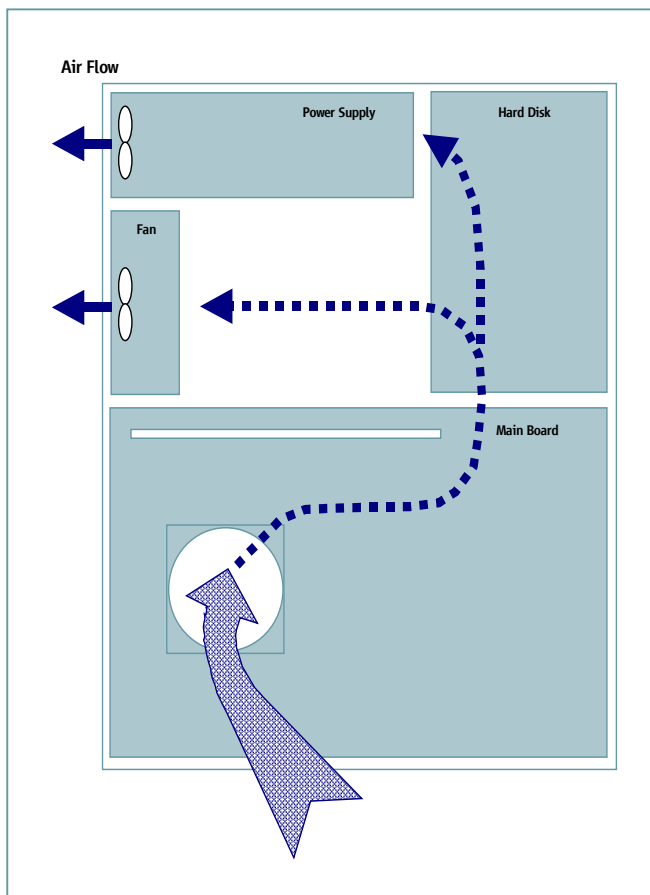


III The PC Inside the CyBox_8

The motherboard of the CyBox_8 is a microATX-type with a Celeron CPU, clocked at 2 GHz, with up to 512 MB DRR memory, dual 100 Mb Ethernet ports, and the standard I/O, such as parallel and a serial port. Graphics uses a shared memory approach that should be sufficient for all graphics needs – except maybe for games.

III Mechanical

The flat case is intended for, but not limited to, mounting behind flat panel displays. Great care has been taken to make operating temperatures of up to 50 C ambient possible.



ELTEC Elektronik AG

Galileo-Galilei-Strasse 11
55129 Mainz
PO Box 10 03 64
55134 Mainz

Fon +49 6131 918 100
Fax +49 6131 918 195
Email info@eltec.com
www eltec.com

ELTEC International SARL

1, Allée des Garays
91872 Palaiseau
France

Fon +33 1 64 47 18 77
Fax +33 1 64 47 09 33
Email info.fr@eltec-france.fr
www eltec-france.fr

American ELTEC, Inc.

2401 Windjammer Way
Las Vegas, Nevada 89107
USA

Fon +1 702 878 40 85
Fax +1 702 878 47 35
Email info.us@eltec.com
www americaneltec.com

ELTEC International PLC

Unit 32, Stratford Office Village
Wolverton Mill
Milton Keynes MK12 5NS
United Kingdom

Fon +44 1908 32 00 55
Fax +44 1908 31 01 07
Email info.uk@eltec.com
www eltec.com

III Specifications

Motherboard

The CyBox_8 Motherboard is equipped with a Celeron CPU, clocked at 2 GHz.; it has the following I/O:

- Parallel
- 1 * Serial, DB-9
- VGA, DB-15
- 2 * USB 2.0
- 2 * 100 Mb Ethernet
- Sound in /out
- Keyboard/Mouse: separate PS/2

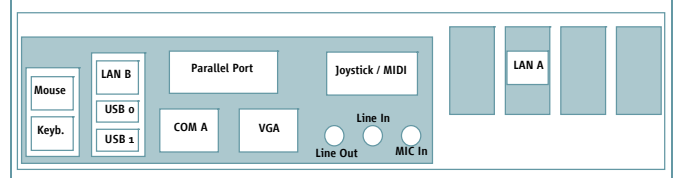
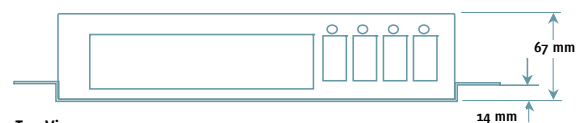
Thermal

Environmental conditions: 0..50 C ambient air temperature.

Documentation

- Free Internet

Please contact your local sales office for detailed information

**Front Panel****Front View****Top View**