

# CyBox\_9

Industrial Real-Time Computer

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### III Industrial Real-Time Computer

- Industrial grade stainless-steel case
- PowerPC CPU
- Operating system OS-9 or Embedded Linux
- Extended temperature range
- Standard PCI expansion slots

### 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 Real-Time Computer

There are several pros for a separate real-time computer: there is always a certain risk that the user interface 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. 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\_9

ELTEC's CyBox\_9 is an industrial real-time computer, housed in a compact stainless-steel case, with a passive backplane, following the PCISA standard. PCISA has one slot for a CPU board, in this case ELTEC's BAB 912, and additional 4 slots for standard PCI boards. The operating systems OS-9 and Embedded Linux are available for the CyBox\_9.

### III CPU Board

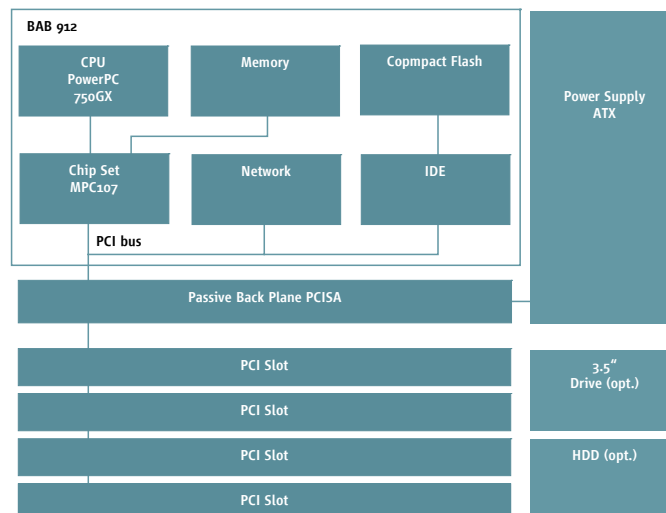
The CPU board of the CyBox\_9 is ELTEC's BAB 912 board. It contains a PowerPC 750 GX CPU, clocked at 1.0 GHz, with up to 256 MB memory on a SO-DIMM module, dual 100 Mb Ethernet ports, and the standard I/O, such as parallel and a serial port.

### III Real-Time Software

The BAB 912 CPU board is available with the operating systems Microware OS-9. It offers maximum compatibility to the operating system OS-9 for 68k, making the transition to today's PowerPC architecture easiest.

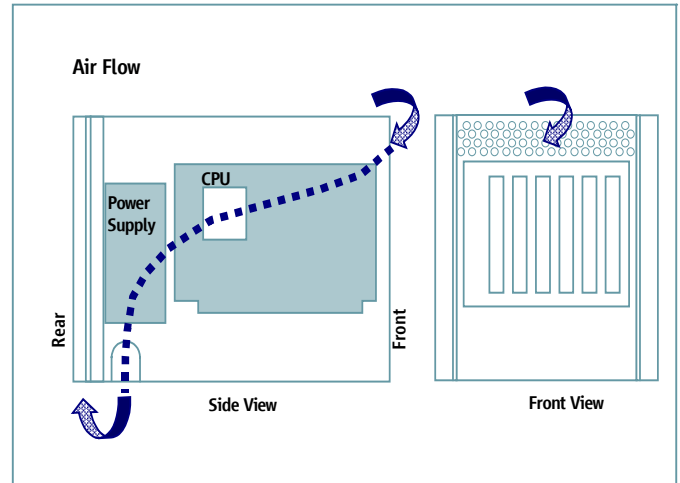
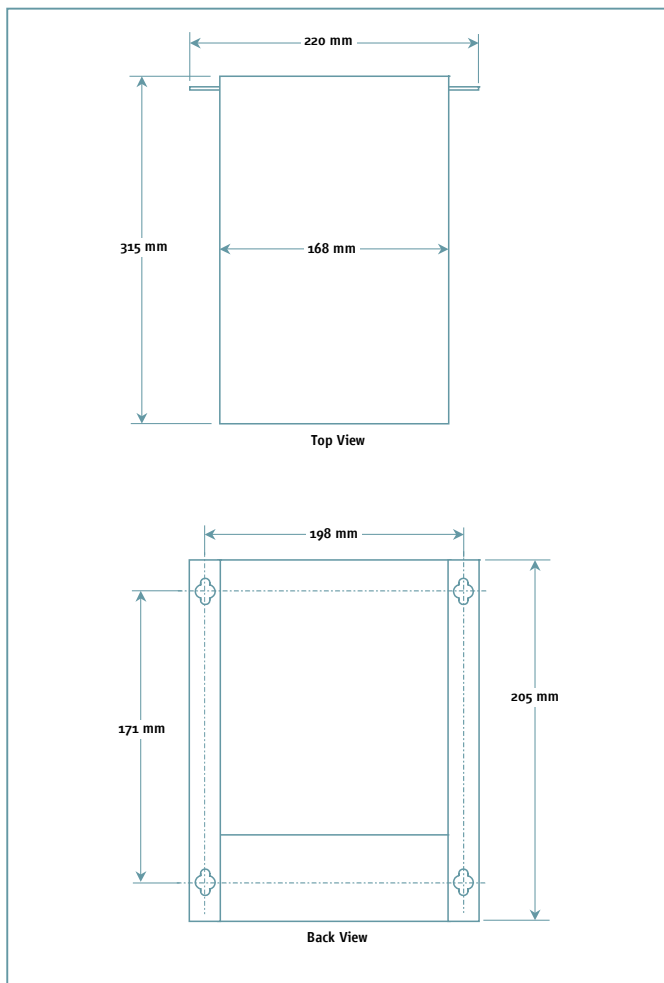
Additionally, the ELinOS Embedded Linux is available, which can be used with Linux' real-time enhancement RTAI. With this software platform, the user gets all sources and has all options to select between soft real-time and hard real-time.

Block Diagram



### III Mechanical

The compact case is intended for, but not limited to, mounting at back panels of 19-inch enclosures. Great care has been taken to make operating temperatures of up to 50 C ambient possible. The case offers mounting space for four PCI cards, one CD-ROM, one hard disk.



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### III Specifications

#### I/O

The CyBox\_9 CPU board has the following I/O

- 2 \* 100 Mb Ethernet RJ45
- Dual serial I/O, DB-9

#### Internal I/O

- Compact Flash socket, on-board
- IDE connector

#### Documentation

- Free Internet

Please contact your local sales office for detailed information

