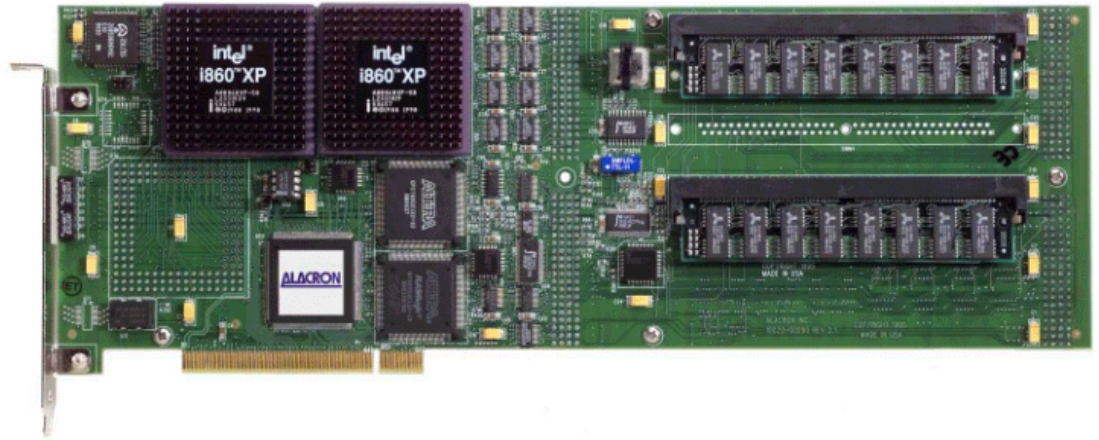


Alacron offers two families of processor boards based on Intel's i860 RISC processors: the AL-860 and FT-200. These boards are ideal for accelerating Digital Signal Processing (DSP), graphics and imaging processing applications.



Features

Features common to all Alacron FT-200 boards include:

- Single i860 XR
- Up to 200 MFLOPS / 100 MIPS
- Up to 256 MB Addressable Memory
- FastTrack™ connection to I/O and processor daughter-cards
- Real-time OS
- DOS, Windows, Unix interfaces
- Available for PCI computers

The FT-200s are single or dual 50 MHz i860 XP-based board-level subsystems, available for PCI bus computers. The FT-200 implements a fully symmetric multiprocessing model, sharing addressable memory equally between i860s. The FT-200 has a 200 MB/sec system bus, and with two processors operates at 200 MFLOPS / 100 MIPS. The FT-200 can execute a 1K complex FFT in under 320 microseconds using both i860's, and in 560 microseconds using a single processor. The FT-200's addressable memory is expandable from 8 MB to 256 MB. The FT-200 subsystem provides two FastTrack expansion connectors. These connectors implement Alacron's stackable daughter-card protocol, and together can support a combination of up to six I/O and processor daughter-cards.

FastTrack Interface

Alacron provides a family of I/O expansion boards which mount on the FastTrack connectors of the FT-200. Software drivers are available for all boards.

- ◆ High Performance Digital (Camera) Interface
- ◆ Digital Framegrabbers
- ◆ High Performance Digital I/O Interface

- ◆ Video Display Adapter
- ◆ FT-2106x-DC 8 SHARC Daughter-cards
- ◆ SCSI, VSB, DT-Connect, VISIONbus Interfaces

Heterogeneous Processing & Migration Paths

Alacron's 8 SHARC FT-2106x-DC daughter-card is also compatible with the FT-200's FastTrack expansion interfaces, proving an ideal heterogeneous processing environment, as well as an easy migration path between processor families.

Software Libraries

Alacron's FT-200 computing subsystems are supported by an extensive suite of application specific libraries for image processing, DSP and graphics applications.

- Vector Numerical Library
- Real-time Image Processing Library

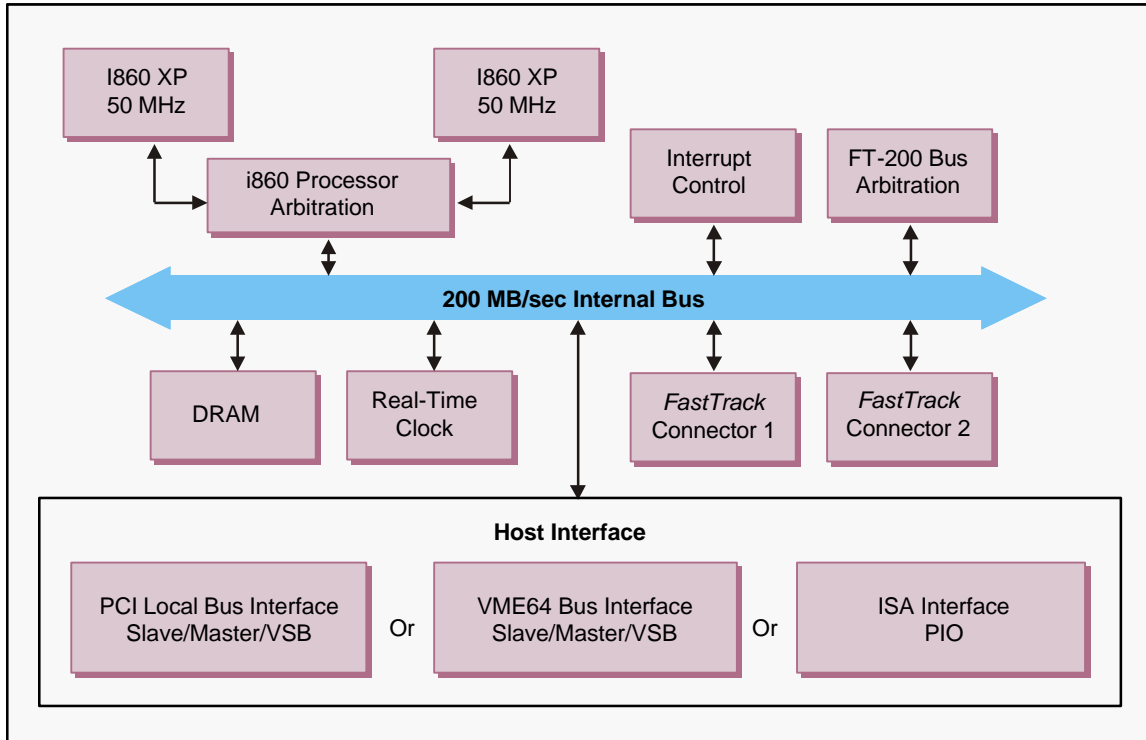
FT-200 Architecture

Processing Environments

Alacron's RT operating environment provides several processing models. Applications can run as simple attached processes on the FT-200 processor boards, as stand alone tasks on the host, or as separate tasks on the host and on the FT-200. Alacron's RT supports Microsoft DOS, Windows 3.1, Windows NT, Windows 95/98, Solaris, LynxOS, and VxWorks.

Development Tools

A full suite of ANSI development tools for C and FORTRAN is available. Compilers support general purpose and numerically intensive applications. Profilers and debuggers are available.



Specifications

FT-200 Multiprocessor Board

Processor Intel i860XP
 Number of i860s..... 1 or 2
 Clock speed..... 50 MHz XP
 Memory..... 8 MB to 256 MB
 External I/O 160 MB/sec (FT-DT
 Burst) 158 MB sustained

Intel i860 CPU

Precision IEEE (754) floating point
 Single (32-bit) precision
 Double (64-bit) precision
 Performance..... 100 MFLOPS, 50 MIPS
 @ 50 MHz
 3D unit..... Z buffering
 Pixel interpolation
 3D shading
 MMU..... 4K & 4M page sizes
 Data bus 128-bit Internal
 64-bit External

Cache 16 KB data, 16 KB
 instruction

FT-200 Board Peak Performance

MFLOPS.....200 MFLOPS
 MIPS..... 100 MIPS
 1K complex FFT < 550 MS, 1K complex
 1xP
 320 MS 2xP

512 image processing
 - 2D real FFT 0.188 Sec 512x512
 - 3x3 convolution..... 51 mSec 512x512

PCI Interface

Bus specification 8, 16, 32 bit PCI format
 Control registers I/O Mapped
 Global memory..... Memory Mapped
 PCI/global 132 MB/sec burst memory
 PCI/global 70 MB/sec sustained
 memory
 PCI/global 16 MB/sec random
 memory

PCI Electrical and Environmental

Power +5 volts at 5A
 Dimensions 12.7 x 35.6 x 1.9 cm
 Operating temp. 0-50 degrees centigrade
 Relative 95% noncondensing
 humidity

FT-I/O Expansion Boards

Alacron provides a family of I/O expansion boards for the FT-200 family:

- ◆ FT-DI: Digital Input/Framegrabber
- ◆ FT-DIO: Digital I/O Module
- ◆ FT-DT/4: Programmed I/O Interface Module
- ◆ FT-DT/IN: DT DMA Input Interface Module
- ◆ FT-SCSI: SCSI Bus Interface
- ◆ FT-VB: VISIONbus Interface
- ◆ FT-VDA: Video Display Adapter