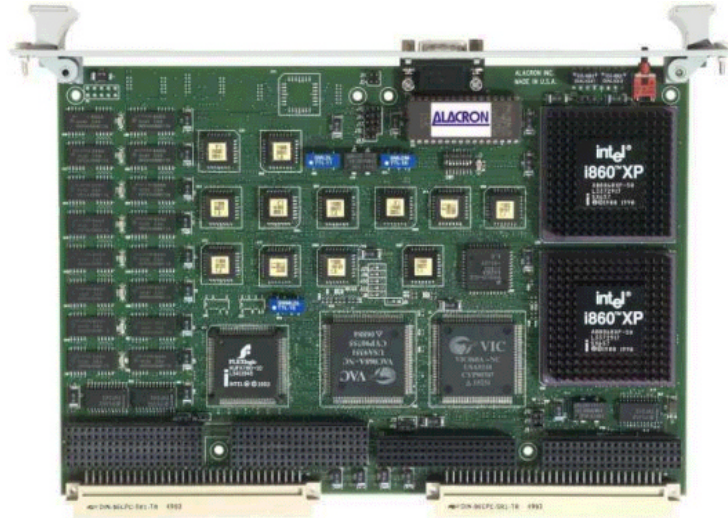


Alacron offers two families of processor boards based on Intel's i860 RISC processors: the AL-860 and FT-200. These boards are ideal for accelerating Digital Signal Processing (DSP), graphics and imaging processing applications.



## 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 VME computers

The FT-200 is a single or dual 50 MHz i860 XP-based board-level subsystem, available for VME 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 mSec 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

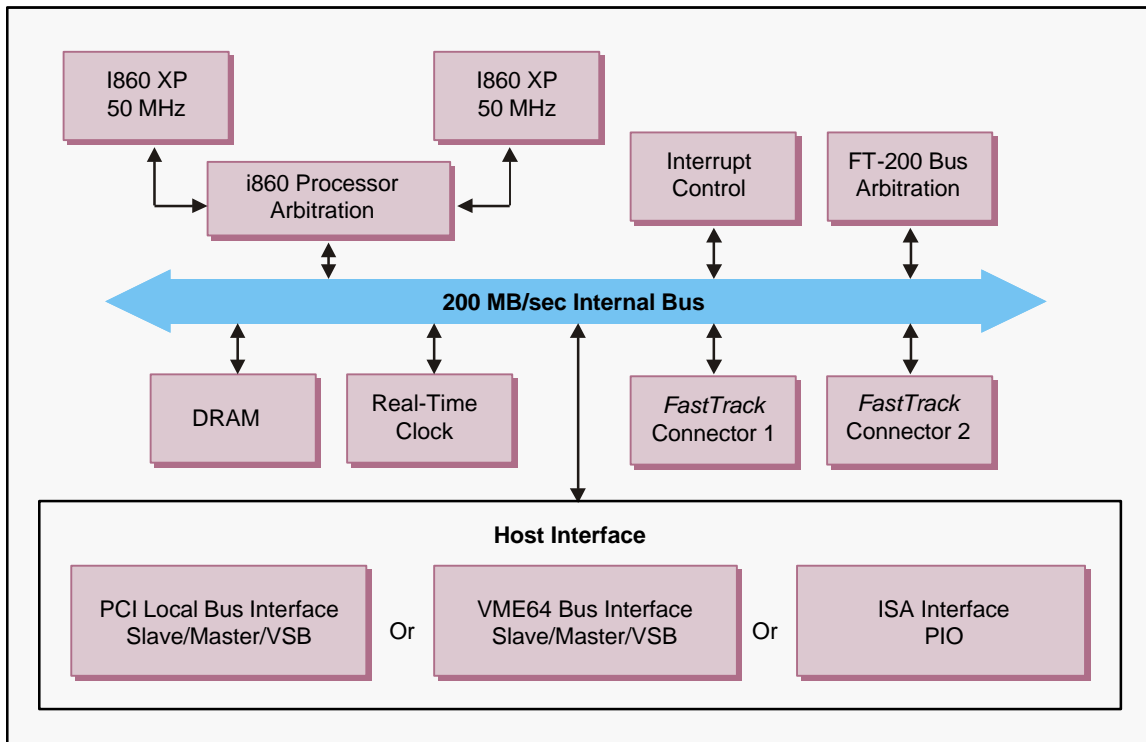
### Processing Environments

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, 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.

## FT-200 Architecture



## Specifications

### FT-200 Multiprocessor Board

Processor .....	Intel i860XP
Number of i860s.....	1 or 2
Clock speed.....	50 MHz
Memory.....	8 MB to 272 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
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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

### 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