



A236 Video DSP Chip Evaluation Board #2 with Fingerprint Option

**Using Oxford Micro Devices, Inc.'s A236 Video DSP Chip,
the *System Designer's Parallel DSP Chip (TM)***

Data Sheet Summary

Rev. March 8, 1999

Features

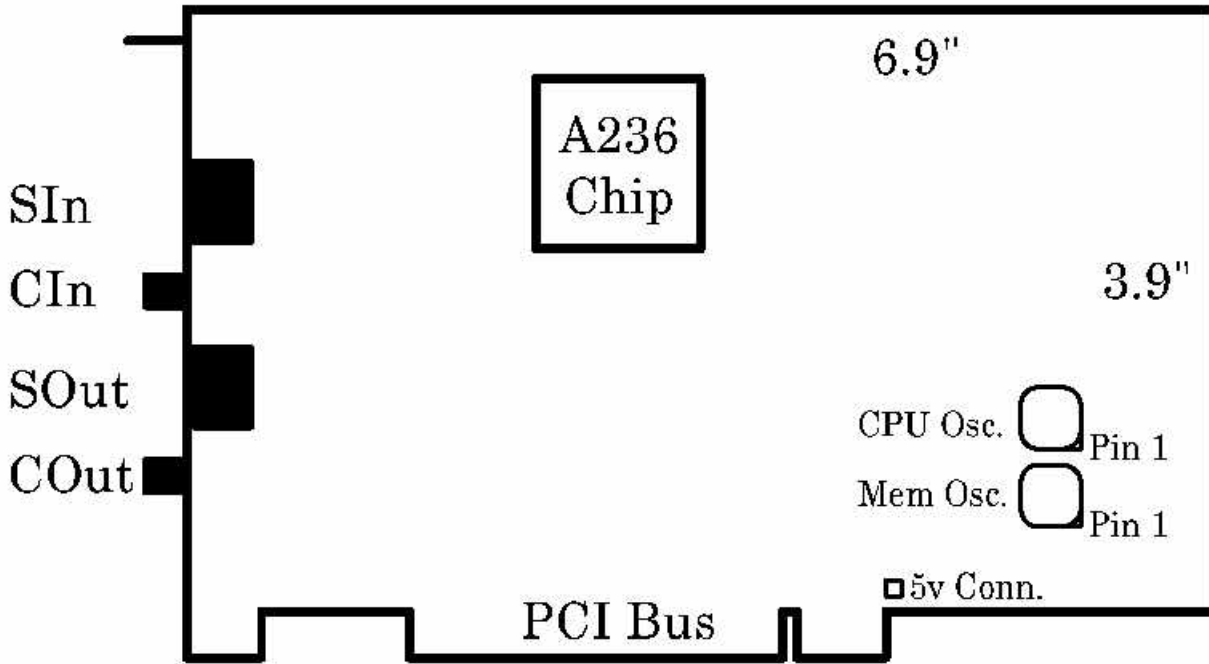
- **Fully user-programmable, A236-based Video Digital Signal Processor Board interfaced to Thomson-CSF FingerChip(tm) fingerprint sensor**
- Adapter socket and interface board are installed in place of video decoder chip in A236 Evaluation Board #2 and are connected to an external fingerprint reader board
- Full documentation is provided so the board can be interfaced by customer to custom input devices or other types of fingerprint sensors
- Fingerprint option includes interface board, RJ45 cable and fingerprint reader board with Thomson-CSF FingerChip(tm) sensor
- Very high speed reading (4 million samples/S typ.) of data from fingerprint sensor is provided
- PCI interface
- Specifically intended for development of A236-based, embedded fingerprint capture and verification systems
- Enables customer to develop own fingerprint verification software (unit does not include fingerprint verification software)
- Enables customer to easily optimize the human factors of new systems
- Provides simultaneous, continuous, fingerprint image capture, processing AND display
- Video output can be used for visual debugging of the processing of incoming images
- Specifically designed for ease of programming using our parallel-enhanced, ANSI-compatible C compiler
- Existing C programs can be compiled to run on the A236 Chip, and performance-sensitive loops can be modified to use our parallel enhancements to C
- Programs are small, execute very efficiently and can be optimized easily, and their execution speeds can be forecast easily
- Suite of software development tools puts you in full control of the program

- Development tools include a parallel-enhanced C Compiler, assembler, linker, loader, simulator, and fingerprint sensor and video encoder device drivers
- Simple programming model
- Graphical user interface to tools interfaces to the board
- **Powered by Oxford Micro Devices, Inc.,'s A236 Video DSP Chip that provides:**
 - 32-bit *Structure Processing Instruction Set* provides fast instruction execution and single-instruction parallel operations on C-like parallel data structures
 - Four 2x8-/16-bit vector processors, one 24-bit scalar processor and on-chip Motion Estimation Coprocessor for high video compression performance
 - Four 16-bit x 16-bit multiply-adds, each with 40-bit accumulation, per CPU Clock
 - Supports 16-bit parallel arithmetic, and normal and saturation, signed and unsigned, 8-bit parallel arithmetic
 - Native support for operations upon monochrome and composite color video data
 - Superior data movement capabilities including extremely powerful, parallel-byte and -word addressing on arbitrary byte addresses
 - Linear 16 MB address space is used for all program and data storage for ease of programming
 - On-chip, synchronous, burst pipelined, 64-bit wide, 1 KB Instruction and Data Caches with efficient, 64-byte transfers and *use-as-fill*
 - 4 MB, 32-bit wide, 100 MHz, 400 MB/S Synchronous DRAM on-board
 - General purpose, RS-232 serial port with programmable baud rate
- Analog video output using Samsung KS0125 Video Encoder Chip
- Composite and S-Video outputs
- PAL and NTSC video output
- For Microsoft Windows 95

Applications

Point-of-sale terminals	Cellular phones
Door locks	Telephones
Slot machines	Electronic commerce
Computer security systems	Security systems

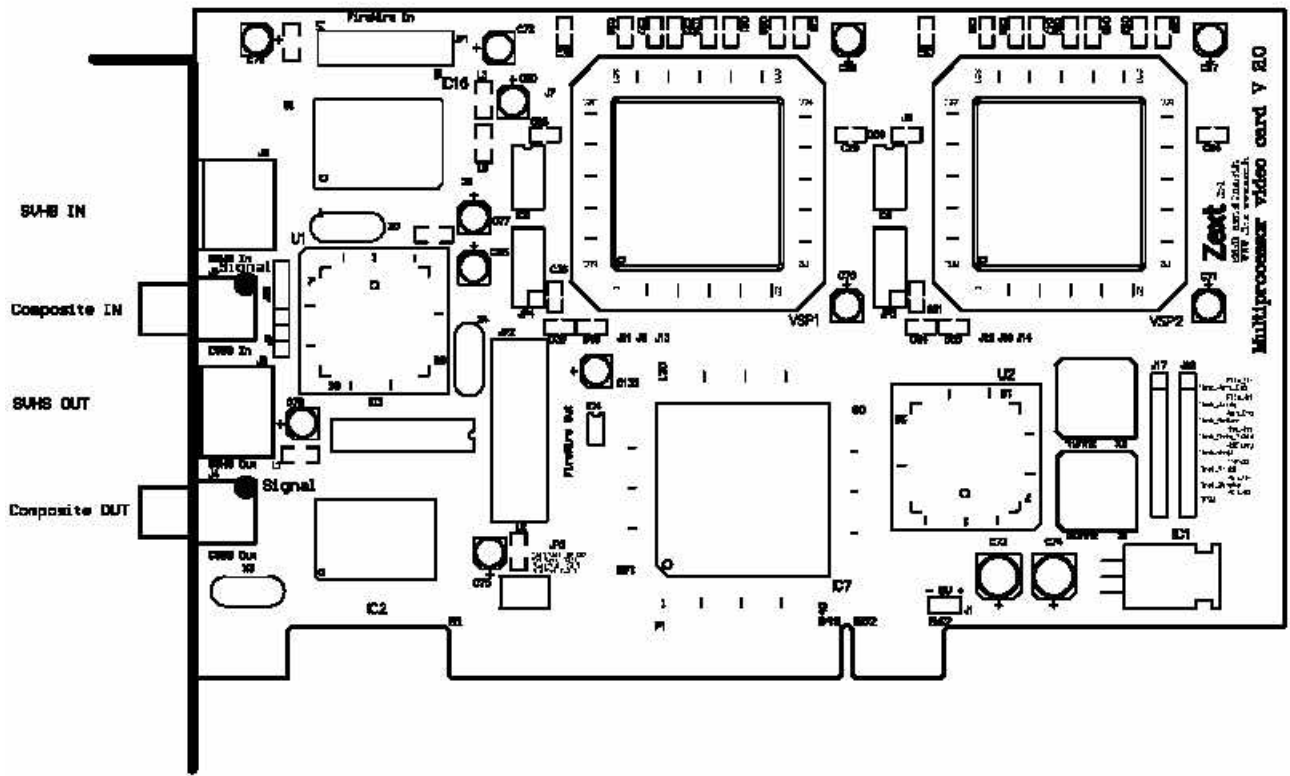
Drawing of Basic Board with Single A236 Chip



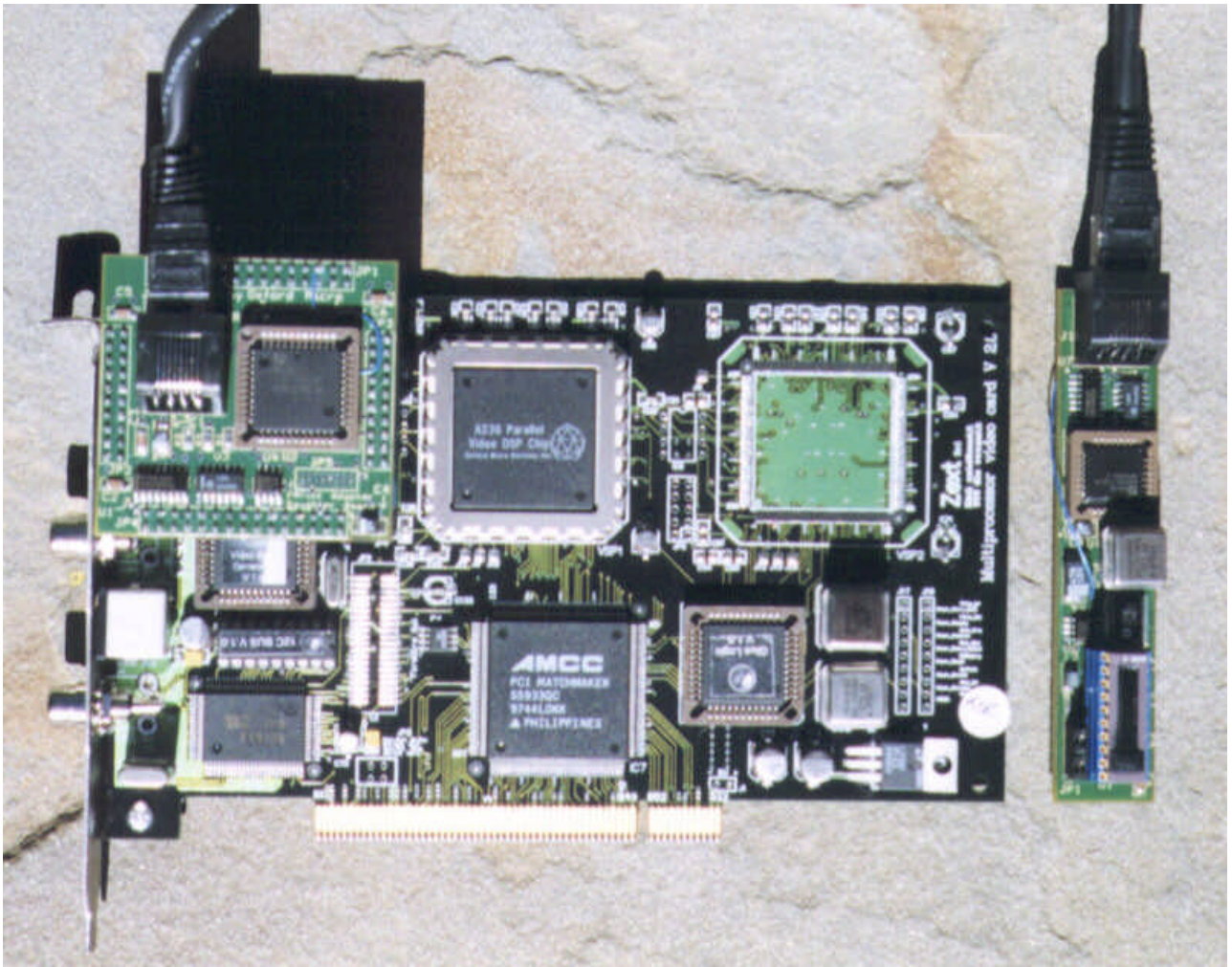
Legend:

- **SIn** - S-Video input (not available)
- **CIn** - Composite video input (not available)
- **SOut** - S-Video output
- **COut** - Composite video output

Layout of Front of Basic Board Showing Key Components (below)

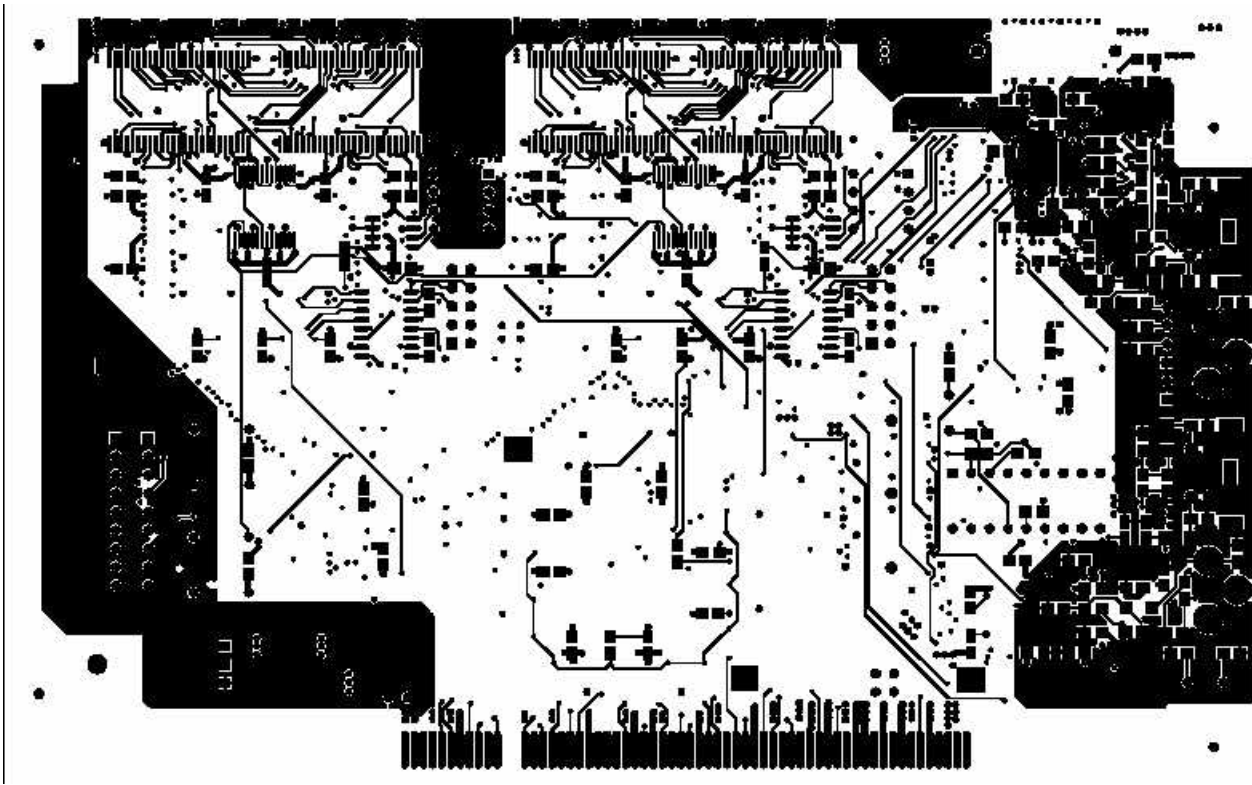


Photograph of Front of Board, Interface Board and Reader Board (below)

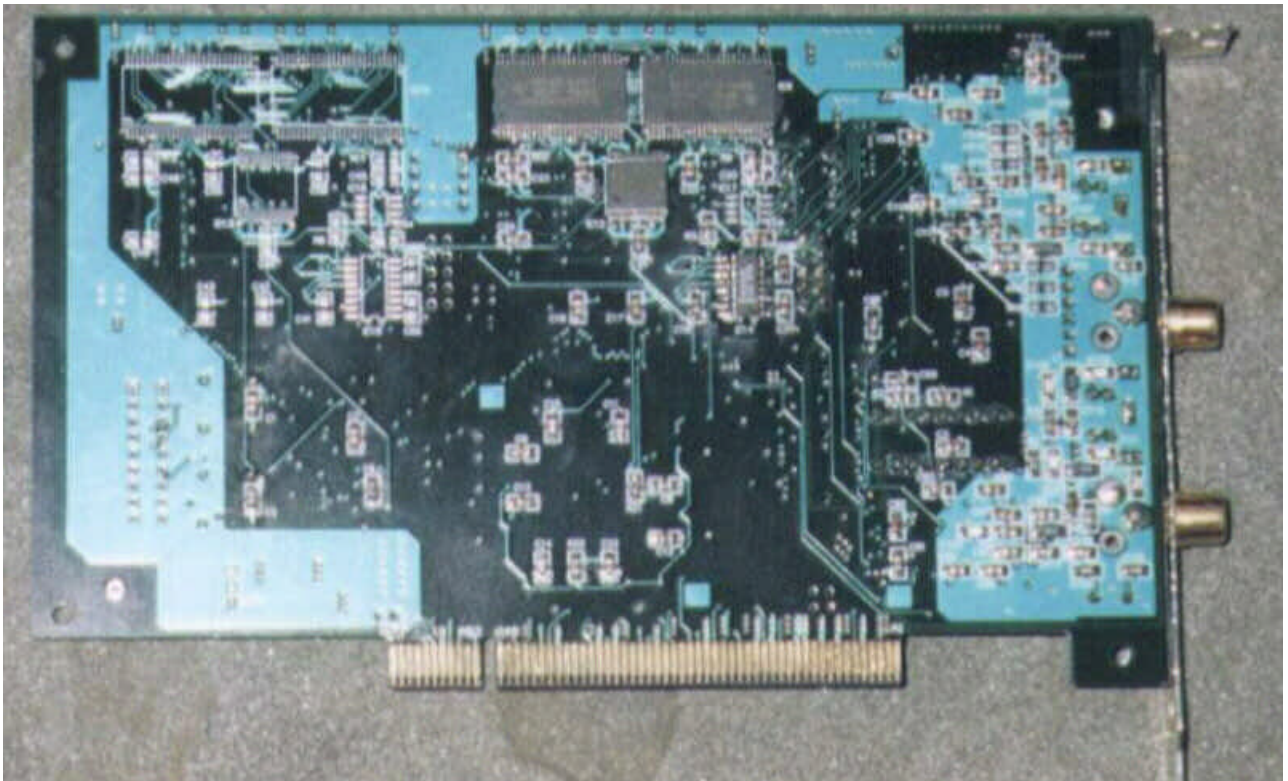


NOTE: A clearance of at least 2.0 inches on the component side of the board is required.

Layout of Back of Board Showing Key Components (below)



Photograph of Back of Board (below)



Oxford Micro Devices, Inc.

*Lantern Ridge Office Park; 731 Main Street, Bldg. 2, Suite B3; Monroe, CT 06468 USA
tel. 203-445-0562; fax 203-445-0564; e-mail: info@omdi.com; Web: <http://www.omdi.com/>*

Copyright ©1997 to 1999. All rights reserved. Patents pending. All trademarks are the property of their respective owners and are used for product identification purposes only.

