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Find the *Cognex MVS-8100* at our website: ***Click HERE***

High-Performance PCI Frame Grabber for Host-based Processing

The Cognex MVS-8100™ is a PC-based machine vision hardware and software package that combines the power of Intel's MMX instruction set with Cognex's industry leading machine vision software to provide unmatched price and performance in machine vision.

With the MVS-8100, you get a high performance PCI machine vision frame grabber and a comprehensive vision software library that runs on the host PC's MMX processor. The vision tool library, which includes our revolutionary *PatMax*® technology, gives you the broadest choice of object location technology available from any company in the world.

The MVS-8100 is ideally suited for OEMs, system integrators, and advanced manufacturing engineers looking to solve demanding applications in guidance, alignment, inspection, and gauging with a cost effective vision system.

High Speed Image Transfer

The Cognex MVS-8100 PCI frame grabber is a high performance imaging platform for your host PC computer. As a PCI bus master, it provides high-speed image transfer to the host for processing and display, enabling fast vision application operation and a single-monitor man-machine interface.

The MVS-8100 frame grabber is designed to capture and transfer high-quality grey-scale images from up to four multiplexed RS-170 or CCIR cameras with image formats of up to 640 x 480 (RS-170) and 768 x 570 (CCIR). The board supports rapid reset cameras for high acquisition rates of rapidly moving parts, and non-interlaced progressive scan acquisition of arbitrary numbers of video lines. These enable you to achieve significantly higher throughput for your application. And, the system provides a high speed opto-isolated triggering and strobe firing interface.

Advantages

- Features fast image transfer, pipelined processing, and on-board display port
- Provides on-board, automatic light control
- MMX accelerated suite of vision tools provide the highest performance host-based machine vision software available
- Graphical tool library interface and support for Microsoft Visual Basic and Visual C/C++ compilers under Windows 95 or NT provides fast application prototyping and development



The MVS-8100 includes a PCI frame grabber and an MMX-accelerated vision software library for high performance host-based machine vision.

Other features include:

Fast image transfer in parallel with acquisition

The 8100 has a unique image transfer control system that ensures that the image captured by the camera is transferred to the host PC for analysis as soon as the acquisition is complete. There is no need to wait for transfer of the image from frame grabber memory to the PC. Each acquisition is also stored in the frame grabber's image memory buffer and can be accessed by the PC in the event of image data loss during the transfer operation across the bus.

Direct memory access for acquisition

The 8100 can acquire images directly to multiple pre-allocated buffers in PC memory. One advantage of this feature is the ability to buffer several images in memory prior to processing.

On-board light optimization

The 8100 also provides on-board circuitry to control the image formation system. Light type selection and intensity can be automatically controlled in order to optimize the performance of the vision application.

Pipelined processing

For high speed applications, the 8100 provides pipelined processing, whereby an image can be processed at the same time the system is acquiring another image. This feature is essential in time critical applications.

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High Performance Vision Tool Library

The MVS-8100's software tool library is based on Cognex vision technology deployed in over 85,000 vision systems worldwide. The library includes a range of industry-leading image processing and high-level host-based image analysis tools. These tools are designed to locate objects or patterns, measure their geometric properties, and read characters and codes – with reliable, accurate, and repeatable results. Additionally, these tools have been optimized to take advantage of the processing power of the MMX host CPU. For a complete description of the software available for the MVS-8100, consult the *MVS-8000™ Product Family Software Overview*.

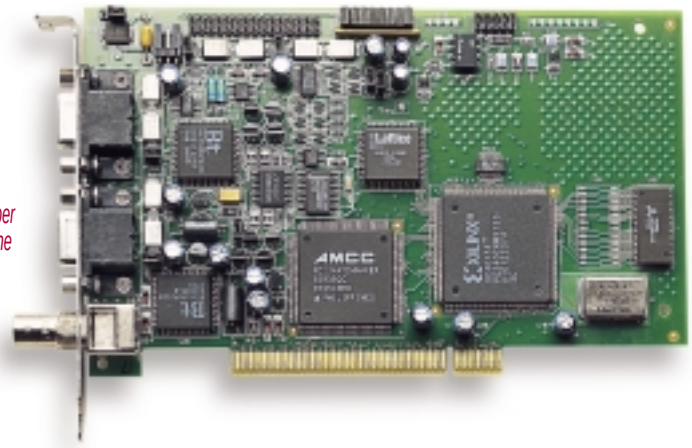
Choice of Software Development Environments

The Cognex MVS-8100 offers users a choice of software development environments with which to build vision applications.

For building applications graphically, users can choose Cognex's Object Manager Interface™ (OMI), an easy-to-use, object-oriented software development environment. OMI enables users to quickly prototype and deploy applications using graphical tools while maintaining access to industry-standard Microsoft Development tools such as Visual Basic and Visual C/C++.

For complex applications requiring greater flexibility and customization, users can choose the Cognex Vision Library™ (CVL) interface, a C++ based environment which was designed to offer flexible, low-level access to Cognex vision tools. CVL enables users to modify the sequence of vision processing operations, develop custom tools, and link vision tools together, providing the power and flexibility required to solve even the most complex vision applications. Vision applications written in C++ and created using the CVL interface are transportable across all members of the MVS-8000 product family, although there may be modifications required due to I/O and bus differences.

Hardware Specifications	
Physical Configuration	• Single-slot PCI bus form factor • 4.2" x 6.875" (107mm x 175mm)
Host PC Requirements	• 133MHz Pentium class CPU or greater (MMX required for PatMax® software) • PCI VGA display adapter operating in minimum 256 color mode, with support for Direct Draw • One open +5V/32-bit PCI expansion slot • Microsoft Windows 95 or NT 4.0 operating system
Memory	• 512K video memory
Video Input	• Up to four multiplexed RS-170 or CCIR cameras • RS-170: Up to 640 x 480 image size • CCIR: Up to 768 x 570 image size • One rapid reset camera • One progressive scan camera, with user controllable number of input lines • Full or half resolution acquisition • Supports external camera sync
Host-based Display	• PCI bus master • DMA to PC memory or VGA card in parallel with acquisition • Color graphics overlay
Parallel I/O	• High speed opto-isolated trigger input • Opto-isolated strobe output • Opto-isolated accept/reject output
External Light Control	• Dynamic light intensity control for up to four cameras via RJ-11 digital connection
Power Consumption	• +12V@2A maximum • -12V@0.2A maximum • +5V@3.0A maximum • Dissipates approximately 27 watts
Environmental	• Operating temperature: 10 to 45 degrees C • Humidity: 10 to 90%, non-condensing



The Cognex MVS-8100 PCI frame grabber provides high speed image transfer to the host for processing and display.

COGNEX Vision for Industry®

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