

- Flexible design supports legacy cameras as well as the latest quad-speed, color, and large format analog cameras
- Allows fast and reliable image transfer
- Provides tight integration with Cognex software libraries, for highest performance

The Cognex® MVS-8510™ Series of machine vision frame grabbers supports the latest high-speed analog camera technology. With a system cost close to that of direct connect cameras, and the bandwidth, reliability, and integrated I/O of a full-featured frame grabber, the MVS-8510 Series is in a price-to-performance class all its own. In addition, these half-slot frame grabbers are backward compatible with legacy analog cameras, while supporting new buses and operating systems. This backwards compatibility makes the MVS-8510 the perfect choice for bringing existing applications forward to the future.



*The MVS-8510e models support up to four independent high-speed analog cameras, in a variety of formats.*

### Fast Image Transfer in Parallel with Acquisition

Unlike direct connect camera technologies, MVS-8510 frame grabbers provide high-speed image transfer directly to system memory, with minimal CPU impact. This frees the PC host processor for image analysis, motion control and application management. MVS-8510 frame grabbers maximize acquisition speed and efficiency with pipelined processing and on-board image buffering, which allows new images to be acquired while the previous image is being transferred.

### No Need for External I/O

By incorporating on-board triggers, strobes and general-purpose TTL I/O, the MVS-8510 Series eliminates the need for additional I/O hardware in the PC. All input lines generate interrupts based on programmable rising or falling edges and variable pulse widths, providing compatibility with a wide variety of third-party sensors. These features provide users with a closed-loop system that ensures complete reliability and control from trigger to image transfer.

### Software Development Environments

As with all Cognex frame grabbers, the MVS-8510 Series supports Cognex high-performance machine vision software to meet the speed, accuracy and reliability requirements of the most demanding applications.

**VisionPro®** machine vision software is a suite of Cognex software tools for the Microsoft® Visual Studio®.NET programming environment. VisionPro combines the power and flexibility of advanced programming with the ease of development of a graphical prototyping environment. This enables OEMs, system integrators and automation engineers to quickly develop and deploy custom machine vision applications.

**CVL™** is a C++ library that enables users to develop powerful, fully customized solutions. Users can freely modify the sequence of vision processing operations, define custom tools, link vision tools and perform a variety of specialized vision functions such as pixel-level processing and complex image buffering.

## Camera Support

Extensible architecture allows the MVS-8510 to maintain support for existing cameras while easily adding new ones. From legacy cameras to the latest high-speed, color, and large-format analog technology, the MVS-8510 Series meets all application requirements.

**MVS-8514e.** With four completely independent A/D converters and support for quad-speed cameras, the MVS-8514e PCI Express frame grabber is built for maximum speed. It manages asynchronous or simultaneous acquisitions from up to four quad-speed cameras. The MVS-8514e features 16 configurable I/O points and supports any mix of high-speed, high-resolution, progressive-scan, and rapid-reset cameras.

**MVS-8511e.** The MS-8511e features four acquisition channels multiplexed to a single A/D converter. With 16 configurable I/O points and support for quad-speed cameras, this PCI Express frame grabber is ideal for price-sensitive yet demanding applications.

**MVS-8514.** The MVS-8514 features four completely independent acquisition channels, 16 configurable I/O points, and PCI bus architecture. This frame grabber can manage asynchronous or simultaneous acquisitions from up to four quad-speed analog cameras.

**MVS-8511.** The MVS-8511 incorporates four channels multiplexed to one A/D converter. This PCI bus frame grabber features 16 configurable I/O points and supports up to four quad-speed cameras.



	MVS-8514e	MVS-8511e	MVS-8514	MVS-8511
<b>Acquisition</b>				
Video input	4 independent	4 multiplexed	4 independent	4 multiplexed
DMA channels	4	1	4	1
Camera support	Progressive and interlaced, single-speed to quad-speed			
<b>Memory</b>				
FIFO acquisition buffer	16MB	8MB	16MB	8MB
<b>I/O</b>				
Parallel I/O	16 bi-directional TTL			
Configurable trigger inputs	4	1	4	1
Configurable strobe outputs	4	1	4	1
Opto-isolation	Opto-isolation available via break-out box			
<b>Architecture</b>				
Bus	PCI Express x1		PCI (32-bit, 33/66 MHz)	PCI (32-bit, 33 MHz)
PC requirements	One available PCI Express expansion slot		One available PCI or PCI-X expansion slot	
<b>Mechanical</b>				
Form factor	PCI Express short card 107mm (4.2in) x 168mm (6.6in)		PCI short card 107mm (4.2in) x 168mm (6.6in)	
<b>Power</b>				
Board power consumption	+3.3VDC @ 2A max; +5VDC @ 0.2A max; +12VDC @ 0.3A max		+3.3VDC @ 0.5A max; +5VDC @ 1.3A max	
Camera power	Pass-through +12VDC from PC power supply			
<b>Environmental</b>				
Operating temperature	0°C to 50°C (32°F to 122°F)			
Operating humidity	10% to 90% non-condensing			
<b>Certifications</b>				
Approvals	FCC (Class A), CE (Class A), KCC, RoHS-compliant			

# COGNEX

Companies around the world rely on Cognex vision and ID to optimize quality, drive down costs and control traceability.

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