EureCard™
JUNIOR 4™

Low-cost capture board for video surveillance applications

- Cost optimized
- Full frame acquisition in real time
- Improved switching acquisition, up to 4 cameras
- Color PAL/NTSC, monochrome CCIR/EIA/RS-170

- **MultiCam™** and standard drivers compatible

- Available in large quantities to OEMs

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EURESYS™
Excellence in vision

JUNIOR 4™ features and software

Video and bitmap image formats

The Junior 4 capture board acquires color or monochrome video images from composite interlaced video signals. The NTSC and PAL color standards are supported. The monochrome video acquisition complies with the so-called CCIR (625 lines) and EIA/RS-170 (525 lines) standards. Acquisition of full frame (two fields) or single field images is selectable. Before storing the acquired image into the destination memory buffer, a pixel format conversion takes place in real-time. Numerous color or monochrome formats can be chosen: RGB15, 16, 24, 32, Y8, YUV4:2:2, YUV4:2:0, packed or planar, and more.

Acquisition

Before PCI transfer to the PC, the acquired images can be scaled to any format smaller than the original one, down to 1/12. The downscaling process involves a sophisticated hardware device, performing an accurate interpolation in both the horizontal and vertical directions. The image buffer for a downscaled image is smaller in size, and its transfer needs less PCI bandwidth.

Moreover, any part of the incoming image can be retained for further PCI transfer, allowing to define a region of interest. All desirable adjustments can be applied to the images during acquisition, such as video contrast, brightness, color saturation and hue (NTSC only).

Bus mastering

The Junior 4 capture board is a PCI bus mastering agent that directly stores the acquired images into the PC physical memory without CPU involvement. As a unique feature, the Junior automatically recovers the scatter-gather virtual memory mapping to present the data as a regular bitmap image in a user allocated memory buffer.

Driver interoperability

Thanks to its basic architecture, Junior 4 may be operated with most of the Conexant® Bt878/CN878A based drivers.

MultiCam™

The MultiCam driver enables the consistent control of several Junior 4 capture boards, using an arbitrary number of cameras, from one or several software applications. MultiCam allows defining channels linking cameras to buffers in the PC memory. The MultiCam channel identifies all parameters ruling the acquisition process from a camera. The camera features, such as its video standard, are reported through simple parameters. Other parameters control the acquisition conditions, such as image contrast, downscaling or acquisition rate.

The channels can be activated simultaneously. The MultiCam driver automatically manages the switching among cameras and frame grabbers to optimize the acquisition speed and the display refresh rate. The channel concept considerably eases the management of video surveillance applications using multiple cameras.

Image processing applications immediately benefits from the multithreading environment offered by MultiCam. MultiCam complies with most development environments. The native API is standard C. ActiveX controls enable the use of Visual Basic.

The MultiCam driver runs under Windows 2000, XP, Server 2003 and Linux (Redhat 7.3, Redhat 8.0).

EasyMultiCam™

Offered as a part of the eVision tools suite, EasyMulticam is a set of powerful C++ classes embedding the whole MultiCam functionality. The object oriented eVision functions define image containers suitable for image handling, display, processing and analysis. The image objects inherit acquisition methods from EasyMultiCam. Implementing the image capture code into a video surveillance application is now straightforward.

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