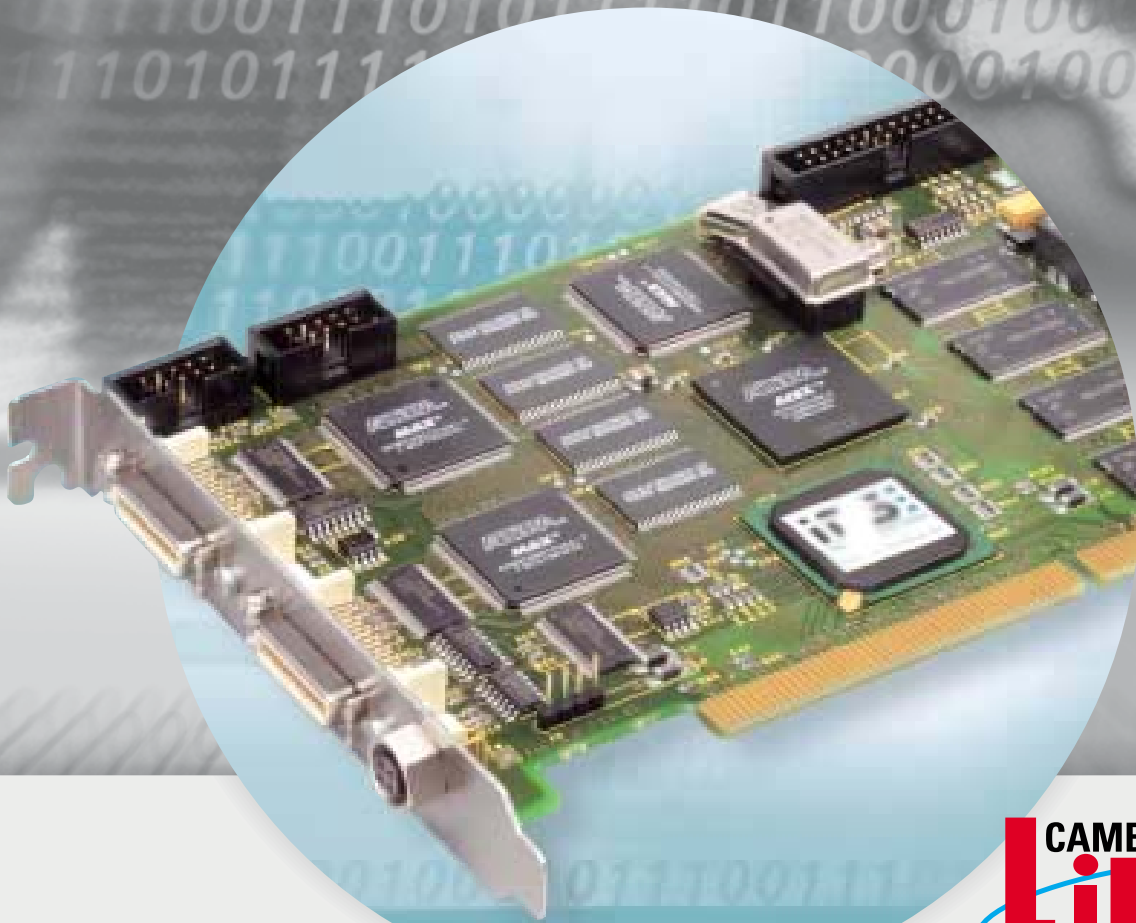


It's so easy

BARRACUDA-CL



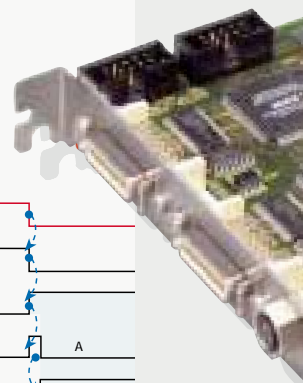
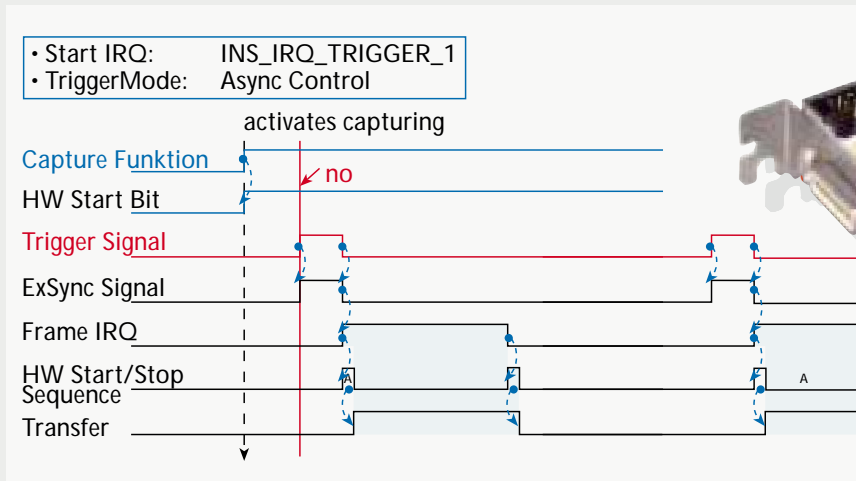
BARRACUDA-CL

PCI frame grabber with Camera Link™ interface

- Asynchronous image capture from up to two cameras
- External trigger input
- Supports monochrome and color image acquisition
- 16 MB memory on board
- Look up tables
- Digital inputs and outputs
- Scatter gather DMA controller
- Pixel packer
- 12 V power supply for cameras
- Powerful Software Development Kit for Win 2000 and XP
- Script Language CCS for cameras (Camera Configuration Script)
- Extensive sample programs in source code available

PCI Frame

BARRACUDA



BARRACUDA-CL

The BARRACUDA-CL is an industrial PCI frame grabber with Camera Link interface for machine vision applications. Camera Link is the new standard for digital high resolution and high speed area and line scan cameras. It supports monochrome cameras as well as true colour cameras and uses a standardized video connection cable. The cost-effective BARRACUDA-CL supports the most popular camera suppliers. The list below of supported cameras is continually extended. If you need a special camera or camera mode please contact us.

Please notice the detailed information of the camera manufacturer regarding the technical specifications of the cameras (i.e. the TELI CSB4000CL is able to supply 83 images/s in a resolution of 640 x 480).

Image Acquisition - asynchronous and fast

The BARRACUDA-CL supports 8, 10, 12, 14, 16 and 24 Bit Camera Link cameras. If you need it the 16 Bit input look-up-table provides you with 8 Bit monochrome images from a 10, 12, 14 or 16 Bit camera. The transformation is done in real time without CPU load. The BARRACUDA-CL has no reduction regarding the number of pixels per line of the camera. The BARRACUDA-CL supports two Camera Link inputs in Base configuration. For image acquisition there two operation modes available: Continuous Mode – in this mode all the images coming from the camera are acquired continuously, are processed, stored and displayed. In the Asynchronous Control Mode the images will be acquired after an external trigger event. This is the typical operation mode for industrial automation lines.

Data formatting

In the data path of the BARRACUDA-CL the board has a powerful pixel formatter and pixel packer which packs the data in a form to transfer them over the PCI bus into the host memory or the VGA card very effectively. A scaler is able to reduce the images in real time without CPU load.

Image memory for the accuracy of your application

Because of less pixel data, frame grabber boards for standard video signals have no on board memory. But using high resolution cameras and/or high speed cameras you will get an overload of the PCI bus. Therefore the BARRACUDA-CL has on board memory of 16 MB. Of course there is also a transparent mode to grab the data into the host memory directly.

Supported cameras (List will be continually extended)

Manufacturer	Type	Pixel formats	Resolution	Images/sec
Adimec	1000-M	10 Bit	1004 x 1004	50
Basler	A102K	10 Bit	1392 x 1040	14,8
Pulnix	TM-1020-15-CL	8 Bit	1024 x 1024	15
SVS Vistek	SVS085-COL	24 Bit	1280 x 1024	bis 25
TELI	CSB4000CL	10 Bit	2048 x 2048	7

Grabber



A-CL



PCI interface

The transfer into the PC occurs over the 32 Bit PCI bus. Because of a high performance scatter-gather DMA controller the transfer is without CPU load.

Bitmap and DirectDraw display with non destructive overlay

To display the images on the VGA screen the driver supports the Bitmap and the DirectDraw overlay surface mode. In the Bitmap mode, the standard mode for most of the applications, the images are transferred via DMA into the host memory for image processing.

Further the software development kit supports Microsofts DirectDraw Overlay Surface Mode. This gives you the possibility to realize non-destructive overlay without CPU load. The supported VGA Colour formats are: 8 Bit, 15 Bit and 16 Bit High Colour, 24 Bit and 32 Bit True Colour.

Power supply for the camera

The BARRACUDA-CL supplies the 12 V power supply for the camera.

Digital inputs and outputs

Integrate the BARRACUDA-CL into automation processes via the on board digital inputs and outputs. A separate board with opto couplers can switch 24 V directly. This board is available as an option. It has 4 interrupt driven trigger inputs, 8 digital inputs and 8 digital outputs.



RS232 communication interface

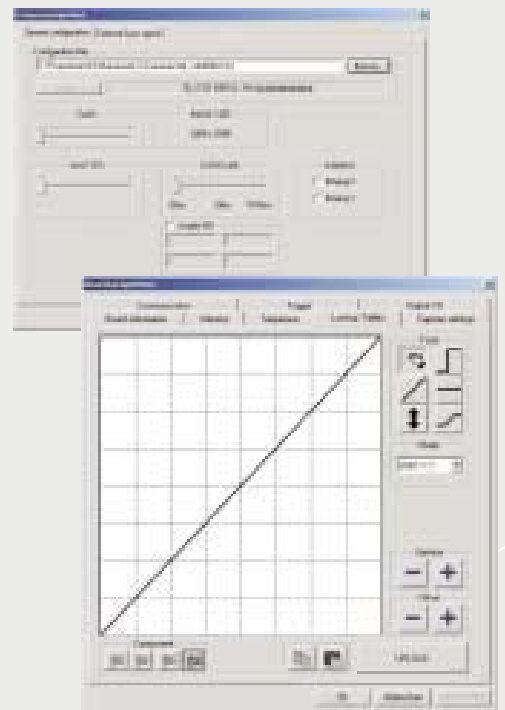
The BARRACUDA-CL has two integrated serial interfaces to control the camera parameters. Via the software development kit all the functions to control the cameras are available.

SDK software development kit - It's so easy

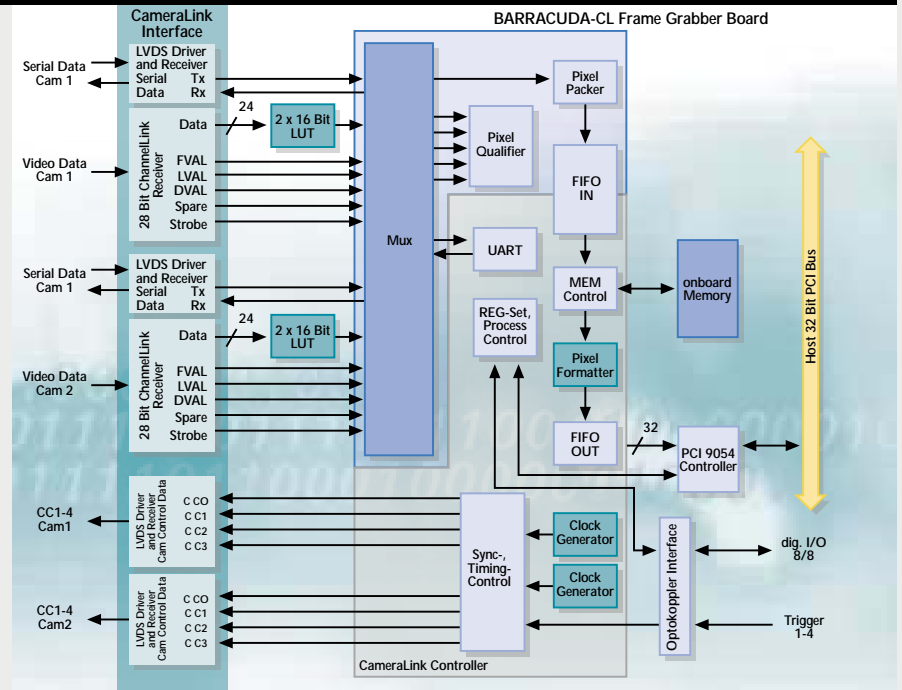
The shipment of the frame grabber contains the high performance software development kit for easy integration of the hardware into your own software. The DLL supplies functions to communicate with the frame grabber and the connected cameras, powerful memory management and the CCS camera communication script language with integrated compiler. This is a unique feature of the BARRACUDA-CL and makes it easy to use different cameras with different modes.

CCS camera communication script gives you the maximum flexibility

CCS is a small programming language. The adaptation of different camera protocols from different camera manufacturers comes with the frame grabber as an ASCII file. The CCS file is editable and modifications can be done by the BARRACUDA-CL user. A CCS compiler is included in the software development kit. This is the solution to communicate with different cameras with different protocols in a high flexible way. A software application based on the BARRACUDA-CL driver can change the camera without changing your own software or without compiling. The CCS is loaded at run time.



BLOCK DIAGRAM BARRACUDA-CL



DELIVERY:

- PCI board
- Drivers for Windows 2000/XP
- Documentation
- Power adapter for the cameras

ORDER DETAILS:

- IS-BARRACUDA-CL PCI frame grabber
- IS-CABL-CAMLINK-3 Video connection cable 3 m
- IS-CABL-CAMLINK-5 Video connection cable 5 m

If you need another cable please contact our sales department.

Electronic Modular Solutions Ltd.

Tel: +44(0)116 2775730 • Fax: +44 (0)116 2774973

www.ems-digitalmedia.com • E-Mail: sales@ems-digitalmedia.com