12/18/2023

Datasheet

eGrabber Driver

Coaxlink and Grablink Duo driver

- C++ API
- C# API
- Python API
- Support for single-thread and multi-thread callbacks for real-time event handling
- Support for script files to configure the frame grabber and camera
- Compatible with GenICam, GenApi and GenTL
- Compatible with Windows, Linux and macOS

Main benefits

A single API for GigE Vision, CoaXPress & Camera Link cameras

eGrabber Gigelink, a new optional add-on to eGrabber, provides a universal, hardware-independent access to GigE Vision cameras. eGrabber Gigelink allows the user to seamlessly integrate GigE Vision cameras from multiple brands in the same application, bypassing the proprietary camera drivers. With eGrabber, programmers can then use the same concepts, objects, and function calls to acquire images from GigE Vision cameras of any brand, from any CoaXPress cameras and any Camera Link camera.

C++,C# and Python

Euresys::EGrabber is a library of C++ classes. Moreover, eGrabber can be used in .NET languages (C#, VB.NET, etc.) via a .NET assembly. Python bindings are also provided as a Python wheel installation package.

Works great in eGrabber Studio

Also available in the same ecosystem, eGrabber Studio is the evaluation and demonstration application of eGrabber. It allows testing image acquisition, checking and configuring the parameters (GenAPI features) of the cameras and frame grabbers and recording the acquired video onto the hard disk. Live histogram, profile and pixel information display are also available.

GenICam

The eGrabber Driver and eGrabber Gigelink are also official GenICam GenTL producers. They seamlessly connect and provide image acquisition services to any application compatible with GenTL.

Compatible with Windows, Linux and macOS

- All versions from Windows 7 SP1 to Windows 11, including the server versions, on x86_64 (64-bit) platforms
- Designed to be independent of the Linux distribution, on x86_64 and AArch64 (ARM64) platforms
- Designed to support all macOS versions from version 10.12 on x86_64 (64-bit) platforms

Other benefits

Genapi script files

eGrabber supports readable script files that can be used to automate camera and frame grabber configuration. Their syntax uses a subset of JavaScript. Using a script file provides several advantages:

- The camera or frame grabber configuration can be changed without recompiling the application.
- The configuration script can be loaded by eGrabber Studio to validate the configuration outside of the user application.
- A configuration script can be shared by several applications written in different languages.

Callback functions

eGrabber supports the definition of callback functions, functions that are automatically called when specified events occur. eGrabber's events are related to new images (buffers), data streams, the camera and illumination controller, the frame grabber's I/O toolbox or the CoaXPress interface events. Single-thread and multi-thread callbacks are supported.

Specifications

Software

Host PC Operating System

Microsoft Windows 11, 10 for x86-64 (64-bit) processor architecture

Linux for x86-64 (64-bit) and AArch64 (64-bit) processor architectures

macOS for x86-64 (64-bit) and AArch64 (64-bit) processor architectures

Offices

- Europe, Middle East & Africa
  Euresys SA
  Contact support : support.europe@euresys.com

  Sensor to Image GmbH
  Contact support : support.europe@euresys.com

- China
  Euresys Shanghai Liaison Office
  Contact support : support.china@euresys.com

  Euresys Shenzhen Liaison Office
  Contact support : support.china@euresys.com

- Japan
  Euresys Japan K.K.
  Contact support : support.japan@euresys.com

- South Korea
  Euresys South Korea Liaison Office
  Contact support : support.korea@euresys.com

- Asia (other countries)
  Euresys Pte. Ltd.
  Contact support : support.asia@euresys.com

- North, Central & South America
  Euresys Inc.
  Contact support : support.usa@euresys.com

  TKH Vision Experience Center
  Contact support : support.usa@euresys.com

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Datasheet

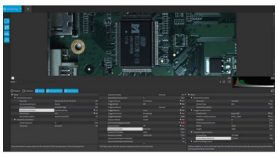
eGrabber Studio

Powerful image acquisition

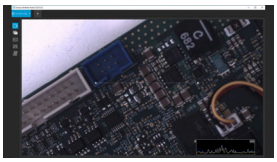
- eGrabber's evaluation and demonstration application
- Compatible with GigE Vision cameras (with the optional Gigelink library)
- Compatible with CoaXPress cameras (with the Coaxlink cards)
- Compatible wih Camera Link cameras (with Grablink Duo)
- Recorder pane giving access to image recording with the optional eGrabber Recorder library
- Compatible with Windows, Linux, and macOS

Main benefits

Live histogram display



Access the camera's and frame grabber's GenICam parameters



New image profile display

eGrabber Recorder integration

A single API for GigE Vision, CoaXPress & Camera Link cameras

eGrabber Gigelink, a new optional add-on to eGrabber, provides a universal, hardware-independent access to GigE Vision cameras. eGrabber Gigelink allows the user to seamlessly integrate GigE Vision cameras from multiple brands in the same application, bypassing the proprietary camera drivers. With eGrabber, programmers can then use the same concepts, objects, and function calls to acquire images from GigE Vision cameras of any brand, from any CoaXPress cameras and any Camera Link camera.

Compatible with Windows, Linux and macOS

- All versions from Windows 7 SP1 to Windows 11, including the server versions, on x86_64 (64-bit) platforms
- Designed to be independent of the Linux distribution, on x86_64 and AArch64 (ARM64) platforms
- Designed to support all macOS versions from version 10.12 on x86_64 (64-bit) platforms

Specifications

Software

Host PC Operating System

Microsoft Windows 11, 10 for x86-64 (64-bit) processor architecture

Linux for x86-64 (64-bit) and AArch64 (64-bit) processor architectures

macOS for x86-64 (64-bit) and AArch64 (64-bit) processor architectures

Offices

- Europe, Middle East & Africa
  Euresys SA
  Contact support : support.europe@euresys.com

  Sensor to Image GmbH
  Contact support : support.europe@euresys.com

- China
  Euresys Shanghai Liaison Office
  Contact support : support.china@euresys.com

  Euresys Shenzhen Liaison Office
  Contact support : support.china@euresys.com

- Japan
  Euresys Japan K.K.
  Contact support : support.japan@euresys.com

- South Korea
  Euresys South Korea Liaison Office
  Contact support : support.korea@euresys.com

- Asia (other countries)
  Euresys Pte. Ltd.
  Contact support : support.asia@euresys.com

- North, Central & South America
  Euresys Inc.
  Contact support : support.usa@euresys.com

  TKH Vision Experience Center
  Contact support : support.usa@euresys.com

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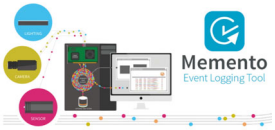
Datasheet

eGrabber Memento

Event logging tool

- Accurate logging of events related to the camera, the frame grabber and its driver as well as the host application
- Graphical representation of time-stamped events on a precise timeline with context information
- Logic analyzer feature to help users analyze selected system events
- Support for setting up, debugging and profiling the system
- Availability with all Coaxlink and Grablink cards in the PC
- Non-intrusive tool requiring low CPU usage
- Compatible with Windows, Linux, and macOS

Main benefits



How does Memento work?

The Memento driver records events such as driver function calls, callbacks, triggers received by the frame grabber, strobe signals sent to the light controller or camera control signals, along with precise time stamps and detailed context information.
In the Memento application, you can display a list of these events with their associated time stamp and useful context information. The events listed are also displayed in a timeline.
Different levels of verbosity are used to filter and display only the most crucial messages or to provide much more detailed log information. Additional display and highlighting options are available based, among others, on the origin or nature of the messages. Search features also allow you to find back messages based on their content.
Memento assists developers during application development and debugging, as well as system operation. It helps them understand the behavior of the machine and pin down the cause of issues such as missed triggers or lost images.

Non-intrusive and powerful tool

Memento runs in the background and builds logs that can be saved and sent back to the support team in case of machine failure. Memento relies on software resources implemented inside the driver of the cards as well as hardware resources on the cards themselves. Memento has been designed to be extremely efficient. It is non-intrusive as the required CPU load is extremely low.
Memento is very powerful as it can collect extremely diverse logging information and provide extensive filtering capabilities, at several levels, based on the nature of logging information or on the requested verbosity level.

A single API for GigE Vision, CoaXPress & Camera Link cameras

eGrabber Gigelink, a new optional add-on to eGrabber, provides a universal, hardware-independent access to GigE Vision cameras. eGrabber Gigelink allows the user to seamlessly integrate GigE Vision cameras from multiple brands in the same application, bypassing the proprietary camera drivers. With eGrabber, programmers can then use the same concepts, objects, and function calls to acquire images from GigE Vision cameras of any brand, from any CoaXPress cameras and any Camera Link camera.

Compatible with Windows, Linux and macOS

- All versions from Windows 7 SP1 to Windows 11, including the server versions, on x86_64 (64-bit) platforms
- Designed to be independent of the Linux distribution, on x86_64 and AArch64 (ARM64) platforms
- Designed to support all macOS versions from version 10.12 on x86_64 (64-bit) platforms

Specifications

Mechanical

Form factor

Format

Cooling method

Housing

Mounting

Connectors

LED indicators

Switches

Dimensions

Weight

PCB connectors

Flat cable

Host bus

Standard

Link width

Link speed

Maximum payload size

DMA

Peak delivery bandwidth

Effective (sustained) delivery bandwidth

Power consumption

Camera / video inputs

Camera interface standard

Interface standard(s)

Maximum link speed

Maximum link width

Camera powering

Connectors

Termination resistor

Formats and standards (HD)

Formats and standards (SD)

Status LEDs

Video inputs

Native resolution

Frame rate

Event reporting

Video presence indicators

ECCO - Extended Camera Link Cable Operation

Number of cameras

Number of cameras (at full frame rate)

Maximum number of cameras

Line-scan cameras supported

Maximum aggregated camera data transfer rate

A/D converter

Maximum camera line rate

Camera Link configuration

Camera Link clock frequency

Supported CXP down-connection speeds

Supported CXP up-connection speeds

Number of CXP data streams (per camera)

Maximum CXP stream packet size

PoCL (Power over Camera Link)

PoCXP (Power over CoaXPress)

Camera types

Camera pixel formats supported

Maximum image size

Frame grabber / video outputs

Interface standard

Interface standard(s)

Maximum link speed

Maximum link width

Maximum data rate

Connectors

Status LEDs

Video delivery

Raw video format(s)

Deliverable video resolution (HD)

Deliverable video resolution (SD)

Audio / Video Outputs

Loop-through

Connectors

Audio modules

Specification

Audio inputs

Number of inputs

Type

Sampling rate

Audio format

Time stamping resolution

Connectors

Audio outputs

Number of outputs

Type

Audio format

Time stamping resolution

Connectors

Area-scan camera control

Trigger

Strobe

Line-scan camera control

Scan/page trigger

Line trigger

Line strobe

On-board processing

On-board memory

Image data stream processing

Flat-field correction

Input LUT (Lookup Table)

Geometrical operators

Bayer CFA to RGB decoder

Pixel binning

CustomLogic

CustomLogic firmware variants

Data stream statistics

Event signaling and counting

Video

On-board video codec

On-board video compression

Video encoders

Number of streams

Video decoders

Video stream control

Bitrate

Video streams resolution

MJPEG encoding performance

Latency

Video processing

General Purpose Inputs and Outputs

Number of lines

Connectors

Usage

Electrical specifications

Filter control

Polarity control

Power output

I/O Toolbox tools

I/O Toolbox composition

Watchdog

C2C-Link

Description

Specification

Streaming

Media transport protocol

Media transport control protocol

RTP transport modalities

Network

LAN interface

LAN connector

Application layer protocols

Transport layer protocols

Internet layer protocols

IP address allocation methods

Number of IP address/MAC address

User authentication and access policy

HTTP and RTSP authentication

WS authentication

Web pages

Access policy

Encryption mechanisms

Web service

HTTPS web pages

Standard and proprietary APIs

ONVIF Profile S 1.0

Proprietary web services

Maintenance client interface

Web pages

User interface

Local interface

System integration

Alarm inputs

Alarm inputs connectors

Relay outputs

Relay outputs connectors

COM

COM connector

Pan/Tilt/Zoom protocol

USB Ports

USB GPS Receiver

USB Storage

Watchdog

Electrical

Supply voltage

Power connector

Power consumption

Power status

AC input

DC output

Rated power

Host system requirements

Processor

System memory

Graphic card

Software

Host PC Operating System

APIs

Memento supported

Related libraries

Environmental conditions

Operating ambient air temperature

Operating ambient air humidity

Storage ambient air temperature

Storage ambient air humidity

Dissipated power

Shock and vibration

Certifications

Certification marks

Safety standards

EMC standards

EMC - Emission

EMC - Immunity

KC Certification

Temperature

Shock and vibration

Flammability

RoHS

REACH

WEEE

Reliability

MTBF

Failure rate

Image processing

Input

Output

Performance

Requirements

Ordering Information

Product code - Description

Options

Included accessories

Optional accessories

Included libraries

Related products

Offices

- Europe, Middle East & Africa
  Euresys SA
  Contact support : support.europe@euresys.com

  Sensor to Image GmbH
  Contact support : support.europe@euresys.com

- China
  Euresys Shanghai Liaison Office
  Contact support : support.china@euresys.com

  Euresys Shenzhen Liaison Office
  Contact support : support.china@euresys.com

- Japan
  Euresys Japan K.K.
  Contact support : support.japan@euresys.com

- South Korea
  Euresys South Korea Liaison Office
  Contact support : support.korea@euresys.com

- Asia (other countries)
  Euresys Pte. Ltd.
  Contact support : support.asia@euresys.com

- North, Central & South America
  Euresys Inc.
  Contact support : support.usa@euresys.com

  TKH Vision Experience Center
  Contact support : support.usa@euresys.com

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Datasheet

eGrabber Gigelink

GigE Vision image acquisition library

- Image acquisition from GigE Vision cameras within eGrabber
- Universal
- Compatible with any GigE Vision camera
- Hardware independent
- Compatible with Windows and Linux platforms

Main benefits

A single API for GigE Vision, CoaXPress & Camera Link cameras

eGrabber Gigelink, a new optional add-on to eGrabber, provides a universal, hardware-independent access to GigE Vision cameras. eGrabber Gigelink allows the user to seamlessly integrate GigE Vision cameras from multiple brands in the same application, bypassing the proprietary camera drivers. With eGrabber, programmers can then use the same concepts, objects, and function calls to acquire images from GigE Vision cameras of any brand, from any CoaXPress cameras and any Camera Link camera.

Universal

Compatible with any GigE Vision camera

Works great in eGrabber Studio

Also available in the same ecosystem, eGrabber Studio is the evaluation and demonstration application of eGrabber. It allows testing image acquisition, checking and configuring the parameters (GenAPI features) of the cameras and frame grabbers and recording the acquired video onto the hard disk. Live histogram, profile and pixel information display are also available.

Bridge towards Open eVision

Thanks to the EGrabberBridge class, images acquired within eGrabber can seamlessly be processed by Open eVision image processing libraries.
Open eVision is a set of image analysis libraries and software tools allowing the processing of images for text and code reading, matching and measurements, 3D processing and Deep Learning inspection. eGrabber Bridge gives access to these libraries by ensuring the smooth interfacing with the camera (handshake and data formats).

Compatible with Neo licensing system

Compatible with Windows and Linux

- All versions from Windows 7 SP1 to Windows 11, including the server versions, on x86_64 (64-bit) platforms
- Designed to be independent of the Linux distribution, on x86_64 and AArch64 (ARM64) platforms

Specifications

Software

Host PC Operating System

Microsoft Windows 11, 10 for x86-64 (64-bit) processor architecture

Linux for x86-64 (64-bit) and AArch64 (64-bit) processor architectures

Ordering Information

Product code - Description

PC4400 eGrabber Gigelink

Related products

PC6514 Neo USB Dongle (empty)

Offices

- Europe, Middle East & Africa
  Euresys SA
  Contact support : support.europe@euresys.com

  Sensor to Image GmbH
  Contact support : support.europe@euresys.com

- China
  Euresys Shanghai Liaison Office
  Contact support : support.china@euresys.com

  Euresys Shenzhen Liaison Office
  Contact support : support.china@euresys.com

- Japan
  Euresys Japan K.K.
  Contact support : support.japan@euresys.com

- South Korea
  Euresys South Korea Liaison Office
  Contact support : support.korea@euresys.com

- Asia (other countries)
  Euresys Pte. Ltd.
  Contact support : support.asia@euresys.com

- North, Central & South America
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  Contact support : support.usa@euresys.com

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  Contact support : support.usa@euresys.com

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Datasheet

eGrabber Recorder

High-performance video recording library

- Highly optimized video recording to disk
- Recording at bandwidth compatible with fast cameras
- Long term recording, limited only by the disk size
- Includes UTC timestamping
- Export to standard TIFF and MKV files
- Compatible with Windows and Linux platforms

Main benefits

Works great in eGrabber Studio

Also available in the same ecosystem, eGrabber Studio is the evaluation and demonstration application of eGrabber. It allows testing image acquisition, checking and configuring the parameters (GenAPI features) of the cameras and frame grabbers and recording the acquired video onto the hard disk. Live histogram, profile and pixel information display are also available.

Make your own recorder

Fast SSDs (such as NVMe PCIe Gen 3 x8 or Gen 4 x4 M.2 SSDs) have become affordable. Their bandwidth is now compatible with the requirements of the faster cameras available.

A single API for GigE Vision, CoaXPress & Camera Link cameras

eGrabber Gigelink, a new optional add-on to eGrabber, provides a universal, hardware-independent access to GigE Vision cameras. eGrabber Gigelink allows the user to seamlessly integrate GigE Vision cameras from multiple brands in the same application, bypassing the proprietary camera drivers. With eGrabber, programmers can then use the same concepts, objects, and function calls to acquire images from GigE Vision cameras of any brand, from any CoaXPress cameras and any Camera Link camera.

Compatible with Neo licensing system

Compatible with Windows and Linux

- All versions from Windows 7 SP1 to Windows 11, including the server versions, on x86_64 (64-bit) platforms
- Designed to be independent of the Linux distribution, on x86_64 and AArch64 (ARM64) platforms

Other benefits

Easy to use

The Recorder library is easy to use and relieves the user from having to care about file size, name, or format.

Timestamping

Recorder is able to compute and store UTC (Coordinated Universal Time) timestamps along with image data.

High performance

Recorder focusses on performance. The library has been highly optimized to exploit the maximum bandwidth of disks. The actual recording throughput will of course depend on the disk capabilities.

Exporting

Recorder stores images in a proprietary highly optimized file format. Images and video can be exported to standard TIFF and MKV files.

Specifications

Software

Host PC Operating System

Microsoft Windows 11, 10 for x86-64 (64-bit) processor architecture

Linux for x86-64 (64-bit) and AArch64 (64-bit) processor architectures

Ordering Information

Product code - Description

PC4401 eGrabber Recorder and Playlink

Related products

PC6514 Neo USB Dongle (empty)

Offices

- Europe, Middle East & Africa
  Euresys SA
  Contact support : support.europe@euresys.com

  Sensor to Image GmbH
  Contact support : support.europe@euresys.com

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  Contact support : support.korea@euresys.com

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