



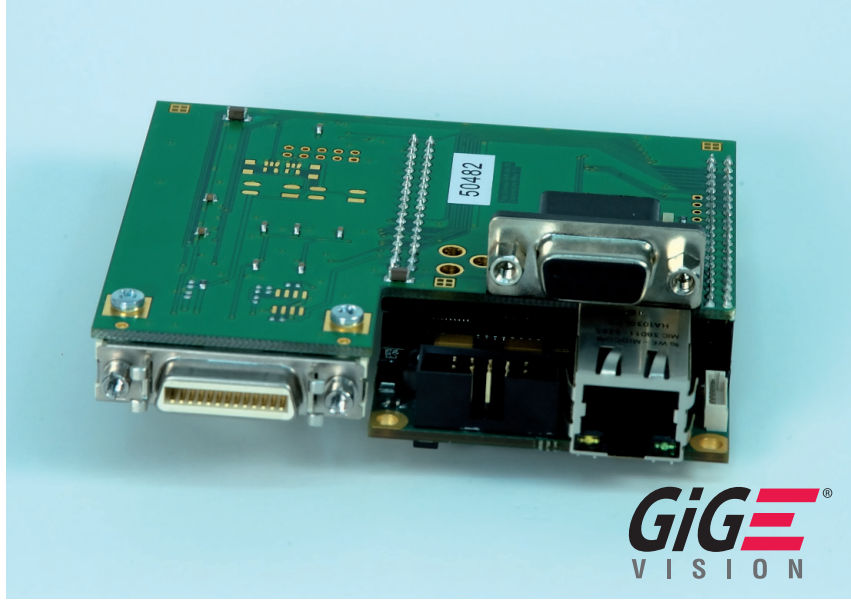
CameraLink to GigE Vision® converter

Applications:

- Quality inspection and sorting systems
- Medical and scientific imaging systems
- Military sensing systems
- Features
- Transmits imaging data from CameraLink® Base cameras at Gigabit Ethernet rates
- Ultra-low latency and jitter
- GigE Vision® and GenICam™ compliant

Sensor to Image S3E-1200 GigE Vision® boards stream video and imaging data in real time over standard GigE connections between Base-configuration CameraLink® cameras and PCs using the industry-standard GigE Vision® protocol.

By leveraging the inherent capabilities of GigE, the S3E-1200 boards overcome the limitations of traditional Camera Link-based systems: the need for proprietary frame grabbers, short distances between cameras and PCs and no networking flexibility for interconnecting multiple cameras or centralizing control and maintenance. S3E-1200 board grabs data from Camera Link cameras, convert it to IP quickly and efficiently, and send it to PCs over GigE links using Cat-5e or Cat6 cables. These operations are performed by Sensor to Image field-proven, purpose-built hardware with very low latency and jitter, at the full, 1 gigabit per second data rate. At the PC, the Cat-5e/6 cable plugs into an economical GigE network interface card (NIC), eliminating the need for a frame grabber. Point-to-point connections go up to 100 m.



CameraLink to GigE module

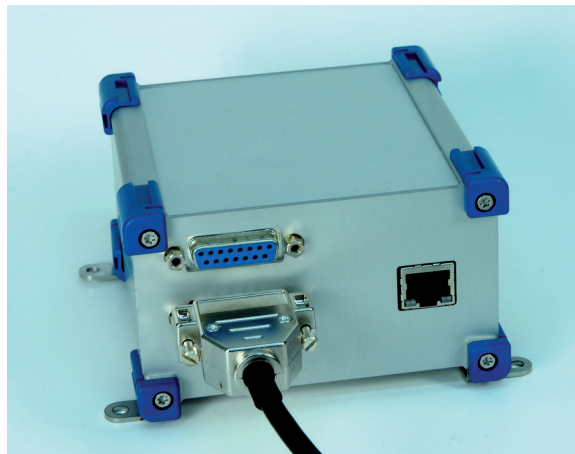
Sensor to Image S3E-1200 GigE Vision® boards use a sophisticated design in a industrial grade FPGA to manage control signals from host PCs and other system elements. This powerful capability allows users to precisely measure, trigger, and control the operation of system components.

As an element of Sensor to Image networked interface solutions, the S3E-1200 are offered with field-proven software tools:

- Sphynx SDK – a feature-rich toolkit that provides the building blocks needed to quickly and easily design high-performance video applications that consume minimal CPU resources
- XML sample files – XML files in source

code which can be adapted to your individual needs creating GenICam™ compliant devices.

The Sensor to Image S3E-1200 GigE Vision® boards are fully compliant with the GigE Vision® and GenICam™ standards. Together with SPHYNX PC software it gives users a solid basis for camera control.



CameraLink to GigE module, enclosed version



USB/CAMERALINK/GIGE-CAMERAS

INTELLIGENT CAMERAS

COMPACT VISION SYSTEMS

FRAMEGRABBER

TECHNOLOGY



GigE Vision® and Networking Features

Gigabit Ethernet based
Fully compliant GigE Vision® firmware load
Compatible with all 3rd party GenICam™ compliant vision software libraries (MIL, LabView, Halcon, Sapera, CVB, VisionPro, StreamPix, TroublePix)
Low-cost, easy-to-use equipment
Compatible with 10/100/1000 Mb/s IP/Ethernet networks
Supports IEEE 802.3 (Ethernet), IP, IGMP v.2, UDP and ICMP (ping)
Long reach: 100 m point-to-point, further with Ethernet switches or fiber converters
Multicast capability enables advanced distributed processing and control architectures

Sphynx SDK

PC filter driver and acquisition library for Windows and LINUX OS (sources on request)
Sample applications, including GenICam™ compliant viewer (sources on request)
Driver installation tool
Documentation

Characteristics enclosed Version

Interface	CameraLink BASE or MEDIUM connector
Temperature Range	0°C to +70°C, optional -40°C to +85°C
Power Supply	8–15 V, 3 Watt
Dimensions Housing in mm	56×46×99
Lense Thread	C-Mount

Characteristics OEM Version

FPGA / CPU	Xilinx Spartan S3E-1200 / µBlaze
Memory CPU / Framebuffer / Flash / EEPROM	32 MByte / 32 MByte / 8 MByte / 8 kByte
Module Interface	55 LVTTTL lines, e.g. for data/adress bus, chip select
RS232 / CAN Interface / TTL-IO	1/Yes/2 in + 2 out
Temperature Range	0°C to +70°C, optional -40°C to +85°C
Power Supply	8–15 V, optional up to 30V, 2.5 Watt
Dimensions PCB in mm	75×50×10

Data Acquisition Features

Accepts LVCMOS/ LVTTTL controls and LVDS camera signals
Compatible with all base-configuration Camera Link cameras
Can acquire images from a wide variety of sources, with pixel depths up to 24 bits, color or B/W, and multi-tap free running or externally triggered
Flexible acquisition modes

AddOn Modules

CameraLink BASE Interface	– or –	max. pixel clock 66 MHz
CameraLink BASE Interface		max. pixel clock 85 MHz optional MEDIUM connector extra 32 MByte image buffer with a maximum image size of 8 MByte extra FPGA: Spartan3A 1800 free for image processing

Connectors

Power:	DSUB15
Network:	RJ45
OEM version:	1 or 2 Mini DSUB26 connectors (3M MDR Connector 102 Series)

Sensor to Image GmbH · Lechtorstraße 20 · D-86956 Schongau · Germany
 Phone: +49 88 61-23 69-0 · Fax: +49 88 61-23 69-69 · email@sensor-to-image.de

