



### Overview

GigE-Connect EM2-CLB is a stand-alone Camera-Link™ frame grabber that captures a Camera-Link™ 'Base' video stream and transports it over a gigabit Ethernet channel to a controlling PC. GigE-Connect EM2-CLB overcomes a number of critical shortcomings of Camera-Link™, namely its limited range (up to 10 meters), its lack of support for network architectures and its requirement for a costly frame grabber.

GigE-Connect offers the following advantages over the standard Camera-Link™ interface:

- Long range: up to 100m
- Support for multiple cameras using off-the-shelf Ethernet switches
- Low cost cables
- High bandwidth
- No need for internal frame grabbers

GigE-Connect EM2-CLB is compliant to the GigE Vision standard.

On the PC side, GigaLinx offers an offloading driver that effectively eliminates CPU load associated with the communications handling and allows for more than 100M bytes/s net bandwidth. An easy to use SDK is also provided, with programming examples.

### Software

#### **GigaLinx Software SDK**

GigE-Connect Software Suit a GenICam compliant API for camera enumeration, image capture and camera control. The SDK also provides easy to follow code examples.

#### **BroadLinx offloading engine**

BroadLinx driver bypasses the standard Windows protocol stack and allows high throughput traffic with almost no CPU burden. GigE-Connect BroadLinx supports net bandwidths of up to 950Mb/s while utilizing typically less than 5% of the CPU.

GigE-Connect BroadLinx driver is compatible to most gigabit Ethernet NICs.

#### **GigaCam**

GigaCam application provides a quick way to configure devices, view video and obtain various acquisition parameters (e.g. falling packets, bandwidth, etc.) in real time.



# Specifications

## Video:

- Input: Camera-Link™ Base configuration, 20MHz to 80MHz.
- Pixel Formats: Monochrome, RGB, Bayer
- Supported Pixel Depths: 8,10,12,14,16,24,30,36
- Camera Taps: 1 or 2
- Support for both area and line scan cameras
- Image size: up to 16K X 16K

## Network:

- 10/100/1000 Ethernet II, 802.3
- Supported protocols: UDP, IP, ICMP, ARP, DHCP, GigE Vision
- Built-in error correction mechanism.
- On-board frame buffer: 16MB (expandable to 128MB) supporting burst modes
- Up to 950Mb/s net video bandwidth

## Software:

- Comprehensive SDK for image grabbing and camera control
- GigE-Connect BroadLinx offloading engine: reduces CPU utilization typically to below 5%

## Electrical:

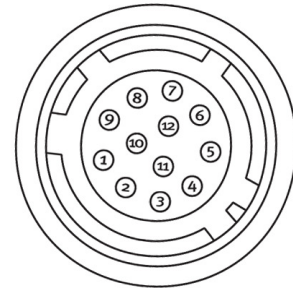
- Power supply: 12V
- Power consumption: 2.0W
- Operating temperature: 0° to 50°

## Minimum requirements from host PC

- 2.4Ghz Pentium4 or equivalent
- Windows XP, SP2, W2K
- 1GB RAM or higher
- Most available Gigabit Ethernet NIC for BroadLinx , Recommended: Intel pro 1000
- AGP/PCI-Express Video card supporting DirectX 8.1 not using shared memory (for best performance do not use onboard video adapters)

## Power/GPIO connector pinout

- 1 GND
- 2 GND
- 3 RS232 TX OUT
- 4 I/O OUT1
- 5 I/O OUT2
- 6 I/O OUT VCC
- 7 I/O IN2
- 8 Power
- 9 Power
- 10 I/O IN1
- 11 RS232 RX IN
- 12 I/O IN GND



Connector P/N: HIROSE HR10A-10R-12PB

Mating connector P/N: HIROSE HR10A-10P-12S

## Mechanical:

