

GigE-Connect™ A2G

Connectivity between analog cameras and PCs over gigabit Ethernet

General Description

GigaLinx's GigE-Connect A2G family of products provide connectivity for up to three analog cameras to a PC over a high-performance Gigabit Ethernet (GigE) network, thereby cutting cost, extending the reach and improving system flexibility.

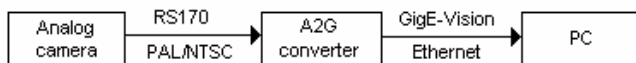
Ordering info	Input Video Sources
GigE Connect A2G-1X3	1 simultaneous, up to 3 multiplexed

GigE-Connect A2G is bundled with two innovative and field-proven applications:

- **GigaLinx's BroadLinx™ Drivers:** significantly reducing the PC's CPU load required for handling of the high-bandwidth data traffic.
- **GigE-Connect Software Development Kit (SDK):** A GenICam compliant API for camera enumeration, image capture and camera control including easy to follow code examples. The SDK also comes with GigaCam viewer application for viewing and controlling the camera.

System Block Diagram

The following diagram illustrates GigE-Connect A2G:



Applications

- Industrial vision
- High quality security / surveillance
- Traffic monitoring
- Medical imaging

Key Features

- Camera-to-PC cable separation of 100 meters (further with switches)
- Use of standard, low cost Ethernet infrastructure (cables, switches, etc.)
- Ultra-high efficiency FPGA implementation
- Up to 950Mb/s NET video bandwidth
- Compliance with both GigE Vision and GenICam standard.
- Bundled with GigE-Connect SDK for rapid development
- No compression (raw data from camera)
- RS232 UART channel over GigE-Vision
- Small foot print
- Low cost



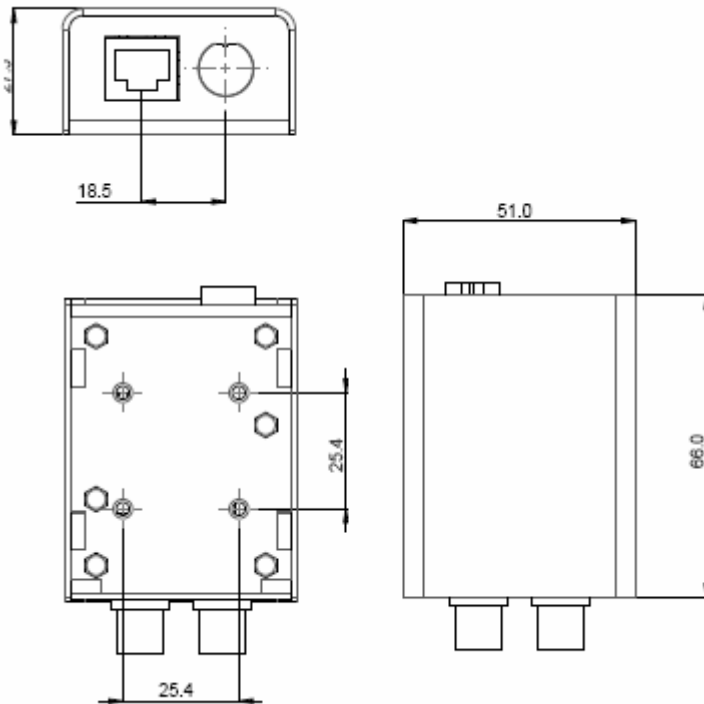
Specifications

Video

- **Data Formats:** NTSC, PAL, RS-170/CCIR (Mono, YUV4:2:2)
- **High-quality video decoder (ADV7180)**
- **Support for region-of-interest extraction**

Communication

- **Error Correction:** Built-in error correction mechanism
- **Support for unicast and multicast**
- **Supported Protocols:** UDP, IP, ICMP, ARP, DHCP, GigE Vision
- **On-board Frame Buffer:** 16 MB (expandable)
- **Ethernet:** 100/1000 Base T



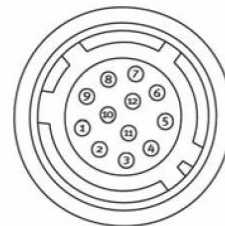
Software

- **Comprehensive GenCam-Compliant SDK:** For image grabbing and camera control. **Supports both GenAPI AND GenTL**
- **GigE-Connect BroadLinX Offloading Engines:** dramatically reducing CPU utilization (2% CPU load)
- **Video is transmitted as interlaced:** de-interlacing function is available with SDK

Mechanical / Electrical

- **Dimensions:** 50.5mm X 65.7mm X 27.7mm (excluding connectors)
- **4 x mounting screws:** 4/40 screws, 3mm depth
- **Power Supply:** 8V to 36V
- **Power + GPIO Connector:** Hirose 12-pin, P/N: HR10-10R-12P. Mating connector P/N: HR10A-10P-12S
- **Video connectors:** 2 X BNC (A2G-1X3); Only two BNCs are mounted to the casing. For using a third input channel, two wires should be connected directly to the PCB.
- **LAN connector:** RJ45
- **Operating Temperature:** -20° to 70°
- **Power consumption:** 4 W
- **RoHs Compliant**

Power / GPIO Connector Pin-Out



- 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 IN (8V-36V)
- 9 POWER IN (8V-36V)
- 10 I/O IN1
- 11 RS232 RX IN
- 12 I/O IN GND

HIROSE HR10A-10R-12P

PRELIMINARY

Specifications subject to change without prior notice

The GigaLinX logo is a trademark of GigaLinX Ltd. All other trademarks mentioned are the property of their respective owners.



GigaLinX Ltd.

6A, Massada Street
Hod-Hasharon, 45294 Israel
Tel: +972-9-7603425
Fax: +972-9-7421622
Web: www.gigalinx.net
Email: info@gigalinx.net

