



iPORT CL-GigE External Frame Grabbers

High-performance GigE Vision connectivity for Camera Link cameras

Overview

Pleora's iPORT™ CL-GigE External Frame Grabbers allow system manufacturers and integrators to treat Camera Link® Base configuration cameras as native GigE Vision® cameras in applications operating in challenging environments.

With these external frame grabbers, designed specifically for highly reliable video transmission in challenging operating conditions, Camera Link cameras can enjoy the long-distance reach of Gigabit Ethernet (GigE) and be mixed with native GigE Vision cameras in networked environments.

The iPORT CL-GigE converts video data from Camera Link cameras to packets and transmits it over a GigE link with low, predictable latency. GigE supports cabling distances of up to 100 meters using standard CAT5e/6 cabling. With off-the-shelf Ethernet switches, distances can be unlimited.

The connection at the PC is a standard GigE plug, eliminating the need for a desktop PC with an available peripheral card slot. As a result, system designers can reduce system size, cost, and power consumption by using computing platforms with smaller form factors, such as laptops, embedded PCs, and single board computers. A sophisticated on-board Programmable Logic Controller (PLC) allows users to precisely measure, synchronize, and control the operation of other elements.

The iPORT CL-GigE interact seamlessly with Pleora's other products in networked or point-to-point digital video systems. The industrial-grade frame grabbers comply fully with the GigE Vision and GenICam™ standards, enabling interoperability with third-party equipment in multi-vendor systems.

With Pleora's iPORT CL-GigE, system manufacturers and integrators can shorten time-to-market, lower design and system costs, and reduce development and deployment risk by reusing expensive or application-specific Camera Link cameras in GigE Vision installations, with minimal software development.

Features

- Transmits video from Camera Link Base cameras over GigE
- Wide operating temperature range for challenging environments
- Plugs into a wide range of computing platforms without needing a PCI frame grabber
- Compact and low power
- Screw surface mountable enclosure
- Line scan and area scan modes
- 120 MB frame buffer to accommodate multi-mega pixel sensor sizes
- Record and playback capability
- GigE Vision and GenICam compatible
- Supports IEEE1588 Precision Time Protocol and action commands
- Supports both PoE and externally-powered options
- Power over Camera Link (PoCL)
- Sophisticated on-board programmable logic controller (PLC) allows users to precisely measure, synchronize, trigger, and control the operation of other vision system elements
- Low, predictable latency
- GenICam Integration Package (consisting of the iPORT AutoGen XML generation tool and a firmware reference design) makes it fast and easy to create a user-friendly GenICam interface (contact sales for pricing information on this integration package)



GEN*i*CAM

For more information, visit www.pleora.com



iPORT CL-GigE External Frame Grabbers

Networked Video Connectivity Solutions

iPORT External Frame Grabber	<ul style="list-style-type: none"> Purpose-built hardware compatible with Camera Link Base cameras Highly reliable, 1 Gb/s data transfer rate with low, end-to-end latency Enclosed unit, or OEM board set
eBUS SDK	<ul style="list-style-type: none"> eBUS SDK: Single API to receive video over GigE, 10 GigE, and USB that is portable across Windows, Mac, and Linux eBUS Tx: Software implementation of a full device level GigE Vision transmitter eBUS Rx: High-speed reception of images or data for hand-off to the end application eBUS Player Toolkit: View streams and develop, test and evaluate advanced features
GigE Vision and GenICam™	<ul style="list-style-type: none"> Fully compatible firmware load Guarantees delivery of all packets Comprehensive data transfer diagnostics

Video Formats

Tap Support	<ul style="list-style-type: none"> 1 and 2 taps
Video Modes	<ul style="list-style-type: none"> Mono, BayerGR, BayerRG, BayerGB, BayerBG, RGB, YUV, YCbCr, Sparse Color Filter
Pixel Depth	<ul style="list-style-type: none"> 8, 10, 12, 14, 16 bits

Features

Pixel Clock	<ul style="list-style-type: none"> 20 MHz to 85 MHz
Frame Buffer	<ul style="list-style-type: none"> 120 MB
Programmable Logic Controller	<ul style="list-style-type: none"> Advanced image capture control Integrated with GPIO
GPIO	<ul style="list-style-type: none"> 2 LVDS/RS-422/HVTTL/±24V/±30V differential or single-ended inputs 2 TTL/LVCMOS inputs 3 TTL/LVCMOS outputs
Gigabit Ethernet-based	<ul style="list-style-type: none"> Low-cost, easy-to-use equipment Compatible with 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
Multicast capability	<ul style="list-style-type: none"> Enables advanced distributed processing and control architectures

Characteristics

Size (L x W x H)	<ul style="list-style-type: none"> 47.6 mm X 81.5 mm X 51.0 mm (enclosed)
Weight	<ul style="list-style-type: none"> 161 grams (enclosed) 47 grams (OEM board set)
Operating temperature	<ul style="list-style-type: none"> OEM board sets: see note*. Enclosed external powered: -40°C to 60°C Enclosed PoE powered with PoCL off: -40°C to 55°C Enclosed PoE powered with PoCL on: -40°C to 50°C
Storage temperature	<ul style="list-style-type: none"> -40°C to 85°C
Power consumption	<ul style="list-style-type: none"> 2.7 W maximum
MTBF at 40°C	<ul style="list-style-type: none"> 1,014,151 hours
ECCN	<ul style="list-style-type: none"> EAR99

*Case and junction temperature limits vary by IC device. Please refer to User Guide for specific IC operating temperature specifications and thermal management information.

Connectors

Video	<ul style="list-style-type: none"> SDR-26 (Mini CL) connector
Network	<ul style="list-style-type: none"> RJ-45 with locking screw connector
GPIO	<ul style="list-style-type: none"> 12-pin circular connector
Power In	<ul style="list-style-type: none"> PoE powered on the RJ-45 connector: IEEE 802.3af External powered on the 12-pin circular connector: 11.7 to 13 Volts nominal
Power Out	<ul style="list-style-type: none"> PoCL on the SDR-26 (Mini CL) connector

Ordering Information

900-6010	<ul style="list-style-type: none"> iPORT CL-GigEB-IND Industrial-use External Frame Grabber in mountable enclosure for Camera Link Base mode with extended operating temperature range, extensive GPIO, and power over Camera Link (PoCL).
900-6009	<ul style="list-style-type: none"> iPORT CL-GigEB-IND Industrial-use External Frame Grabber OEM board set for Camera Link Base mode with extended operating temperature range, extensive GPIO, and power over Camera Link (PoCL).
900-6011	<ul style="list-style-type: none"> iPORT CL-GigEB-IND Development Kit including 900-6010, Gigabit Ethernet desktop NIC, PoE injector, 2 Ethernet cables, and eBUS SDK USB Stick.