iPORT CL-GigE External Frame Grabbers

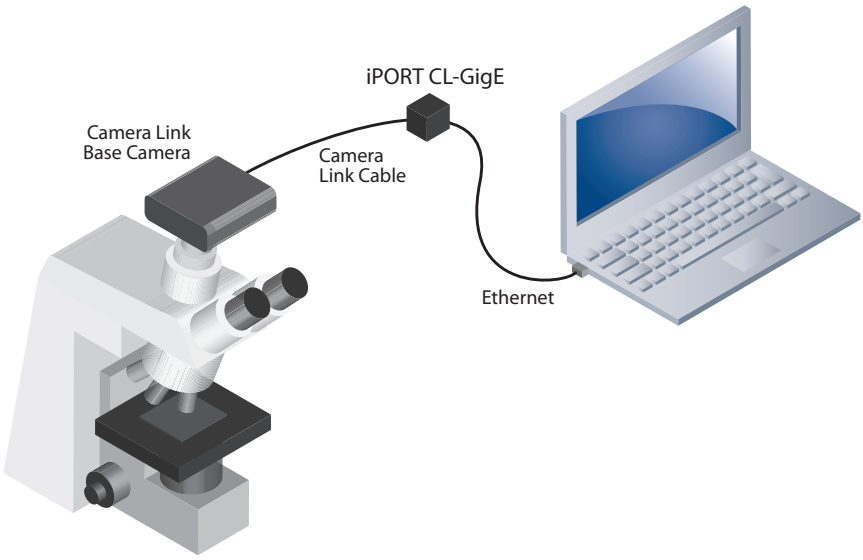
High-performance GigE Vision connectivity for Camera Link cameras

Overview

Pleora's **iPORT™ CL-GigE External Frame Grabbers** allows designers to treat Camera Link® Base configuration cameras as native GigE Vision® cameras in applications operating in -40°C to +60°C 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 at distances up to 100 meters using standard CAT5e/6 cabling. With off-the-shelf Ethernet switches, distances can be unlimited. The connection at the computing platform is a standard GigE port, allowing designers to reduce system size, cost, and power consumption by using smaller form factor platforms such as laptops, embedded PCs, and single-board computers.

The industrial-grade frame grabbers comply fully with the GigE Vision and GenICam™ standards, enabling interoperability with third-party equipment in multi-vendor systems. The iPORT CL-GigE is supported by Pleora's feature-rich eBUS™ SDK application tool kit. With this software suite, designers can rapidly prototype and deploy production-ready software to support video transmission over GigE, 10 GigE, and USB 3.0 using the same application programming interface (API).



Features

- Highly reliable, 1 Gbps data transfer rate with low, end-to-end latency from Camera Link Base cameras to computing platforms without needing a PCI frame grabber
- Line scan and area scan modes
- 120 MB frame buffer to accommodate multi-mega pixel sensor sizes
- Record and playback capability
- Supports both PoE and externally-powered options and 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
- Supports IEEE 1588 Precision Time Protocol and action commands
- Screw surface mountable enclosure or OEM board set
- Fully supported by a comprehensive development kit

GENICAM GigE VISION PoCL CAMERA Link

Pleora Technologies

iPORT CL-GigE External Frame Grabbers

Networked Video Connectivity Solutions

iPORT External Frame Grabber	• 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	• **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	• Fully compatible firmware load • Guarantees delivery of all packets • Comprehensive data transfer diagnostics

Video Formats

Tap Support	1 and 2 taps
Video Modes	Mono, BayerGR, BayerRG, BayerGB, BayerBG, RGB, YUV, YCbCr, Sparse Color Filter
Pixel Depth	8, 10, 12, 14, 16 bits

Features

Pixel Clock	20 MHz to 85 MHz
Frame Buffer	120 MB
Programmable Logic Controller	• Advanced image capture control • Integrated with GPIO
GPIO	• 2 LVDS/RS-422/HVTTL/±24V/±30V differential or single-ended inputs • 2 TTL/LVCMOS inputs • 3 TTL/LVCMOS outputs
Gigabit Ethernet-based	• 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	Enables advanced distributed processing and control architectures

Connectors

Video	SDR-26 (Mini CL) connector
Network	RJ-45 with locking screw connector
GPIO	12-pin circular connector
Power In	• 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	PoCL on the SDR-26 (Mini CL) connector

Characteristics

Size (L x W x H)	47.6 mm x 81.5 mm x 51.0 mm (enclosed)
Operating temperature	• OEM board sets* • 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	-40°C to 85°C
Power consumption	2.7 W maximum
MTBF at 40°C	1,014,151 hours
ECCN	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.

Ordering Information

900-6010	**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	**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	**iPORT CL-GigEB-IND Development Kit** including 900-6010, Gigabit Ethernet desktop NIC, PoE injector, 2 Ethernet cables, and eBUS SDK USB Stick.
900-6020	**iPORT CL-GigEB-IND Developer Bundle** including the iPORT CL-GigEB-IND in mountable enclosure 900-6010, Gigabit Ethernet desktop NIC, 2 Ethernet cables, PoE Power Injector, eBUS SDK USB stick, and one year of eBUS SDK Developer Annual Maintenance and Support.

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