DATA SHEET

iPORT PT1000-CL External Frame Grabbers

High-performance GigE Vision connectivity for Camera Link cameras

Overview

Pleora's iPORT™ PT1000-CL External Frame Grabbers allow system manufacturers and integrators to treat Camera Link® cameras as native GigE Vision® cameras. With these external frame grabbers, Camera Link cameras enjoy the long-distance reach of Gigabit Ethernet (GigE) and can be mixed with native GigE Vision cameras in networked environments.

The PT1000-CL External Frame Grabbers interact seamlessly with Pleora's other products in networked or point-to-point digital video systems. The frame grabbers also comply fully with the GigE Vision® and GenICam™ standards, enabling them to interoperate with third-party equipment in multi-vendor systems. 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.

The PT1000-CL 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 PT1000-CL is bundled with Pleora's feature-rich application toolkit, eBUS™ SDK, and compatible with Pleora's vDisplay™ External Frame Grabbers for HDMI output.

Features

- Transmits video from Camera Link Base mode cameras over GigE with low, consistent latency
- Built-in Programmable Logic Controller (PLC) for advanced real-time synchronization and triggering
- Asynchronous serial communications connectivity over Camera Link, as well as an external connector

Ordering Information

900-2011	• iPORT PT1000-CL External Frame Grabber Base Camera Link product in enclosure, with 16 MB SDRAM, up to 66 MHz pixel clock
900-2013	• iPORT PT1000-CL External Frame Grabber Base Camera Link product in enclosure, 128 MB SDRAM, up to 66 MHz pixel clock
900-2112	• iPORT PT1000-CL External Frame Grabber Base Camera Link product in enclosure, with 16 MB SDRAM, up to 80 MHz pixel clock
900-2002	• iPORT PT1000-CL External Frame Grabber Development Kit, which contains 900-2011, power supply, and a GigE NIC

GiGE VISION CAMERA Link GEN<i>CAM

For more information, visit www.pleora.com

Pleora Technologies

iPORT PT1000-CL External Frame Grabbers

Networked Video Connectivity Solutions

iPORT™ External Frame Grabbers	• 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
eBUS™ SDK	• eBUS Universal Pro driver • Sample applications, including NetCommand™ sample application, a demonstration of multi-device network connectivity • Driver installation tool • Documentation • Support for CLProtocol
GigE Vision®	• Fully compliant firmware load • Guarantees delivery of all packets • Comprehensive data transfer diagnostics

Data Acquisition Features

Accepts LVCMOS/ LVTTL signals	• Compatible with all Base-configuration Camera Link cameras
Integrated acquisition engine	• Can acquire images from a wide variety of sources, with pixel depths up to 16 bits, color or B/W, and multi-tap at up to 66 MHz
Free running or externally triggered	• Flexible acquisition modes

Connectors

Power	• **Enclosed:** Hirose 6-pin (HR10A-7R-6P) • **OEM:** Molex 4-pin 6373 series (22-23-2041)
Network	• RJ45
Video	• Female MDR-26 for Camera Link
I/O and serial control	• **Enclosed:** Hirose 12-pin (HR10A-10R-12S) • **OEM:** Sametec 16-pin 2 mm male header (TMM-108-01-G-D-SM)

Programmable Logic Controller Features

Inputs 2 TTL inputs 1 LVDS input 1 optically isolated input **Outputs:** 2 TTL outputs 1 optically isolated output	• Allows synchronization of multiple cameras or system elements • Flexible triggering capabilities, including Boolean combinations and Camera Link control signals • Wide range of interface signaling options • Electrically isolated control interface • Built-in debouncers
2 UART serial links 1 LVDS 1 LVCMOS/LVTTL	• Serial control of camera and other devices via PC application over the GigE link
Delayer, rescaler, general-purpose counter	• Allows full synchronization to line scan cameras • Allows synchronized capture between multiple cameras • Allows camera acquisition to track changing speeds on conveyor belts

Networking Features

Gigabit Ethernet-based	• 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
Multicast capability	• Enables advanced distributed processing and control architectures

Characteristics

Size (LxWxH)	• **Enclosed:** 93 mm X 98 mm x 37 mm • **OEM:** 89 mm X 56 mm X 21 mm
Operating temperature	• **Enclosed:** 0°C to 45°C • **OEM:** 0°C to 70°C
Power supply	• 4.5 V to 16 V
Power consumption	• 2.5 W
Certification	• CE and FCC (enclosed unit only)

Pleora Technologies Inc.
340 Terry Fox Drive, Suite 300
Kanata, Ontario
Canada, K2K 3A2

Tel: +1.613.270.0625
Fax: +1.613.270.1425
Email: info@pleora.com