



iPORT PT1000-LV External Frame Grabbers

High-performance GigE Vision connectivity for LVDS cameras

Overview

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

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 LVDS cameras in GigE Vision installations, with minimal software development.

The PT1000-LV 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.

The PT1000-LV converts video from LVDS 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, trigger, and control the operation of other vision system elements.

The PT1000-LV is bundled with Pleora's feature-rich application toolkit, eBUS™ SDK, and compatible with Pleora's vDisplay™ External Frame Grabbers, which deliver video directly to a monitor.

Features

- Transmits video from LVDS cameras supporting the TIA/EIA 644 standard over GigE with low, consistent latency
- Built-in Programmable Logic Controller (PLC) for advanced real-time synchronization and triggering
- RS-232 and GPIO to control external accessories

Ordering Information

900-4006	• iPORT PT1000-LV External Frame Grabber enclosed product with 16 MB SDRAM
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GIG
VISION

GEN<i>CAM

For more information, visit www.pleora.com

Pleora
Technologies

iPORT PT1000-LV External Frame Grabbers

Networked Video Connectivity Solutions

iPORT™ External Frame Grabbers	<ul style="list-style-type: none"> Purpose-built hardware compatible with TIA/EIA 644 LVDS cameras Highly reliable, 1 Gb/s data transfer rate with low, end-to-end latency Enclosed unit or OEM board
eBUS™ SDK	<ul style="list-style-type: none"> eBUS Universal Pro driver Sample applications, including NetCommand™ sample application, a demonstration of multi-device network connectivity Driver installation tool Documentation
GigE Vision®	<ul style="list-style-type: none"> Fully compliant firmware load Guarantees delivery of all packets Comprehensive data transfer diagnostics

Data Acquisition Features

Accepts TIA/EIA-644 signals	<ul style="list-style-type: none"> Compatible with a wide range of cameras
Integrated acquisition engine	<ul style="list-style-type: none"> Can acquire image data from a wide variety of sources, with pixel depths up to 16 bits, color or B/W, and multi-tap
Free running or externally triggered	<ul style="list-style-type: none"> Flexible acquisition modes

Connectors

Power	<ul style="list-style-type: none"> Enclosed: Hirose 6-pin (HR10A-7R-6P) OEM: Molex 4-pin 6373 series (22-23 -2041)
Network	<ul style="list-style-type: none"> RJ45
Video	<ul style="list-style-type: none"> Hirose 68-pin female MDR (DX10GM-68SE)

Programmable Logic Controller Features

Inputs 2 TTL inputs 1 LVDS input 1 optically isolated input Outputs: 2 TTL outputs 1 optically isolated output	<ul style="list-style-type: none"> Allows synchronization of multiple cameras or system elements Flexible triggering capabilities, including Boolean combinations and camera control signals Provides an electrically isolated control interface Built-in debouncers
2 RS-232 serial links	<ul style="list-style-type: none"> Simultaneous serial control of camera and other devices via PC application over Ethernet link
Delayer, rescaler, general-purpose counter	<ul style="list-style-type: none"> Allows full synchronization with line scan cameras Allows synchronized capture between multiple cameras Allows camera acquisition to track changing speeds on conveyor belts
Timestamp trigger, counter, and reset	<ul style="list-style-type: none"> Allows system actions to be triggered based on timestamps Allows resets to be broadcast to all iPORTs in system from host

Networking Features

Gigabit Ethernet-based	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Enables advanced distributed processing and control architectures

Characteristics

Size (LxWxH)	<ul style="list-style-type: none"> Enclosed: 95 mm X 97 mm X 37 mm OEM: 89 mm X 72 mm X 21 mm
Operating temperature	<ul style="list-style-type: none"> Enclosed: 0°C to 45°C OEM: 0°C to 70°C
Power supply	<ul style="list-style-type: none"> 4.5 V to 16 V
Power consumption	<ul style="list-style-type: none"> 3.1 W