



iPORT PT1000-LV External Frame Grabbers

High-performance GigE 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 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 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 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.

Features

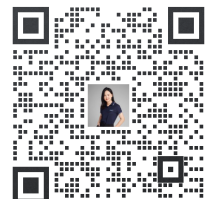
- Transmits video from LVDS cameras supporting the TIA/EIA 644 standard over GigE with low, consistent latency
- Built-in Programmable Logic Controller (PLC) for advanced real-time synchronization and triggering
- RS-232 and GPIO to control external accessories

Ordering Information

900-4006	• iPORT PT1000-LV External Frame Grabber enclosed product with 16 MB SDRAM
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GigE[™]
VISION

GEN<i>CAM



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
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"> • Hirose 6-pin (HR10A-7R-6P)
Network	<ul style="list-style-type: none"> • RJ45
Video	<ul style="list-style-type: none"> • Hirose 68-pin female MDR (DX10GM-68SE)

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

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

Characteristics

Size (LxWxH)	<ul style="list-style-type: none"> • 95 mm X 97 mm X 37 mm
Operating temperature	<ul style="list-style-type: none"> • 0°C to 45°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