iPORT SB-GigE-EV7520A External Frame Grabber

Leverage the long-distance cabling and multicasting capabilities of GigE for a Sony block FCB-EV7520A camera

Pleora's iPORT™ SB-GigE-EV7520A External Frame Grabber improves the usability of a Sony block FCB-EV7520A camera by allowing systems manufacturers and integrators to treat it as a native GigE Vision® camera. With this external frame grabber, Sony block cameras can leverage the simple, long-distance cabling of Gigabit Ethernet (GigE) for both video and control signals. The camera can also be used with a broader selection of computing platforms, lowering system costs.

The SB-GigE-EV7520A presents a user friendly interface to the Sony® VISCA™ protocol set, both graphically and in the eBUS SDK (software development kit). This allows system designers to rapidly prototype interactions between the SB-GigE-EV7520A, the FCB-EV7520A, and their software as well as quickly deploy production-ready software.

The SB-GigE-EV7520A transmits full-resolution video with low, predictable latency over a GigE link. The connection at the PC is a standard GigE plug, eliminating the need for a desktop PC with an available peripheral card slot for a traditional frame grabber.

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.

GigE supports cabling distances of up to 100 meters using standard CAT5e/6 cabling. Deploying an off-the-shelf Ethernet switch, extended distances and more flexible network configurations are supported. Multiple cameras can be aggregated to a single port, imaging data can be multicast from one camera or image sensor to multiple displays, or images from multiple cameras can be combined on one computer or processing unit.

A sophisticated on-board programmable logic controller (PLC) and support for the IEEE 1588 Precision Time Protocol allows users to precisely measure, synchronize, trigger, and control the operation of other vision system elements.

The SB-GigE-EV7520A 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

- Transforms a Sony block FCB-EV7520A camera into a GigE Vision camera
- Power, control, and video over the same cable
- Plugs into a wide range of computing platforms without needing a PCI frame grabber
- Transmits full-resolution images at the maximum rate supported by the block camera
- Converts video to 8-bit Bayer (color) or 8-bit monochrome formats to conserve bandwidth (except in 1080p modes at 50 fps or higher)
- Simplifies Sony VISCA interface
- Synchronizes image capture with other elements of the system
- Low, predictable latency

Compatibility

- Sony FCB-EV7520A only

GiGE VISION®

GEN<i>CAM

Pleora Technologies

iPORT SB-GigE-EV7520A External Frame Grabber

Networked Video Connectivity Solutions

iPORT External Frame Grabbers	· Highly reliable, 1 Gb/s data transfer rate with low, end-to-end latency · OEM, in-camera board set
eBUS SDK	· eBUS Universal Pro driver · Sample applications, including NetCommand™ sample application, a demonstration of multi-device network connectivity · Driver installation tool · Documentation
GigE Vision and GenICam™	· Fully-compliant firmware load · Guarantees delivery of all packets · Comprehensive data transfer diagnostics

Video Formats

Video acquisition	· Digital video interface
Input Resolutions	· Full resolution images · 1080p, 25/29.97/30Hz · 1080i, 50/59.94/60Hz · 720p, 25/29.97/30/50/59.94/60Hz · 1080p, 50/59.94/60Hz
Pixel formats	· Mono8 (8 bits per pixel) · BayerGR8 (8 bits per pixel) · YUV 4:2:2 (16 bits per pixel) · YUV 4:1:1 (12 bits per pixel)

Features

Gigabit Ethernet-based	· Connection to 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, ICMP (ping), and IEEE 1588 Precision Time Protocol (PTP) · Long reach: 100 m point-to-point, further with Ethernet switches
Multicast capability	· Enables advanced distributed processing and control architectures
Mechanical Bracket	· Easy assembly with Sony block cameras

Connectors

12-pin circular connector	· GPIO · RS-232 serial communication interface · External power (optional)
RJ-45 jack	· Network/computer interface · Power over Ethernet (PoE)
30-pin connector	· Sony block camera interface · VISCA serial command interface · Power for block camera

Characteristics

Size (Without bracket)	· 37 mm X 37 mm X 34.3 mm
Operating temperature	· Commercial[1]
Storage temperature	· -40°C to 85°C
External power supply (when not using PoE)	· 4.8 V to 16 V
Power consumption (Typical, incl. block camera)	· Up to approximately 7.0 W
MTBF @ 40°C	· 1,189,775 hours

[1]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

900-6167	· iPORT SB-GigE-EV7520A OEM Basic Kit includes SB-GigE-EV7520A OEM board set on camera bracket assembly (assembly # 900-6166*), and mounting screws.
900-6168	· iPORT SB-GigE-EV7520A OEM Kit includes SB-GigE-EV7520A OEM board set on camera bracket assembly (assembly # 900-6166*), GPIO board assembly with flat flex cable and unsoldered 12-pin circular connector, mounting screws, and 30-pin micro-coaxial video/control camera cable. · GPIO bracket extension not included.
900-6170	· iPORT SB-GigE-EV7520A Development Kit includes SB-GigE-EV7520A OEM board set on camera bracket with GPIO bracket extension assembly (assembly # 900-6169*), flat flex cable and soldered 12-pin circular connector, 30-pin micro-coaxial video/control camera cable, mounting screws, Gigabit Ethernet desktop NIC, PoE Power Injector, 2 Ethernet cables, and eBUS SDK USB stick.

* Note: Not an orderable part number