



iPORT SB-GigE External Frame Grabbers

Leverage the long-distance cabling and multicasting capabilities of GigE for Sony block cameras

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

The SB-GigE 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, the Sony block camera, and their software as well as quickly deploy production-ready software.

The SB-GigE 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 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 Sony block cameras into GigE Vision cameras
- 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-EV7500
- Sony FCB-SE600
- Sony FCB-EV7100
- Sony FCB-EV5500
- Sony FCB-EH6500
- Sony FCB-EH6300
- Sony FCB-EH3410
- Sony FCB-EH3310



GEN<I>CAM

For more information, visit www.pleora.com



iPORT SB-GigE External Frame Grabbers

Networked Video Connectivity Solutions

iPORT External Frame Grabbers	<ul style="list-style-type: none"> Highly reliable, 1 Gb/s data transfer rate with low, end-to-end latency OEM, in-camera board set
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 and GenICam™	<ul style="list-style-type: none"> Fully-compatible firmware load Guarantees delivery of all packets Comprehensive data transfer diagnostics

Video Formats

Video acquisition	<ul style="list-style-type: none"> Digital video interface
Input Resolutions	<ul style="list-style-type: none"> Full resolution images 1080p, 25/29.97/30Hz 1080i, 50/59.94/60Hz 720p, 25/29.97/30/50/59.94/60Hz Sony FCB-EV7500: 1080p, 50/59.94/60Hz
Pixel formats	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Enables advanced distributed processing and control architectures
Mechanical Bracket	<ul style="list-style-type: none"> Easy assembly with Sony block cameras

Connectors

12-pin circular connector	<ul style="list-style-type: none"> GPIO RS-232 serial communication interface External power (optional)
RJ-45 jack	<ul style="list-style-type: none"> Network/computer interface Power over Ethernet (PoE)
30-pin connector	<ul style="list-style-type: none"> Sony block camera interface Digital video interface: 4 lanes of LVDS, 8 lanes for FCB-EV7500 VISCA serial command interface Power for block camera

Characteristics

Size (Without bracket)	<ul style="list-style-type: none"> 37 mm X 37 mm X 34.3 mm
Operating temperature	<ul style="list-style-type: none"> 0°C to 70°C
Storage temperature	<ul style="list-style-type: none"> -40°C to 85°C
External power supply (when not using PoE)	<ul style="list-style-type: none"> 4.8 V to 16 V
Power consumption (Typical, incl. block camera)	<ul style="list-style-type: none"> Up to approximately 7.0 W
MTBF @ 40°C	<ul style="list-style-type: none"> 1,189,775 hours

*The product is specified for operation within the stated ambient and case temperature range of its components.

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Ordering Information

900-6132	<ul style="list-style-type: none"> iPORT SB-GigE OEM Basic Kit includes SB-GigE OEM board set on camera bracket assembly (assembly # 900-6116*), and mounting screws. For Sony FCB-EV7100, use 900-6137 For Sony FCB-SE600, use 900-6142
900-6117	<ul style="list-style-type: none"> iPORT SB-GigE OEM Kit includes SB-GigE OEM board set on camera bracket assembly (assembly # 900-6116*), 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. For Sony FCB-EV7100, use 900-6138 For Sony FCB-SE600, use 900-6143
900-6119	<ul style="list-style-type: none"> iPORT SB-GigE Development Kit includes SB-GigE OEM board set on camera bracket with GPIO bracket extension assembly (assembly # 900-6118*), 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. For Sony FCB-EV7100, use 900-6139 For Sony FCB-SE600, use 900-6144
900-6137	<ul style="list-style-type: none"> iPORT SB-GigE-EV7100 OEM Basic Kit includes SB-GigE OEM board set on camera bracket assembly (assembly # 900-6135*), and mounting screws. Use with Sony FCB-EV7100 only.
900-6138	<ul style="list-style-type: none"> iPORT SB-GigE-EV7100 OEM Kit includes SB-GigE OEM board set on camera bracket with GPIO bracket extension assembly (assembly # 900-6136*), flat flex cable, soldered 12-pin circular connector, 30-pin micro-coaxial video/control camera cable, and mounting screws. Use with Sony FCB-EV7100 only.
900-6139	<ul style="list-style-type: none"> iPORT SB-GigE-EV7100 Development Kit includes SB-GigE OEM board set on camera bracket with GPIO bracket extension assembly (assembly # 900-6136*), flat flex cable, 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. Use with Sony FCB-EV7100 only.

900-6142	<ul style="list-style-type: none"> iPORT SB-GigE-SE600 OEM Basic Kit includes SB-GigE OEM board set on camera bracket assembly (assembly # 900-6140*), and mounting screws. Use with Sony FCB-SE600 only.
900-6143	<ul style="list-style-type: none"> iPORT SB-GigE-SE600 OEM Kit includes SB-GigE OEM board set on camera bracket with GPIO bracket extension assembly (assembly # 900-6141*), flat flex cable, soldered 12-pin circular connector, 30-pin micro-coaxial video/control camera cable, and mounting screws. Use with Sony FCB-SE600 only.
900-6144	<ul style="list-style-type: none"> iPORT SB-GigE-SE600 Development Kit includes SB-GigE OEM board set on camera bracket with GPIO bracket extension assembly (assembly # 900-6141*), flat flex cable, 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. Use with Sony FCB-SE600 only.

* Note: Not an orderable part number

