

# iShot FCB HD-SDI INTERFACE MODULE

- **HD-SDI digital interface for the Sony FCB-H11**
- **1080i/720p high definition video**
- **Analog video pass through**
- **RS-232 serial communications**

## FEATURES

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- Next generation solution for interfacing to Sony FCB-H11 series block cameras.
- Includes interface module, cables, and bracket.
- Uses the camera's digital output port to give optimum image quality.
- Supports all available HD modes – 1080i and 720p at 50Hz or 59.94Hz.
- Compliant with SMPTE 274M and SMPTE 296M.
- RS-232 communications port for camera control.
- HD and SD analog video also accessible.
- Compatible with most frame grabbers.
- RoHS compliant.



## OVERVIEW

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The **iShot-FCB-HDSDI** is a complete interface solution to acquire digital images directly in real-time from the Sony FCB-H11 and FCB-H10 series of block cameras.

This interface module provides a cost effective solution to take full advantage of the high definition digital video provided by the Sony FCB-H11 and FCB-H10 block cameras. Unlike alternative solutions, which re-digitize the analog output from the camera, this solution directly connects to the camera's digital output to provide superior image quality. All camera HD modes are supported i.e. 1080i/50Hz, 1080i/59.94Hz, 720p/50Hz and 720p/59.94Hz.

The kit consists of the small interface module, a mounting bracket and cables.

InterTest, Inc. can also supply a range of HD-SDI video capture cards for interfacing to this module if required. As well as zero CPU acquisition, these cards provide serial communications and access to the camera's reset line for control of standby mode. These cards are available in a range of formats – not only standard PC formats (PCI & PCI-Express) but also in compact form factors such as PCI/104-Express for embedded applications.

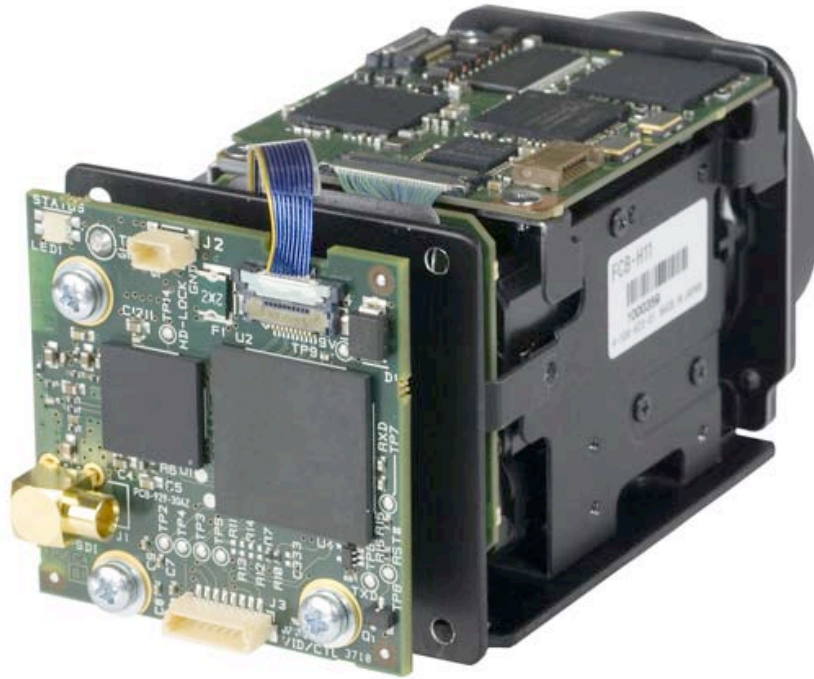


Figure 1: Interface module fitted via Mounting Bracket to rear of camera.

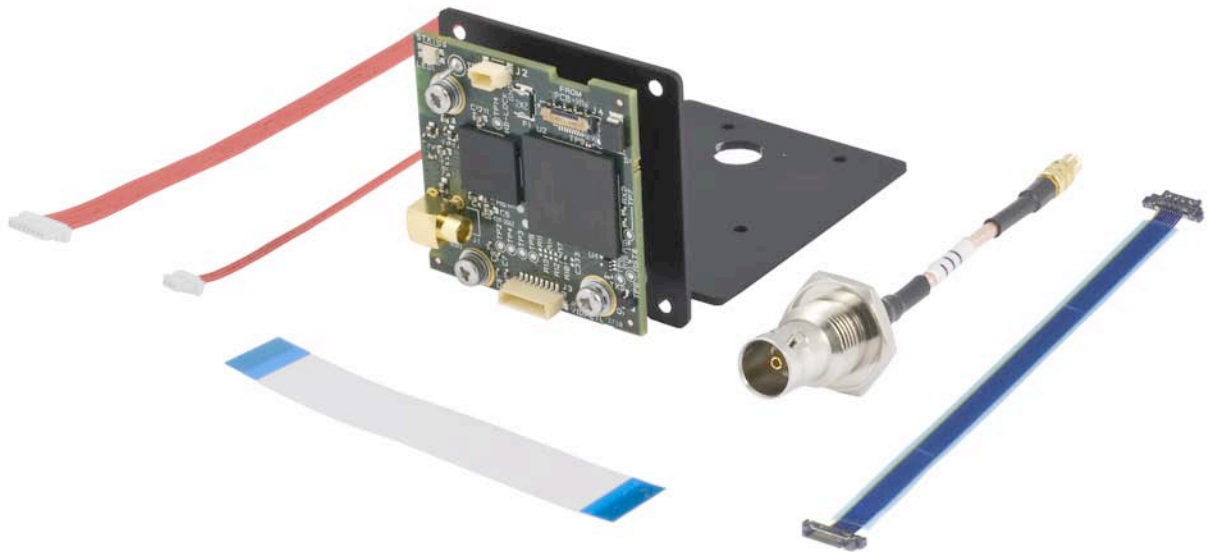


Figure 2: iShot-FCB-HDSDI Kit Contents.

## CONNECTOR SPECIFICATION – iShot-FCB-HDSDI

### HD-SDI Connector (J1)

The **iShot-FCB-HDSDI** is fitted with a 75Ω MCX7 connector, allowing the use of RG179 coax cable for connection to the interface module.

Connector type: MCX7-J-P-H-RA-TH1-SKT.

Mating cable: RG179 Coaxial cable.  
(MCX7 to 75Ω bulkhead BNC adapter supplied.)

### Power in Connector (J2)

The **iShot-FCB-HDSDI** is fitted with an industry standard 3-way connector for power in.

Connector type: JST BM03B-SRSS-TB.

Mating cable: Suitable cable supplied as part of the kit.

PIN	SIGNAL
1	9V ± 3V
2	GND
3	GND

### Signal and Control (J3)

The **iShot-FCB-HDSDI** is fitted with an 8-way connector to the matching connector on the camera.

Connector type: JST BM08B-SRSS-TB.

Mating cable: Suitable cable supplied as part of the kit.

PIN	SIGNAL	NOTES
1	RXD	Serial control (input to camera).
2	TXD	Serial control (output from camera).
3	RESET IN	Camera reset control.
4	CVBS Out	Composite video output (SD only).
5	GND	
6	Y	Component output (HD only).
7	Cb	Component output (HD only).
8	Cr	Component output (HD only).

### KEL10 Connector (J4)

The **iShot-FCB-HDSDI** is fitted with a 10 way miniature connector to link to the matching connector on the Sony FCB-H11.

Connector type: KEL SSL series.

Mating cable: KEL SSL20-10SSB-BH.  
(Suitable cable supplied as part of the kit).

**FFC24 Connector (J5)**

The **iShot-FCB-HDSDI** is fitted with an industry standard 0.5mm pitch FFC (Flat Flexible Cable) connector to link to the matching CN901 connector on the camera.

Connector type: Hirose FH12A-24S-0.5SH.

Mating cable: e.g. Molex 98266-0251.  
(Suitable cable supplied as part of the kit).

**Status LED (LED1)**

The **iShot-FCB-HDSDI** is fitted with multi-LED to indicate camera status.

Solid Green: Camera and Interface Board are powered and the camera is sending valid video data.

Solid Red: Interface board is powered but no valid video data is being received from the camera. (This would indicate that the 10 way video cable (J4) and the 24 way FFC cable (J5) are not correctly connected to the Interface Board and camera.)

## CONFORMANCE

**HD-SDI:** **iShot -FCB-HDSDI** is compliant with SMPTE 274M and SMPTE 296.

**Approvals:** The **iShot -FCB-HDSDI** has been designed for inclusion in systems meeting the following regulations and standards when housed in a suitable enclosure:

- EU ⚡ mark for compliance with EMC EN 55022:1998 (class A) and EN 55024:1998 in accordance with EU directive 89/336/EEC.

- USA EMC FCC Class A.

RoHS Compliant.

The printed circuit board is manufactured by UL recognized manufacturers and has a flammability rating of 94-V0.

## PHYSICAL AND ENVIRONMENTAL DETAILS

**Dimensions:** 42mm by 42mm by 16mm high.  
When the bracket is used, the depth of the camera is increased by 25mm.

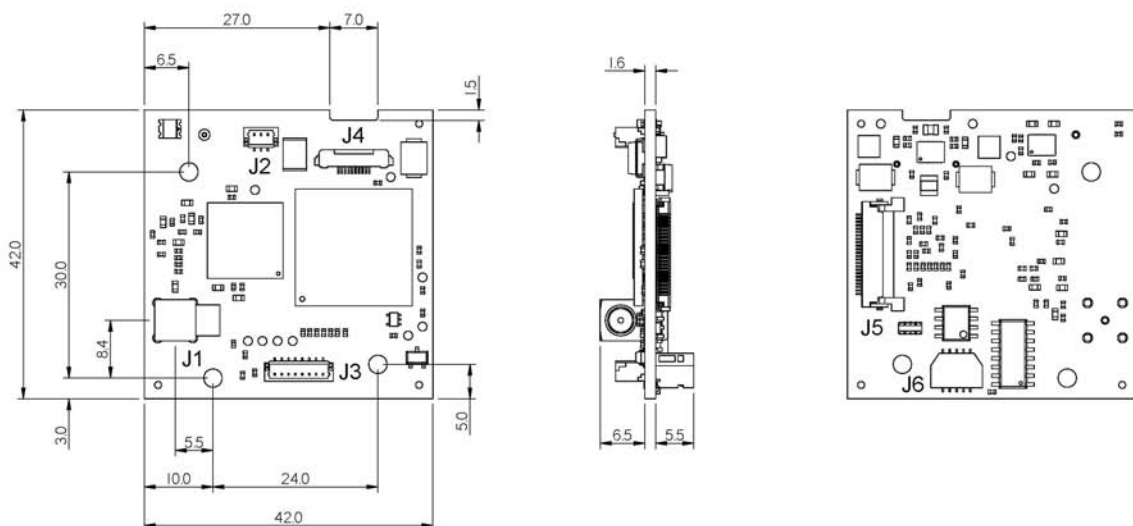
**Approximate weight:** 12g (excluding metal bracket).

**Power consumption (typical):** 90mA @ 9V. With no camera connected.  
525mA @ 9V. With FCB-H11 connected.

**Storage Temperature:** -15°C to +70°C.

**Operating Temperature:** 0°C to +55°C (ambient environment).

**Relative Humidity:** 10% to 90% non-condensing (operating and storage).



**Figure 3: PCB Mechanical Details (Top, Side and Bottom)**

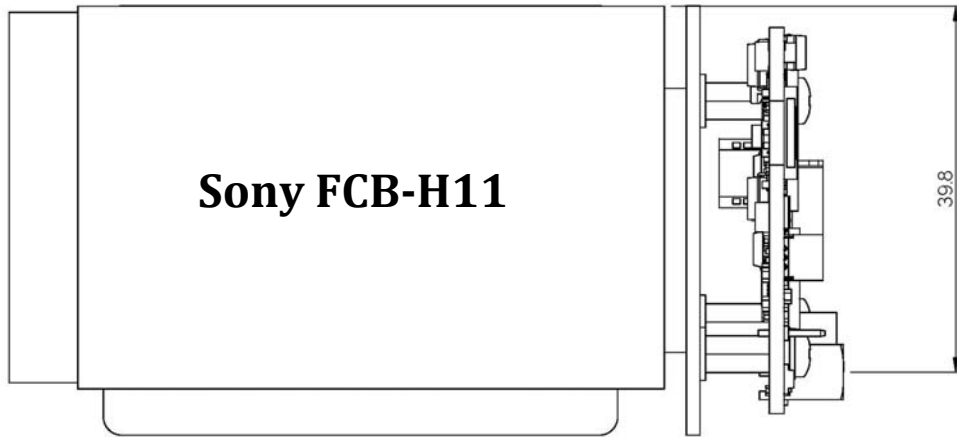


Figure 4: Module on Bracket and attached to Camera (Top View)

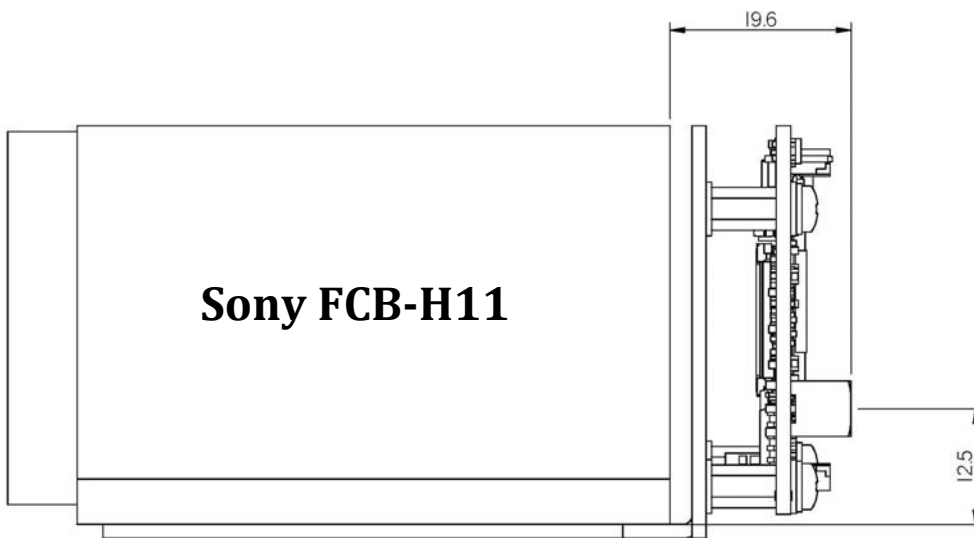


Figure 5: Module on Bracket and attached to Camera (Side View)



## CONTACT DETAILS

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