

- > SDI and HDSDI digital video output.
- > Analog HD and SD video output.
- > Automatic SONY camera recognition.
- > Enhanced signal quality : Low jitter, Sharp rising edges for long distance transmission.
- > Video format selection by micro switches.
- > Embedded colour bar & pathologic charts.
- > Embedded cross reticle
- > TTL or RS232 VISCA dialog level.
- > 5 to 12 VDC protected and EMC filtered power supply input.

Features

More than a video transmission module, the TWIGA HDMI interface is the heart of an industrial vision OEM system.

Compact size

Highly compact, the electronic module can be fixed at the rear of all SONY FCB HD without disturbing the mechanical integration.

Perfect HDSDI Image quality

Developed in association with the Engineers of the «Gennum» manufacturer, the HDSDI output is optimized to supply a high quality signal. This is proved by high-level characteristics. The low jitter, sharp rising edges allow a digital reliable transmission with long cables.

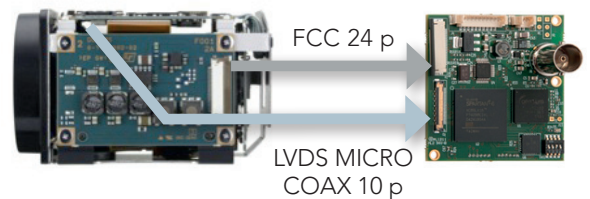
Low power consumption

The board uses components that require little energy. Internal supply voltages are lowered. The intensity circulating in components is reduced in order to lower the consumption. This also reduces the radiated emission for EMC regulation. This confers on the module an EMC behavior suitable with the hardest medical and aeronautical standards.

OEM Embedded Image processing functions

The TWIGA HDMI interface is based on an oversized Xilinx FPGA for a simple signal transmission application. Graphic overlay and image processing functions can be applied to the image flow in real time.

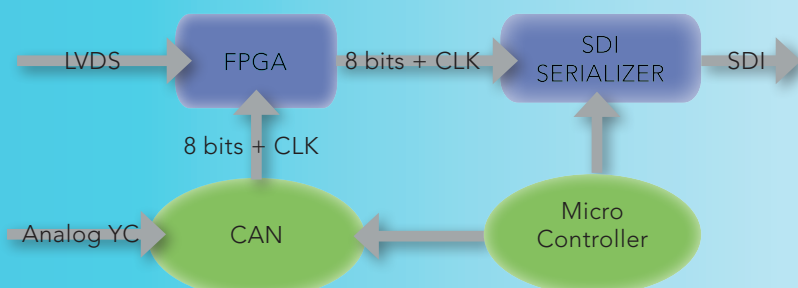
Connection with FCB H11



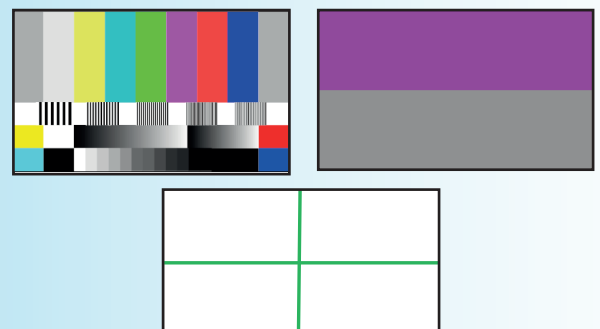
Connection with FCB EH & SE600



Bloc diagram



Embedded color bar & reticle

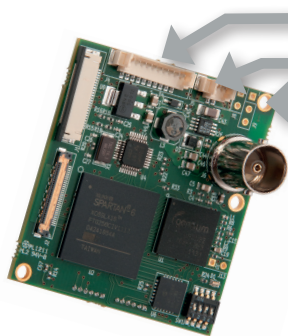


SONY FCB H11 / FCB EH HDSDI Interface specifications

	H11	EH6300	EH3400	EH3300	EH3150	SE 600
DVI 1080p25, 1080p30		✓				✓
DVI 1080i50, 1080i60	✓	✓				✓
DVI 720p50, 720p60	✓	✓	✓	✓	✓	✓
DVI 720p25, 720p30	✓	✓	✓	✓	✓	✓
HD Analogue Y, PbPr	✓	✓	✓	✓	✓	

Functions	Specifications	Functions	Specifications
Digital video output	HDSDI SMPTE 292 M	Latency	LVDS input to HDSDI output : 14 microseconds
Analog video output	Y, Pb, Pr 75 ohms, 1V p to p	Power	6 to 12 VDC, 6 W (including camera) 5V for SE 600
Video output standard configuration	Micro switches	Environmental	0°C to 60°C
Camera setting	RS232 or TTL, RX, TX, SONY VISCA protocol	Storage	-20°C to 60°C
Video output connector	BNC (SMB, MCX available in option)	Regulation	EMC FCC part 15, PCB : UL 94 V0
		Dimensions (mm)	48 (H) x 45 (L) x 20 (P)

SONY FCB H11 / FCB EH HDSDI Interface connection and configuration

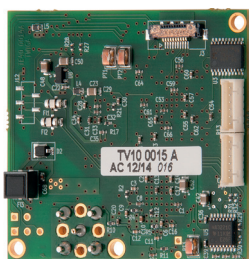


J6	Power
1	6 to 12 VDC
2	GND

J3	Analog SD video output
1	VBS out
2	GND
3	Y
4	C
5	GND

J7	HD video and COM signal
1	Y
2	GND
3	Pb
4	GND
5	Pr
6	GND
7	RX RS232
8	TX RS232
9	GND
10	Not Connected




1	2	3	4	FCB-H11	FCB-EH SERIE
OFF	OFF	OFF	OFF	External	External
ON	OFF	OFF	OFF		1080p30
OFF	ON	OFF	OFF		1080p25
ON	ON	OFF	OFF	1080i59,94	1080i60
OFF	OFF	ON	OFF	1080i50	1080i50
ON	OFF	ON	OFF	720p59,94	720p60
OFF	ON	ON	OFF	720p50	720p50
ON	ON	ON	OFF		720p30
OFF	OFF	OFF	ON		720p25
ON	OFF	OFF	ON	NTSC	NTSC
OFF	ON	OFF	ON	PAL	PAL



LED Blinking	Status
1 blink	Firmware loading
2	Decoder initialization OK
3	FPGA loading OK
4	Camera Dialog OK
5	Video format config OK
6	FPGA video processing OK
7	Video format modification by switches.

TTL / RS232 Dialog level	Open	Bypass
PS 3	RS232 level	TTL level input
PS 4	RS232 level	TTL level input

SONY FCB H11 / FCB EH HDSDI Interface product code

	HDMI Conversion module for SONY FCB H11	HDSDI Conversion module for SONY FBC EH / SE 600	
Product code	TV80 0019	TV80 0022	
Content	Interface electronic board ref TV10 0010		
Mechanical interface	Right angle black anodised aluminium plate +screws		
Analog camera link	24 pins FCC 150 mm length		
Digital camera link	SSL20-10SSB-009-B Cable assembly	USL20-30SS-005-C Cable assembly	
Power input wires	2 ways harness, 200mm length for power connector (J6)		
Analog HD output wires	10 ways harness, 200mm length for HD video / com signal connector (J7)		
HDSI connector options	TV80 0019  TV80 0022	TV80 0019-SMB  TV80 0022-SMB	TV80 0019-MCX  TV80 0022-MCX

