HDMI INTERFACE BOARD

FOR SONY FCB-EV7520A, FCB-EV, FCB-EH & SE600
New SONY FCB-EV9500L

TWIGA provides a compact interface board that converts the native LVDS format for Sony EV7520A, Sony FCB-EV, EH range & FCB-SE600 and new Sony FCB-EV9500L.

The Twiga HDMI module transmits the video stream over internationally recognized HDMI standard.

FEATURES

- o Supports new Sony FCB-EV7520A, FCEB-EV, EH & SE600 range
- o HDMI digital and analogue video output*
- o Up to 1080p60 video resolution output
- o Automatic camera detection
- o Video format selection by DIP switches
- o TTL or RS232 VISCA level serial control interface
- o Supply voltage 6V to 9VDC **
- o Auxiliary power output 5VDC, 1 A
- o Size 48mm x 45mm x 17mm

* Refer to camera technical manual for video standard supported
**Refer to camera technical manual for max power supply input

o Low power consumption

The board has been designed by using components that require low energy consumption. The intensity that circulates in components is reduced. This also reduces the radiated emission for EMC regulation. It confers an electromagnetic behavior suitable with the hardest medical and aeronautical standards.

o Key switch local control

Connecting the camera to a computer to drive it is not a requirement. DIP switches available on the board will allow you to select the desired camera video format.

You can also control the main VISCA functions such as zoom, freeze, factory preset that are preprogrammed by connecting a push-buttons keyboard on the board. It is possible to modify this configuration to replace it by your own OEM functions.

o Tailor-made image processing functions

The Twiga HDMI interface board is based on a powerful Xilinx FPGA. Graphic overlay and image processing functions can be implemented to the image flow in real time.
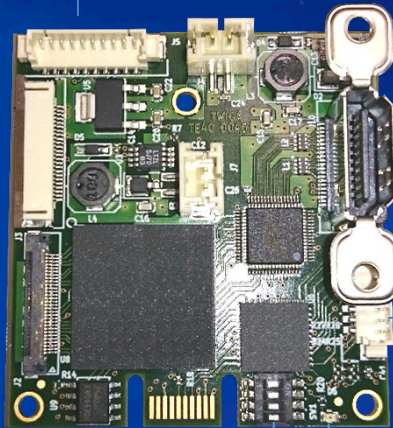
TARGET APPLICATIONS

Medical application Endoscopy

Aerospace / UAV's

Viual inspection / Low vision

Robotics ROV's

Onboard
Connectors

J5	Analogue HD/ SD output + COM
1	Y
2	GND
3	Pb
4	GND
5	Pr
6	GND
7	TX RS232
8	RX RS232
9	GND
10	VBS out

J4	Power IN
1	6 to 12 VDC
2	GND

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

J6	GPIO's
1	GND
2	Zoom TELE
3	Zoom WIDE
4	Freeze ON / OFF
5	Factory Preset SET / RECALL
6	Function 1
7	Function 2 (bar chart & reticle)

DIP switches				Video format configuration	
1	2	3	4	EV Series	EH Series
OFF	OFF	OFF	OFF	External	External
ON	ON	ON	ON	-	1080p60
OFF	ON	ON	ON	-	1080p30
OFF	OFF	ON	ON	-	720p560
OFF	OFF	ON	ON	1080p59.94	-
ON	ON	OFF	ON	1080p50	-
ON	OFF	OFF	OFF	1080p29.97	1080p30
OFF	ON	OFF	OFF	1080p25	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

Functions	Specifications
Digital video output	HDMI 1.3
Analogue video output*	Y, Pb, Pr 75 ohms, 1V - VBS
Digital Video Connector	HDMI Type A
Video output standard configuration	VISCA - Default: RS232 level – TTL level (Option)
Video output configuration	DIP switches or VISCA FCB control software
Auxiliary power output	5V, 1A
Power supply	6 to 12 VDC, 6 W (including camera) - **5V for FCB-SE600**
Operating temperature range	0°C to 60°C
Storage temperature range	-20°C to 60°C
Regulation	EMC FCC part 15, PCB: UL 94 V0
Dimensions (mm)	48 (H) x 45 (W) x 17 (D)

P/N Electronic Board:	TV10 0032 HDMI	
P/N Accessory kit:	TV50 0022 Mounting kit	TV50 0017 Cable kit
30 way USL20-30SS-012-C Cable assembly	✓	✓
24 way FCC cable	✓	
2 way cable - power supply (J4)	✓	✓
10 way cable - COM (J5)	✓	✓
7 way cable – GPIO'S – (J6)	✓	
Right angle black anodized aluminum bracket	✓	
Screws + spacers	✓	