

HDMI INTERFACE BOARD

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

New SONY FCB-EV9500L



HDMI
XILINX

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

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

○ 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.

○ 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.

○ 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

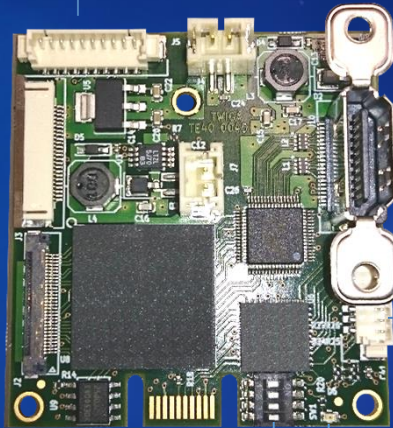
Medical application
Endoscopy

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 |

| 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 |



| 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) |

| 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 | ✓ | |



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