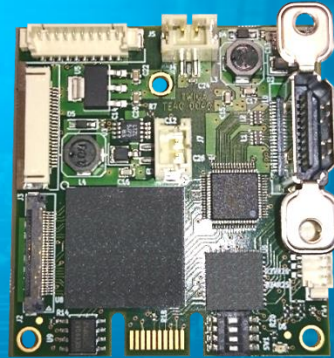


# HDMI INTERFACE BOARD

FOR TAMRON MP1010-VC and

**New MP1110 module**



TWIGA provides a compact interface board that converts the native LVDS format from Tamron MP1010M-VC & new MP1110 camera zoom module.

Twiga HDMI interface board allows transmission of the video stream over internationally recognized HDMI standard.

## FEATURES

- Supports Tamron MP1010M-VC & MP1110
- Video resolution : up to 1080p60 for MP1110
- Video resolution : up to 1080p30 for MP1010M-VC
- 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

\* The camera need to be restarted

\*\*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

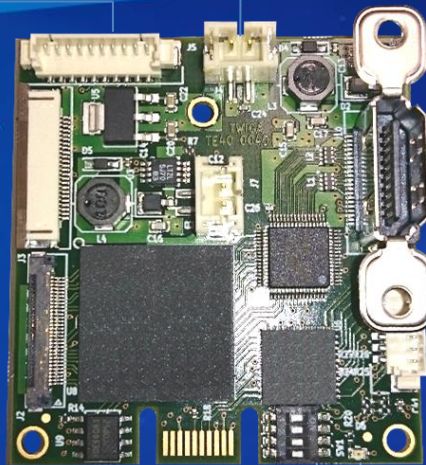
Aerospace / UAV's

Viual inspection / Low vision

Robotics  
ROV's

# Onboard Connectors

J5	COM
1	NA
2	NA
3	NA
4	NA
5	NA
6	NA
7	TX RS232
8	RX RS232
9	GND
10	NA



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	MP1010M-VC
OFF	OFF	OFF	OFF	External
ON	OFF	OFF	OFF	1080p30
OFF	ON	OFF	OFF	1080p25
ON	ON	OFF	OFF	1080i60
OFF	OFF	ON	ON	1080i50
ON	OFF	ON	OFF	720p60
OFF	ON	ON	OFF	720p50



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)

TTL / RS232 Dialog level	
R24 + R26 Soldered	RS232 level
R25 + R27 Soldered	TTL level

Functions	Specifications
Digital video output	HDMI 1.3
Digital Video Connector	HDMI Type A
Video output standard configuration	VISCA - Default : RS232 level – TTL level (Option)
Video output configuration	DIP switches or Tamron VISCA control software
Auxiliary power output	5V, 1A
Power supply	6 to 12 VDC, 6 W (including camera)
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)

## HDMI interface set for Tamron MP1010M-VC

P/N	TV80 0035-L
<b>Content</b>	
HDMI interface board - ref. TV10 0032	✓
30 way USL20-30SS-012-C Cable assembly	✓
2 way cable - power supply (J4)	✓
10 way cable - COM (J5)	✓