

4K to USB3 interface board

SONY FCB-ER series, FCB-ES8230 and latest FCB-EW9500H



The new compact TWIGA 4K to USB3 interface board is a high-performance USB3 SuperSpeed video capture module.

It allows you to capture uncompressed video stream from Sony 4K camera blocks and transmit it over a single USB3 cable. A simultaneous HDMI output is also available to display the 4K video on a monitor.

TWIGA 4K to USB3 supports up to 3840x2160p@30fps video resolution.



Plug & Play 4K to USB3 solution



Twiga 4K to USB3 interface board provides uncompressed UVC compliant video stream. A simple USB3 cable is enough to power, to control and to stream 4K on most devices equipped with a USB3 port (single board computers, NVidia platforms or PC using Windows or Linux OS).

Simultaneous HDMI video output

Twiga 4K to USB3 interface board enables to get a simultaneous USB & HDMI 4k video stream. Ideal for digital inspection, UAVs or medical applications that require simultaneously video display and image processing.

Camera control

You can control your camera settings remotely from your computer via the single USB3 cable or using the local UART. GPIOs for basic camera commands are also available.

FEATURES

- Uncompressed 4K video stream
- Video resolution up to 2160p30
- USB Video Class (UVC) compliant
- Communication
 - USB CDC (COM port / tty)
 - VISCA camera control via local UART
 - GPIOs for keypad connection
- Supports Windows and Linux OS
- HDMI 2.0 output
- Camera external power supply 6V-12VDC *

*Refer to camera technical manual for max power supply input

TARGET APPLICATIONS



Onboard Connectors

J204 **USB3.2**

J202		UART TTL	
1		GND	
2		Rx	
3		Tx	

J203 **HDMI 4k output**

J205 **HDMI loop-through**



J300		External Power supply	
2		V+	
1		GND	

J200		GPIOs	
1		GND	
2		Zoom +	
3		Zoom -	
4		Focus Auto/Manual	
5		Focus Near	
6		Focus Far	
7		Freeze On/Off	

J200 **Sony FCB-ER /ES/ EW HDMI Input**

J204 **Board to Board connector**

Extended functionalities

J202		External sync	
3		VID SYNC	
2		SYNC LOCK	
1		GND	

Functions	Specifications
Digital video output	USB3.2 Gen 1 – UVC compliant
Camera settings and control	VISCA protocol via USB CDC or UART TTL
GPIOs	Camera commands
Digital video output connector	USB3 micro B-type
Camera power supply	USB3 cable or external 6 to 12 VDC
HDMI output	HDMI 2.0 type D
Operating temperature range	0°C to 60°C
Storage temperature range	-20°C to 60°C
Regulation	CE EMC compliant, PCB : UL 94 V0
Dimensions (mm)	48 (H) x 45 (W) x 18 (D)
Weight (g)	24

P/N Electronic Board:	TV20 0008 4K to USB3		
P/N Accessory kit:	TV50 0027 Mounting kit	TV50 0026 Cable kit	
30 way USL20-30SS-012-C Cable assembly	✓	✓	
2 way cable (External power supply)	✓	✓	
7 way cable (GPIOs)	✓		
3 way cable (COM – UART TTL)	✓		
Right angle black anodized bracket	✓		
Screws + spacers	✓		



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