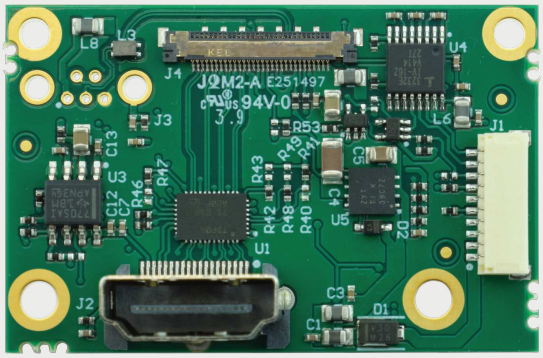
TL12G1152

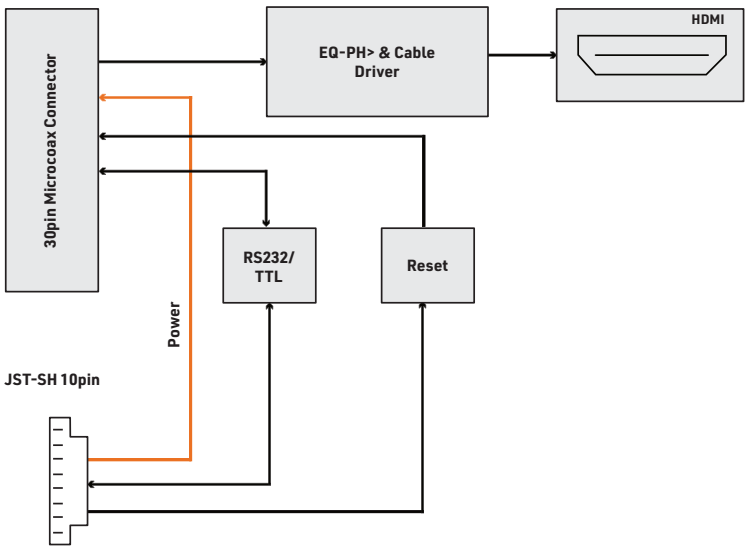
12 Gbps HDMI 2.0 Transmitter

General Description

TL12G1152 is a small form factor digital serial video transmitter. Camera video input signals are equalized, processed and output over an HDMI connector. Camera control is accomplished by a transparent full duplex communication channel. Physical interface between camera and camera controller / uC / PC is based on RS232 level or 3.3V TTL level.



Blockdiagram



Features

- 4K Video Output
- Seamless connection to Sony FCB 4K Cameras
- Integrated input signal equalizer
- Ultra high speed 12Gbps cable driver
- Up to 3840x2160p @ 60fps HDMI 2.0 video output
- UHD, FHD, HD video format support
- RS232 level serial camera control
- 3.3V TTL level serial camera control
- Supply voltage 7V to 12V DC regulated
- Ultra-low power 700mW@9V supply voltage only
- Physical interface between camera and camera controller / uC / PC is based on RS232 level or 3.3V TTL level.

Ordering Information

- TL12G1152, 4K-UHD HDMI 2.0 output
- TL12G1152CK, Cable kit (included)
  + 1x 30 wire micro coaxial cable
  + 1x 10 wire cable for J1, (open wires on 2nd end)

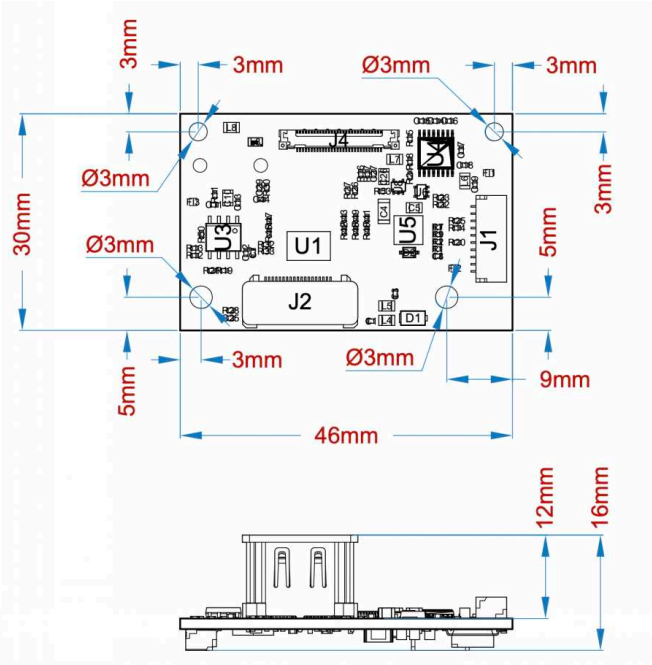
Board Mechanical

J1	
1	DC supply voltage input
2	DC supply voltage input
3	GND (0V)
4	GND (0V)
5	Reset - Pull pin 5 to GND(0V) for 1ms or longer for reset, leave open for normal operation
6	GND
7	TXD_TTL (serial IF transmit 3.3V)
8	RXD_TTL (serial IF receive 3.3V)
9	RXD_232 (serial IF transmit RS232)
10	TXD_232 (serial IF receive RS232)

J2	HDMI Connector

J4	30 wire microcoax connector for camera. Use 30wire micro coaxial cable supplied with cable kit.

Switch	Onboard Mode
1	Don't use
2	On = 2160p60/2160p50 Off = all other video modes



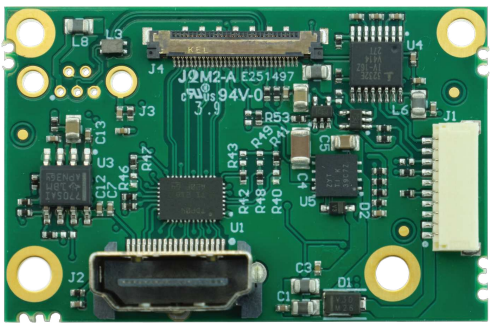
+ Max. component height = 12mm
+ PCB thickness 1.47mm

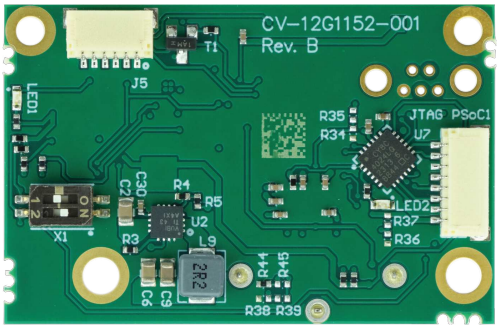
J5 and PsoC1	Don't connect

Power and Environment

Power Input	7V to 12V DC regulated supply input voltage range
Characteristics	PD = 6.5W (FCB-ER9500 lens steady + TL12G1152) PTL12G1152 = 700mW (typ.) (9V DC supply, 3840x2160@60fps, TA = 25°C, Humidity = 40%)
Operating and Storage Conditions	Ambient temperature (min/max) -5°C/60°C = 23°F/140°F Humidity: 20% - 80%
Environment	RoHS compliant (2002/05/EG and 2011/65/EU)

Board View





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