TL4K1152   AIVION ®

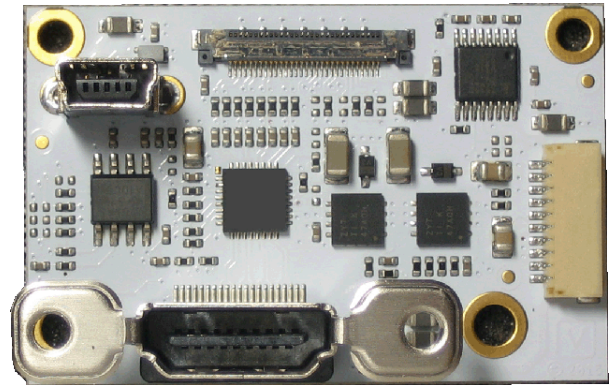## 3.4Gbps HDMI1.4b Transmitter   UHD   Data Sheet

Features

+ Ultra High Definition video output

+ Seamless connection to Sony FCB-ER8550, ER8530, ER8300 and FCB-ES8230 4K camera blocks

+ Integrated input signal equalizer

+ Ultra high speed 3.4Gbps cable driver

+ Up to 3840x2160p @ 30fps HDMI 1.4b video output

+ UHD, FHD, HD video format support

+ RS232 level serial camera control IF*

+ 3.3V TTL level serial camera control IF*

+ Supply voltage 7V to 12V DC regulated

+ Ultra low power - 150mW@8V supply voltage only

*Note on camera control IF:

Only one control interface must be active. It is not possible to use RS232 and 3.3V TTL control interfaces in parallel. TL4K1152 detects the active interface automatically.

General Description

TL4K1152 is a small form factor digital serial video transmitter. Camera video input signals are equalized, processed and output over an HDMI connector.
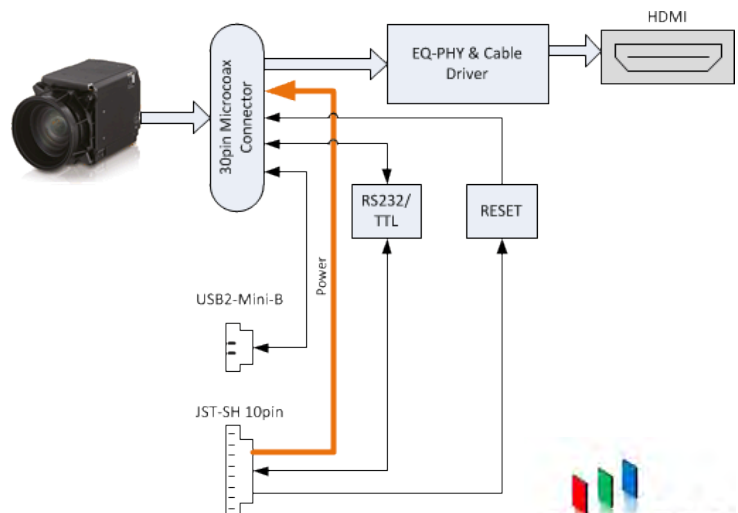
Camera control is accomplished by a transparent full duplex communication channel. Physical interface between camera and camera controller / uC / PC is based on RS232 level or 3.3V TTL level.
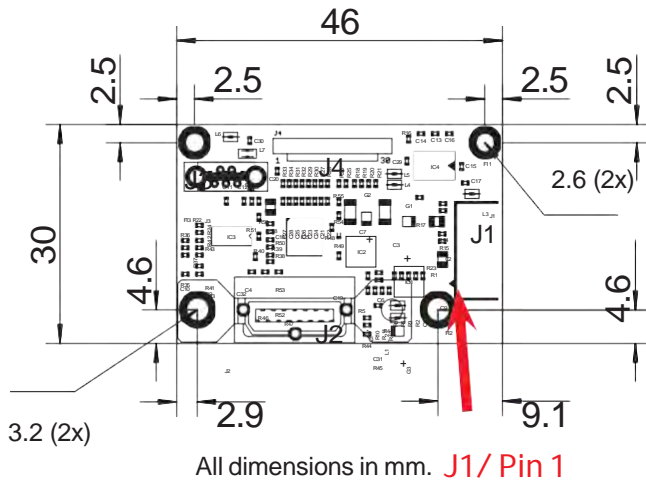
Applications

+ 4K UHD, Full HD and HD integrated cameras based on Sony FCB-ER8300 4K camera block

+ Industrial, medical, security, law enforcement, video production

Quick Specification

• FCB-ER8300 interface on 30pin microcoax connector
• Up to 4K 3840x2160@30fps HDMI 1.4b video output
• RS232 and 3.3V TTL camera control interface
• Supply voltage 7V to 12V DC, 8V DC recommended
• Operating ambient temperature range -10°C to +60°C
• Operating humidity range 20% to 80%
• Power consumption only 0.15W with 8V DC supply voltage
• Board size (L x W) 46mm x 30mm
• Wire/cable kit for camera and external interconnect
• RoHS compliant (2002/05/EG and 2011/65/EU)
• UL/UR compliant

3.4Gbps HDMI1.4b Transmitter   UHD   Data Sheet

Board Mechanical

46

2.5

2.5   2.5

2.6 (2x)

30

4.6   4.6

J1

J4

J2

3.2 (2x)

2.9   9.1

All dimensions in mm.   J1/ Pin 1

+ Max. component height = 10.5mm (HDMI connector, J2)

+ PCB thickness 1.53mm

Power and Environment

POWER INPUT:

7V to 12V DC regulated supply input voltage range

CHARACTERISTICS:

P_D = 3.05W (FCB-ER8300 lens steady +TL4K1152)

$P_{TL4K1152}$ = 150mW (typ.)

(8V DC supply, 3840x2160@29.97fps, T_A = 25°C, Humididty = 40%)

OPERATING AND STORAGE CONDITIONS:

Ambient temperature (min/max) -5°C/60°C = 23°F/140°F

Humidity: 20% - 80%

TL4K1152 is RoHS compliant (2002/05/EG and 2011/65/EU)

Onboard Connectors

J1:

Power, RS232, Shutdown

Pin assignment:

1	DC Supply voltage input
2	DC Supply voltage input
3	GND (0V)
4	GND (0V)
5	Reset*
6	GND
7	TXD_TTL (serial IF transmit 3.3V)
8	RXD_TTL (serial IF receive 3.3V)
9	RXD_232 (serial IF receive RS232)
10	TXD_232 (serial IF transmit RS232)

*Pull pin 5 to GND(0V) for 1ms or longer for reset, leave open for normal operation.

J4:

30wire microcoax connector for FCB-ER8300

Use 30wire micro coaxial cable supplied with cable kit.

J3:

USB connector - do not connect (for FCB-ER8300 firmware updates only). USB connector is no more assembled for revision B boards.

Ordering Information
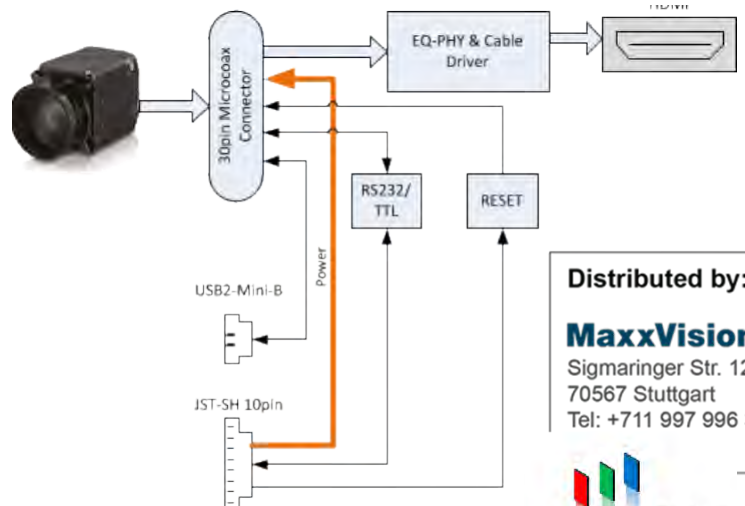
TL4K1152, 4K-UHD HDMI 1.4b output

TL4K1152CK, Cable kit (included)

   1 pcs. 30 wire micro coaxial cable

   1 pcs. 10 wire cable for J1, (open wires on 2nd end)

Data sheet V2.0.0 is valid for all revision B boards.

Cable Connections

Distributed by:

MaxxVision®
Sigmaringer Str. 121
70567 Stuttgart
Tel: +711 997 996 3

AIVION
Modular Imaging & Video Solutions