

Features

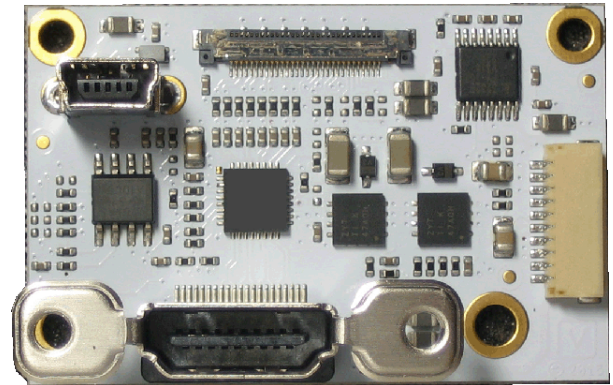
- + Ultra High Definition video output
- + Seamless connection to Sony FCB-ER8550, ER8530, ER8300 and FCB-ES8230 4K camera blocks
- + Integrated input signal equalizer
- + Ultra high speed 3.4Gbps cable driver
- + Up to 3840x2160p @ 30fps HDMI 1.4b video output
- + UHD, FHD, HD video format support
- + 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.

Applications

- + 4K UHD, Full HD and HD integrated cameras based on Sony FCB-ER8300 4K camera block
- + Industrial, medical, security, law enforcement, video production



General Description

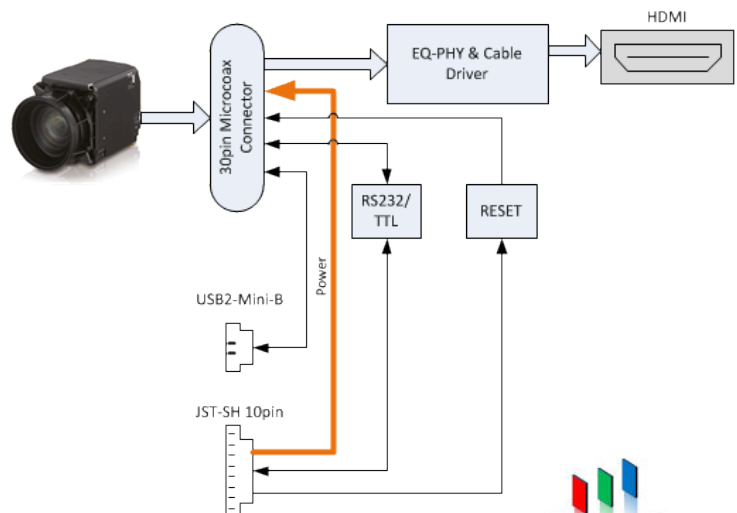
TL4K1152 is a small form factor digital serial video transmitter. Camera video input signals are equalized, processed and output over an HDMI connector.

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.

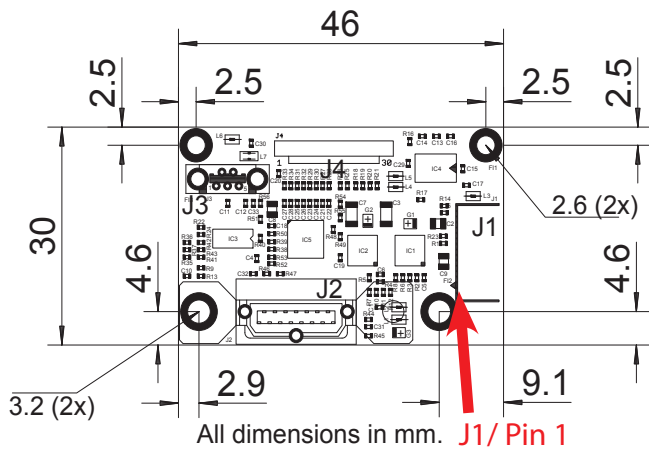
Quick Specification

- 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

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Board Mechanical



- + 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, $T_A = 25^\circ C$, Humidity = 40%)

OPERATING AND STORAGE CONDITIONS:

Ambient temperature (min/max) $-5^\circ C/60^\circ C = 23^\circ F/140^\circ F$

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

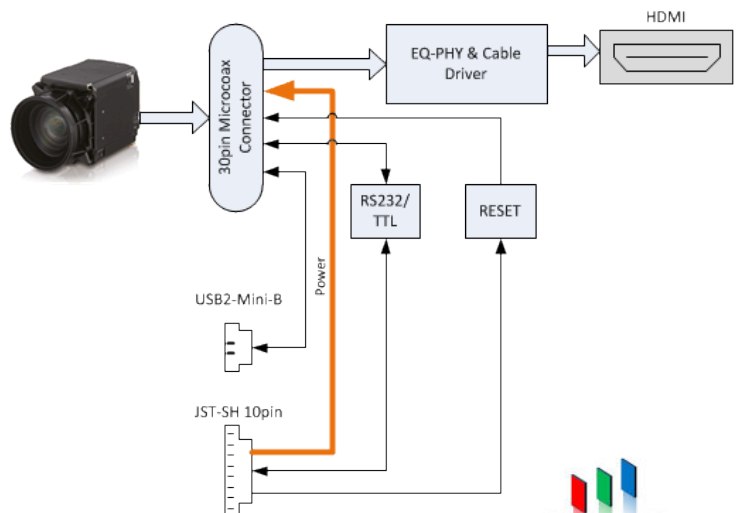
TL4K1152CK, Cable kit (included)

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



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