

New Product Brief

4K Camera Optical Interface Board

Product Description

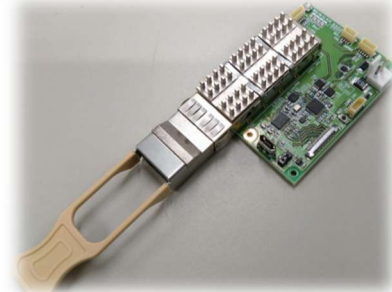
OptoHub's 4K Camera Optical Interface Board converts the TMDS video output into optical signals for long-distance and noise-immune transmission over optical fiber. The board is designed for OEM integration in machine vision, medical imaging, and other applications requiring high-resolution video transmission.

Features

- Designed to be compatible with Sony FCB-4K series camera blocks
- Camera control via VISCA protocol over RS-232C
- Wide range of power supply voltages, Tx board: DC +12 V, Rx board: DC +5 to +24 V
- Low power consumption of less than 2W
- Compact size, Tx board: 50 x 65 mm, Rx board: Size to comply with Compact PCI

Applications

- Machine vision
- Industrial inspection equipment
- Surgical lighting systems
- Robotic surgery
- Long-distance 4K video transmission



Tx Board



Rx Board

Product Specifications

Parameter	Tx camera board	Rx monitor board
Supported Video Formats	3840 × 2160p / 60, 59.94, 50, 30, 29.97, 25 1920 × 1080p / 60, 59.94, 50, 30, 29.97, 25 1920 × 1080i / 60, 59.94, 50 1280 × 720p / 60, 59.94, 50, 30, 29.97, 25	
Optical fiber	SMF or MMF	
Optical connector	LC or MPO-12	
Wavelength & Transmission Distance	CWDM, 1270–1330 nm (depending on model) or 850 nm or	
Video input connector	KEL USL00-30L	—
Video output	—	TMDS (Transition Minimized Differential Signaling)
Camera control interface	Serial signal : max. 115.2Kbps CMOS Level (3.3V) JST SR connector (BM07-SRSS-TB)	Serial signal: max. 115.2 kbps RS 232C, D-SUB 9-pin, Female
Power supply voltage	+12V DC JST VH connector (B2P-VH)	+5 - +24V DC HRS FX30B (FX30B-2S-3.81DS) or JST VH connector (B2PS-VH)
Power consumption	2 W max.	4.5 W max.
Operating temperature	-5 to +60°C	0 to +45°C
Dimension	50.0 x 65.0 mm excluding protrusions	100.0 x 156.5 mm excluding protrusions

TABLE OF PART NUMBER

#	Part Number	Tx/Rx	Wavelength	Optical Fiber	Optical Connector	Transmission Distance
1	MD12MP00085BD	Tx	850 nm	MMF	MPO12	150 m
2	MD22MP00085BD	Rx	850 nm	MMF	MPO12	150 m
3	MD12MP00131BD	Tx	1310 nm	SMF	LC	10 km
4	MD22MP00131BD	Rx	1310 nm	SMF	LC	10 km
5	MD12MP00085BD	Tx	850 nm	MMF	LC	300 m
6	MD22MP00085BD	Rx	850 nm	MMF	LC	300 m

Accessories

Product	Model #	Supplier	Note
Camera-to-board connection thin coaxial cable 30 poles, L=20cm	USL20-30SS-020.0-CY	KEL	Sold separately
USB-serial (CMOS3.3V) conversion cable L=180cm	MHM0003-180	Mimaki Electronics Components	Sold separately
Power cable VHR-2N--One end disconnected, L=100cm	MHM0004-100	Mimaki Electronics Components	Sold separately

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