

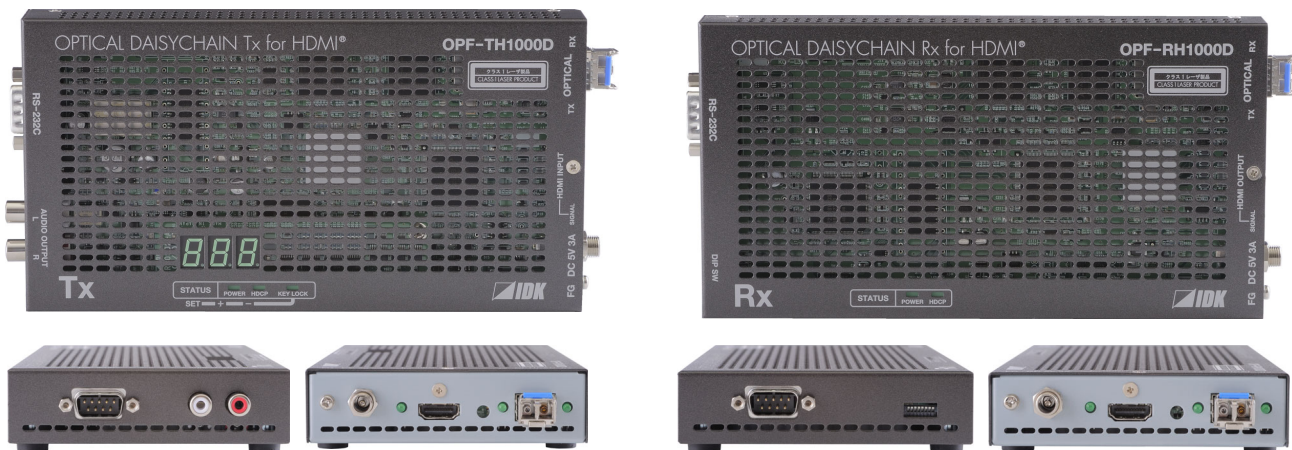
# OPF-TH1000D/OPF-RH1000D



## HDMI Fiber Optic Extender

The IDK OPF-1000D Fiber Optic Extender is an extender for long haul transmission of HDCP-compliant HDMI video, and unidirectional RS-232 control signals over fiber optic cabling. And it also supports Daisy Chain. Input signals are extended without quality lessening as they are extended without compression. Audio can be audio de-embedded from HDMI signal and output as analog audio at transmitter side.

### FRONT PANEL



### FEATURES

#### ■ Video

- Up to WUXGA (RB)\* or 1080p
- HDCP
- Daisy Chain Connection with single SFP module
- Extension distance
  - Multimode fiber (OM3): 984 ft. (300 m)
  - Multimode fiber (OM4): 0.62 mi. (1 km)
  - Singlemode fiber (OS1): 2.92 mi. (4.7 km)
  - Singlemode fiber (OS1): 6.21 mi. (10 km) (Optional)

#### ■ Audio

- Analog audio de-embedded (OPF-TH1000D only)

#### ■ Control

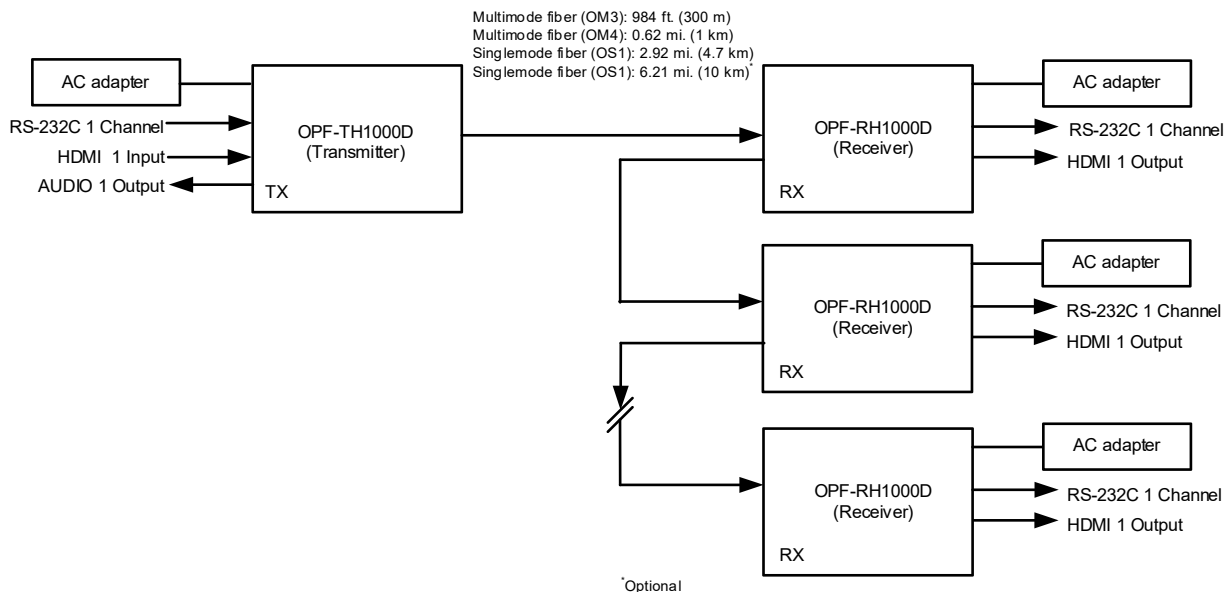
- Unidirectional communication via RS-232C

#### ■ Others

- AC adapter mechanical lock

\*WUXGA only supports RB (Reduced Blanking)

### DIAGRAM



Ver.1.8.0 (181003)

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**VIDELCO** Europe GmbH – Professionelle Audio-, Video-, Medien-Technik  
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# SPECIFICATIONS



Item			OPF-TH1000D (Transmitter)	OPF-RH1000D (Receiver)		
Input	Video	HDMI / DVI	Number / Signal	1 input / HDMI (*1) / DVI 1.0 - HDCP1.4 - TMDS Single Link - TMDS clock: 25 MHz to 165 MHz - Dot clock: 25 MHz to 165 MHz	1 input / Optical signal for extension	
			Connector	1 female HDMI Type A (*2)	1 LC connector	
		Others	Others	Color depth: 24bit		
		Formats	Formats	480i / 480p / 576i / 576p / 720p / 1080i / 1080p VGA / SVGA / XGA / WXGA (1280 x 768) / WXGA (1280 x 800) / Quad-VGA / SXGA / WXGA (1360 x 768) / WXGA (1366 x 768) / SXGA+ / WXGA+ / WXGA++ / UXGA / WSXGA+ / WUXGA * WUXGA only supports DVI signal and Reduced Blanking		
	Audio	Digital	Number / Signal	1 input / Multi-channel LPCM up to 8 channels - Sampling frequency: 32 kHz to 192 kHz - Sample size: 16 bit to 24 bit - Reference level: -20 dBFS - Max. input level: 0 dBFS	1 input / Optical signal for extension	
			Connector	1 female HDMI Type A (*2)	1 LC connector	
		Analog (*4)	Number / Signal	1 input / Stereo LR unbalanced signal - Input impedance: 75 Ω - Reference level: -10 dBu, - Max. output level: +10 dBu	1 input / Optical signal for extension	
			Connector	1 stereo mini jack (3.5 mm)	1 LC connector	
	Output	Video	HDMI / DVI	Number / Signal	1 output / Optical signal for extension	1 output / HDMI (*1) / DVI 1.0 - HDCP1.4 - TMDS Single Link - TMDS clock: 25 MHz to 165 MHz - Dot clock: 25 MHz to 165 MHz
				Connector	1 LC connector	1 female HDMI Type A (*2)
Daisy Chain			Number / Signal	-	1 output / Optical signal for extension	
Connector			Connector	-	1 LC connector	
Others		Others	Others	Color depth: 24bit (*3)		
Formats		Formats	480i / 480p / 576i / 576p / 720p / 1080i / 1080p VGA / SVGA / XGA / WXGA (1280 x 768) / WXGA (1280 x 800) / Quad-VGA / SXGA / WXGA (1360 x 768) / WXGA (1366 x 768) / SXGA+ / WXGA+ / WXGA++ / UXGA / WSXGA+ / WUXGA * WUXGA only supports DVI signal and output as Reduced Blanking			
Audio		Digital	Number / Signal	1 output / Optical signal for extension	1 output / Multi-channel LPCM up to 8 channels - Sampling frequency: 32 kHz to 192 kHz - Sample size: 16 bit to 24 bit - Reference level: -20 dBFS - Max. input level: 0 dBFS	
			Connector	1 LC connector	1 female HDMI Type A (*2)	
		Daisy Chain	Number / Signal	-	1 output / Optical signal for extension	
		Connector	Connector	-	1 LC connector	
Analog (*5)	Number / Signal	1 output / Optical signal for extension	1 output / Stereo LR unbalanced signal - Output impedance: 75 Ω - Reference level: -10 dBu, - Max. output level: +10 dBu			
	Connector	1 LC connector	1 stereo mini jack (3.5 mm)			
Plug & Play			DDC2B (Built in EDID) *Max. resolution selectable using built in EDID			
Fiber optic cable	Suitable cable		Simplex fiber cable, SFP module (2 LC connectors)			
	Polishing (*6)		SFP for Multimode: PC (recommended) SFP for Singlemode: UPC (recommended), SPC supported * APC is not supported			
Signal transmission distance (*7)			Multimode fiber (OM3): 984 ft. (300 m) Multimode fiber (OM4): 0.62 mi. (1 km) Singlemode fiber (OS1): 2.92 mi. (4.7 km) Singlemode fiber (OS1): 6.21 mi. (10 km) (Optional)			
Control	Serial control port	Number / Signal	1 port / simplex up to 115.2kbps			
		Connector	1 male D-Sub (9-pin)			
Others	AC adapter		Input: 100 - 240 VAC ± 10%, 50 Hz / 60 Hz ± 3 Hz Output: DC 5V 3A (AC adapter supplied)			
	Power consumption		About 9 Watts	About 8 Watts		
	Dimensions		4.2 x 1.2 x 7.9" (106 (W) x 30 (H) x 200 (D) mm) (EIA quarter rack wide) (Excluding connectors and the like)			
	Weight		1.3 lbs. (0.6 kg)	1.3 lbs. (0.6 kg)		
	Temperature		Operating: 32°F to 104°F (0°C to +40°C) Storage: -4°F to +176°F (-20°C to +80°C)			
	Humidity		Operating/ Storage: 20% to 90% (Non Condensing)			

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## SFP

Item	Multimode fiber	Singlemode fiber
Wave length	850 nm (Oxide VCSEL Laser (*8))	1310 nm (Fabry-Perot laser (*8))
Max. extension distance	OM3: 984 ft. (300 m) OM4: 0.62 mi. (1 km)	OS1: 2.92 mi. (4.7 km) OS1: 6.21 mi. (10 km) (Optional)
Optical power level	Input	Over -13 dBm
	Output	-9 dBm to -2.5 dBm
Max. input power	0 dBm	-8.4 dBm to -3 dBm
Connector	2 LC connectors (Duplex)	

If SFP is for Singlemode fiber, we have modules which can extend up to 6.21 mi. (10 km). (OS1)  
For request, please ask our Sales division.

- (\*1) CEC, HEC and ARC are not supported.
- (\*2) Please use an HDMI cable shorter than 5 meters.
- (\*3) Deep Color is not supported.
- (\*4) Separate analog audio input cannot be embedded onto digital video
- (\*5) Analog audio cannot be de-embedded (de- multiplexed) from digital audio.
- (\*6) It is possible to connect without using the recommended polishing method, but that may cause a change of extension distance ability due to an increase in return loss.
- (\*7) Max. Extension distance is measured under following condition; using fiber of recommended polishing method, without connection at the transmission path and not exceeding the value of allowable bending radius.
- (\*8) This device uses laser certified to be Class 1 as measured in JIS C 6802, which means they are designed to be fundamentally safe

## PRODUCT SELECTION

Parts Number	Fiber Type	Max. Distance
OPF-TH1000D-MM	Multimode	OM3: 984 ft. (300 m)
OPF-RH1000D-MM		OM4: 0.62 mi. (1 km)
OPF-TH1000D-SM	Singlemode	OS1: 2.92 mi. (4.7 km)
OPF-RH1000D-SM		OS1: 6.21 mi. (10 km) (Optional)