



## HDMI Fiber Optic Extender OPF-H1000-A

The IDK OPF-H1000-A Fiber Optic Extender is an extender for long haul transmission of HDCP-compliant HDMI video, stereo audio, and bidirectional RS-232 control signals over fiber optic cabling. Input signals are extended without the loss of quality since they are extended without compression.

### ■ Specification

Item			Description		
Model number			OPF-TH1000-A (Transmitter)	OPF-RH1000-A (Receiver)	
Input	Video	HDMI / DVI	Number / Signal	1 input / HDMI (*1) - HDCP: Pass through - CEC: Pass through - 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)	2 LC connectors
		Others	Color depth: 24bit		
	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 linear PCM 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)	2 LC connectors
		Analog (*4)	Number / Signal	1 input / Stereo LR unbalanced signal - Input impedance: 75 Ω - Reference level: -10 dBu - Max. input level: +3 dBu	1 input / Optical signal for extension
			Connector	1 stereo mini jack (3.5 mm)	2 LC connectors
Output	Video	HDMI / DVI	Number / Signal	1 output / Optical signal for extension	1 output / HDMI (*1) - HDCP: Pass through - CEC: Pass through - TMDS Single Link - TMDS clock: 25 MHz to 165 MHz - Dot clock: 25 MHz to 165 MHz
			Connector	2 LC connectors	1 female HDMI Type A (*2)
		Others	Color depth: 24bit (*3)		
	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 linear PCM 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	2 LC connectors	1 female HDMI Type A (*2)
		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. input level: +3 dBu
			Connector	2 LC connectors	1 stereo mini jack (3.5 mm)
Plug & Play			DDC2B (EDID is copied from a connected monitor automatically)		
Fiber optic cable	Suitable cable	Duplex 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): 985 ft. (approx.) / 300 m Multimode fiber (OM4): 3,280 ft. (approx.) / 1 km Singlemode fiber (OS1): 2.92 miles (approx.) / 4.7 km		
Control	Serial control port	Number / Signal	1 port / Full duplex up to 115.2kbps		
		Connector	1 male 9-pin D-Sub		
Others	AC adapter	Input: 100 - 240 VAC ± 10%, 50 Hz/60 Hz ± 3 Hz Output: 5VDC 3A 15Watt (AC adapter is supplied)			
	Power consumption	About 6 Watt			
	Dimensions	4.17 × 1.18 × 3.54" (approx.) / 106 (W) × 30 (H) × 90 (D) mm (Quarter rack, not including projections)			
	Weight	0.88 lbs. (approx.) / 0.4kg			
	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
Connector		2 LC connectors (Duplex)	
Wave length		850 nm (Oxide VCSEL Laser (*8))	1310 nm (Fabry-Perot laser (*8))
Max. extension distance		OM3: 985 ft. (approx.) / 300 m OM4: 3,280 ft. (approx.) / 1 km	OS1: 2.92 miles (approx.) / 4.7 km
Optical power level	Input	Over -13 dBm	Over -18 dBm
	Output	-9 dBm to -2.5 dBm	-8.4 dBm to -3 dBm

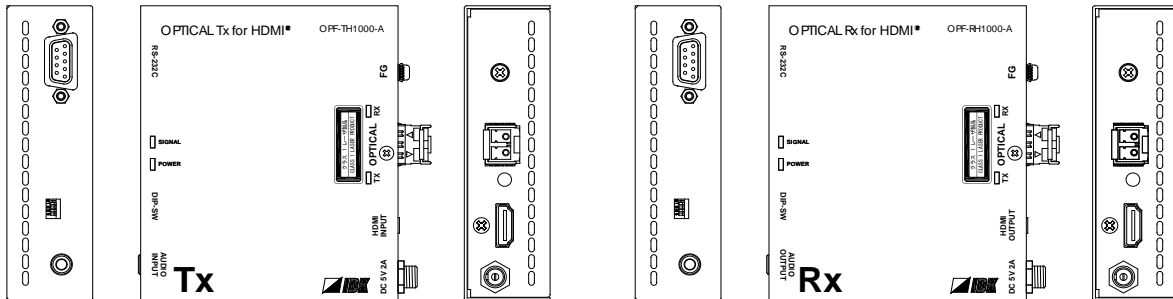
If SFP is for Singlemode fiber, we have modules which can extend up to 30 km. (OS1)  
For request, please ask our Sales division.

■Product Selection

Parts Number	Fiber Type	Max. Distance
OPF-TH1000-A-MM	Multimode	OM3: 985 ft. (approx.) / 300 m
OPF-RH1000-A-MM		OM4: 3,280 ft. (approx.) / 1 km
OPF-TH1000-A-SM	Singlemode	OS1: 2.92 miles (approx.) / 4.7 km
OPF-RH1000-A-SM		

- (\*1) 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

■ Front & Rear Panel

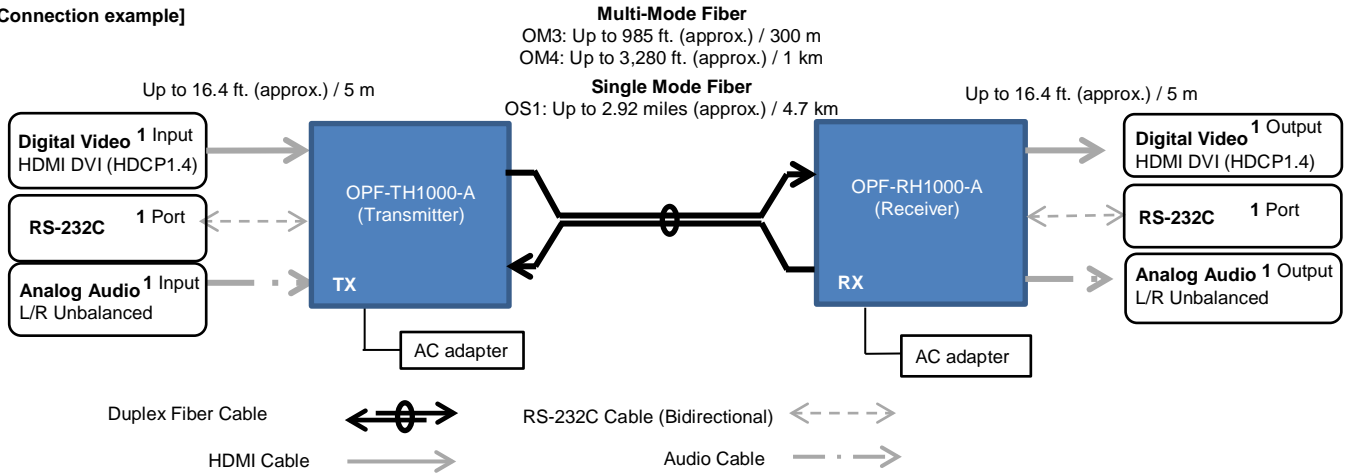


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# OPF-H1000-A Diagram and Features

## [Connection example]



## [Features]

### ■ Video

- Up to WUXGA (RB)\* or 1080p
- Extension distance
  - Multimode fiber (OM3): 985 ft. (approx.) / 300 m
  - Multimode fiber (OM4): 3,280 ft. (approx.) / 1 km
  - Singlemode fiber (OS1): 2.92 miles (approx.) / 4.7 km
- HDCP1.4 (Pass through)

### ■ Audio

- Extends analog audio

### ■ Control

- Bidirectional communication via RS-232C

### ■ Others

- CEC (Pass through)
- AC adapter mechanical lock

\*WUXGA only supports RB (Reduced Blanking) and DVI signals.