



### ■ Description

The IDK OPF-H2000 Fiber Optic Extender is an extender for long haul transmission of HDMI video, Giga Bit Ethernet signal, and bidirectional RS-232 control signals over fiber optic cabling. OPF-H2000 supports 4K signals. Input signals are extended without the loss of quality since they are extended without compression. \*This unit cannot use with OPF-H1000-A, OPF-H1000D, and FDX series optical input/output boards.

### ■ Specification

Item			Description		
Model number			OPF-TH2000 (Transmitter)	OPF-RH2000 (Receiver)	
Input	Video	Digital	Number / Signal	1 input / HDMI (*1) - HDCP 1.4: Pass through - CEC: Pass through - TMDs Single Link - TMDs clock: 25 MHz to 297 MHz	1 inputs / Optical signal for extension
			Connector	1 female HDMI Type A (*2)	2 LC connectors
		Others	Color depth: 24bit, 30 bit, 36 bit Deep Color (*3)		
	Formats	VGA / SVGA / XGA / WXGA (1280x768) / WXGA (1280x800) / Quad-VGA / SXGA / WXGA (1360x768) / WXGA (1366x768) / SXGA+ / WXGA+ / WXGA++ / UXGA / WSXGA+ / WUXGA / QWXGA / 4K (*4) 480i / 480p / 576i / 576p / 720p / 1080i / 1080p / 4K (*4)			
		Audio	Digital	Number / Signal	1 input / Multi-channel linear PCM up to 8 channels
	Connector	1 female HDMI Type A (*2)			2 LC connectors
Output	Video	Digital	Number / Signal	1 outputs / Optical signal for extension	1 output / HDMI (*1) - HDCP 1.4: Pass through - CEC: Pass through - TMDs Single Link - TMDs clock: 25 MHz to 297 MHz
			Connector	2 LC connectors	1 female HDMI Type A (*2)
		Others	Color depth: 24bit, 30 bit, 36 bit Deep Color (*3)		
	Formats	VGA / SVGA / XGA / WXGA (1280x768) / WXGA (1280x800) / Quad-VGA / SXGA / WXGA (1360x768) / WXGA (1366x768) / SXGA+ / WXGA+ / WXGA++ / UXGA / WSXGA+ / WUXGA / QWXGA / 4K (*4) 480i / 480p / 576i / 576p / 720p / 1080i / 1080p / 4K (*4)			
		Audio	Digital	Number / Signal	1 outputs / Optical signal for extension
	Connector	2 LC connectors			1 female HDMI Type A (*2)
Plug & Play			Pass through		
Fiber optic cable	Suitable cable		Duplex fiber cable, SFP module (2 LC connectors)		
	Polishing (*5)		SFP for Multimode: PC (recommended) SFP for Singlemode: UPC (recommended), SPC supported * APC is not supported		
Signal transmission distance (*6)			Multimode fiber (OM3): 493 ft (approx.) (150 m) Singlemode fiber (OS1): 4593 ft (approx.) (1.4 km)		
Control	Serial control port	Number / Signal	1 port / Full duplex up to 115.2kbps		
		Connector	1 male 9-pin D-Sub		
	LAN control port	Number / Signal	1 port / 10Base-T, 100Base-TX, 1000Base-T (Auto Negotiation), Auto MDI/MDI-X		
		Connector	1 RJ-45		
Others	AC adapter		Input: 100 - 240 VAC ± 10%, 50 Hz/60 Hz ± 3 Hz Output: 5VDC (AC adapter is supplied)		
	Power consumption		Around 9 Watts	Around 9 Watts	
	Dimensions		4.17 (W) × 1.16 (H) × 4.72 (D)" (approx.) (106 (W) × 29.5 (H) × 120 (D) mm) (Quarter rack, not including projections)		
	Weight		0.88 lbs. (approx.) (0.4kg)		
	Temperature		Operating temperature: 32°F ~ 104°F (0°C ~ +40°C) Storage temperature: -4°F ~ +176°F (-20°C ~ +80°C)		
	Humidity		Operating/ Storage humidity: 20 % ~ 90 % (Non Condensing)		

### ■ SFP+

Item	Multimode fiber	Singlemode fiber
Connector	2 LC connectors (Duplex)	
Wave length	850 nm (Oxide VCSEL Laser (*7))	1310 nm (Fabry-Perot laser (*7))
Max. extension distance	OM3: 493 ft (approx.) (150 m)	OS1: 4593 ft (approx.) (1.4 km)
Optical power level	Input	Over -11.2 dBm
	Output	-8.2 dBm to -2 dBm
		Over -13.8 dBm
		-10.6 dBm to +0.5 dBm

### ■ Product Selection

Parts Number	Fiber Type	Max. Distance
OPF-TH2000-MM	Multimode	OM3: 493 ft (approx.) (150 m)
OPF-RH2000-MM		
OPF-TH2000-SM	Singlemode	OS1: 4593 ft (approx.) (1.4 km)
OPF-RH2000-SM		

(\*1) HEC and ARC are not supported.

(\*2) Please use an HDMI cable shorter than 5 meters.

(\*3) 4K signals are only supported 24 bit.

(\*4) 4K signals are only supported 24 Hz / 25 Hz / 30 Hz.

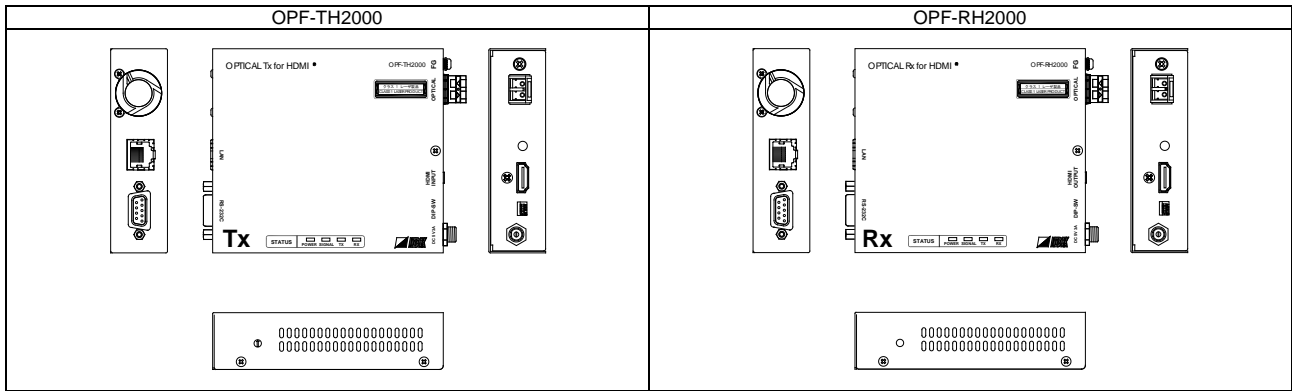
(\*5) It is possible to connect without using the recommended polishing method, but that may cause a change of extension distance ability due to an increase in return loss.

(\*6) 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.

(\*7) This device uses laser certified to be Class 1 as measured in JIS C 6802, which means they are designed to be fundamentally safe

(\*8) If SFP is for Singlemode fiber, we have modules which can extend up to 10 km (OS1). For the request, please ask our Sales division.

■ Front & Rear Panel



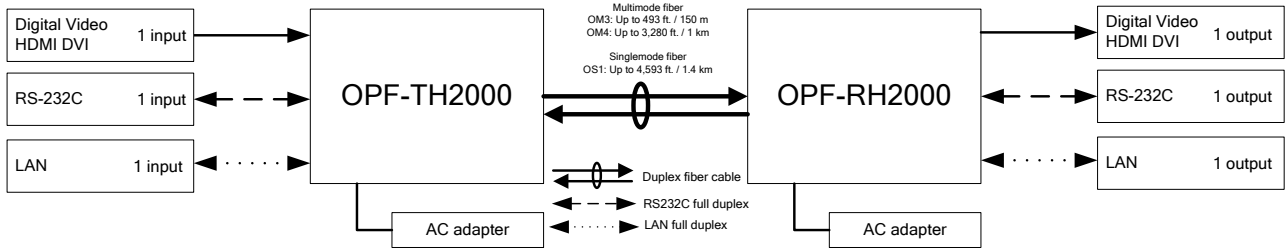
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## 4K 30Hz HDMI Fiber Optic Extender

# OPF-H2000 Diagram and Features

### [Connection Diagram]



### [Features]

#### ■ Video

- Up to 4K 30Hz
- Extension distance
  - Multimode fiber (OM3): 493 ft (approx.) <150 m>
  - Singlemode fiber (OS1): 4593 ft (approx.) <1.4 km>

#### ■ Control

- Giga Bit Ethernet signal transmission
- Bidirectional communication via RS-232C and LAN

#### ■ Others

- HDCP (Pass through)
- CEC (Pass through)
- AC adapter mechanical lock