Compact 1-Channel 4K HDMI Fiber Extender

Model: FCM-1100-H1-4k

4K60 4:4:4 · HDMI embedded audio

Transmitter -T / Receiver -R · DC 5V



Product Overview

- Using a transmitter and a receiver, extend 1 HDMI video and embedded audio to a remote display device.
- Suitable for point-to-point fiber wiring in conference displays and digital signage, with optical modules selected according to fiber type and distance.
- Compact body size of 80×24×20 mm, can be mounted on wall or with 35 mm rail mounts, suitable for deployment in limited space.

Key Features

- **Clear Display** 4K60 4:4:4, HDMI interface 18 Gbps.
- **Audio and video simultaneous transmission** Supports embedded LPCM and compressed audio.
- **Display Matching** Supports EDID management, HDCP, and HDR.
- **Signal equalization** HDMI receiving end supports adaptive equalization.
- **Easy for inspection** VOK/FIB/PWR LED status indication.
- **Optical path optional** Single/fiber dual, single/multi-mode, selected according to module distance
- **Low power consumption** Each device <6 W, powered by Type-C interface DC 5V.

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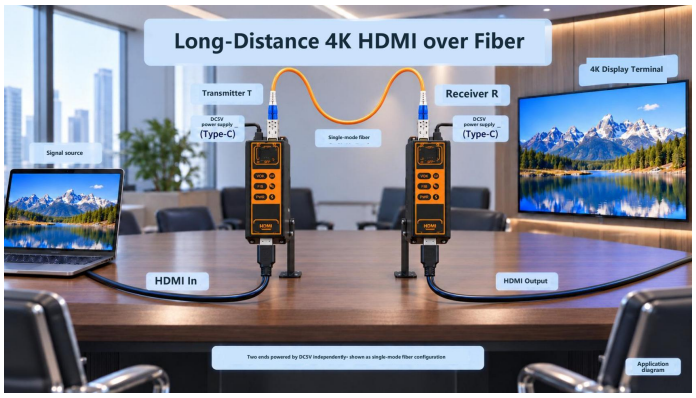
Typical Application



The transmitting end connects to the signal source, and the receiving end connects to the display device; the diagram shows a single-mode single-fiber configuration, with both ends powered by DC 5V.

Optical fiber connected via top SFP module, HDMI connected via bottom port; the bracket in the diagram is only for showing wiring orientation.

Interfaces and Installation

Front of Body



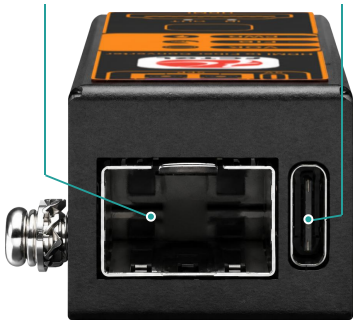
VOK / FIB

PWR identifier

Top surface

SFP fiber port

Type-C DC 5V



Optical module and power plug connected from top

Bottom surface

HDMI: -T input / -R output



HDMI plug inserted upward from bottom

35 mm

DIN-Rail Mount





Wall-mounted Mounting Elements

Configured to Order

The interface location is based on the physical surface; the front graphic is a stencil indication; sufficient space is reserved at the top and bottom for plugging and cable bending during installation.

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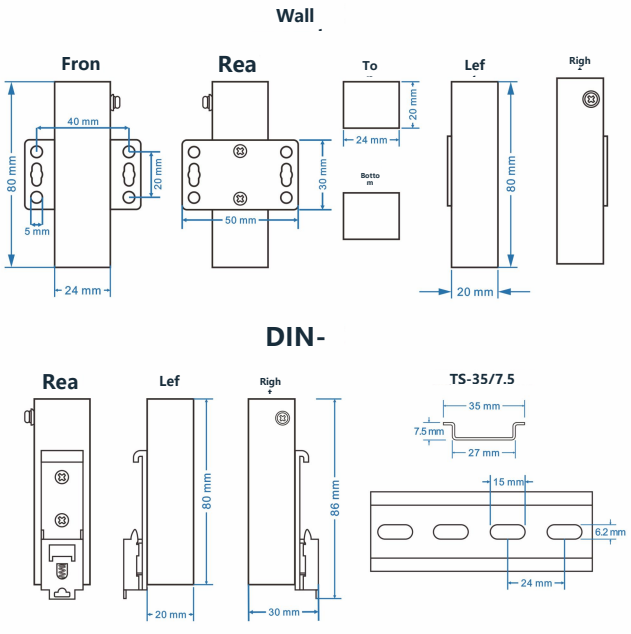
Technical Specifications

Item	Specification
HDMI interface	1 HDMI-A connector per unit; -T input, -R output. HDMI 2.0b, compatible with 1.4b; local 18 Gbps; receiver supports adaptive equalization.
Video & Transmission	Up to 4K@60 Hz, 4:4:4; fiber extension uses video encoding/decoding. Fiber link speed can reach up to 10 Gbps
Content protection and display	HDCP 1.4 / 2.2 / 2.3; supports HDR and static/dynamic metadata; supports EDID information management and transmission.
Audio	Supports HDMI embedded LPCM and compressed audio transmission with video; format is negotiated between both ends; no independent audio embedding/decoding or serial interface.
Status Indicators	VOK, FIB, and PWR LED status indicators, locations, and labeling refer to the interface diagram.
Fiber Interface	1 SFP optical module slot per unit, LC interface; single-fiber/double-fiber, single-mode/multi-mode can be selected according to the module.
Transmission distance / Wavelength	Multi-mode reference: 300 m, 850/1310 nm; single-mode reference: 10–80 km, 1310/1550 nm. Distance and wavelength depend on the selected module and fiber.
Power supply / Power consumption	Type-C interface, DC 5V; total power consumption <6 W. Power supplied separately at both ends
Environment	Standard operating range: -10～+55 ℃; industrial version with option: -40～+85 ℃. Storage range: -40～+90 ℃; 0%～95% RH, no condensation.
Structure / Reliability	Body size: 80×24×20 mm; wall-mounted or 35 mm rail installation, mounting components are provided according to order. MTBF > 100000 h.

4K, high color depth, and HDR actual display formats are constrained by signal source, display device, color depth, and cable conditions; optical modules, fiber count, and wavelength must be paired appropriately.

Dimensions and Mounting



Unit: mm. Body dimensions: 80×24×20; Mounting height with rails and clips: 86, total depth: 30. Full installation view and hole positions are shown in the above figure.

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Ordering Information

Model segmentation: FCM- | 1100- | H1- | 4k | -T / -R

NO	Name	Definition
1	FCM-	Model prefix for this series of products
2	1100-	Product series code.
3	H1-	1 HDMI video channel
4	4k	4K video specification, up to 4K60, 4:4:4
5	-T / -R	-T represents transmitter, -R represents receiver; transmitters and receivers must be paired.
6	Optical module configuration	LC interface; specify single/double fiber, single/multi-mode, transmission distance, and wavelength when ordering; both ends must use matching optical modules.
7	Power supply and installation	Both ends have Type-C interfaces, 5V DC; temperature versions, wall-mounted or rail-mounted components and accessories specified in the order list.

Full Ordering Code

Full Model Code	Configuration
FCM-1100-H1-4k-T	1-channel 4K HDMI transmitter; 1 HDMI input, 1 SFP fiber port; Type-C, DC 5V.
FCM-1100-H1-4k-R	1-channel 4K HDMI receiver; 1 HDMI output, 1 SFP fiber port; Type-C, DC 5V.

When placing an order, specify the number of both ends, single/multi-mode, single/double fiber, transmission distance, wavelength, and temperature version. Optical modules and optical fibers must match; power supply, HDMI cable, optical fiber cable, and installation accessories shall be as specified in the order list.

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