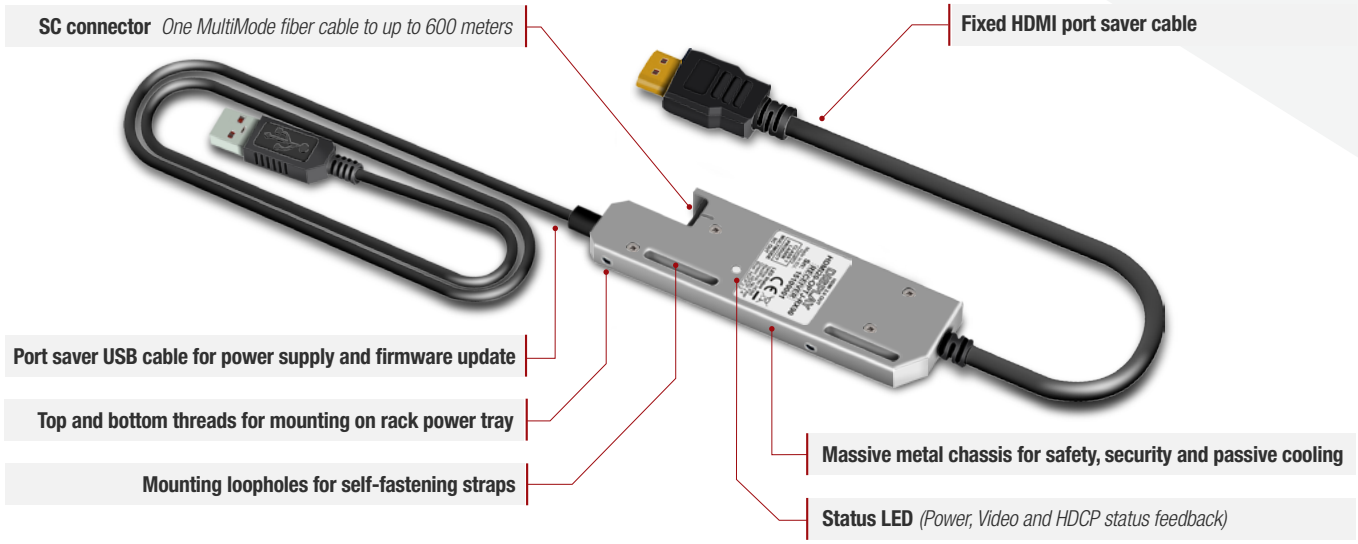
HDMI20-OPTJ-TX90 and HDMI20-OPTJ-RX90



The HDMI20-OPTJ-TX90 and HDMI20-OPTJ-RX90 are HDMI 2.0 compatible optical fiber extenders. These units transfer uncompressed HDMI 2.0 class signals with embedded audio to up to 600 m distance, over one MultiMode fiber cable. Embedded HDMI audio signals include Dolby TrueHD and DTS-HD Master Audio.

The maximum resolution is based on the HDMI 2.0 standard: extending uncompressed signals of 4K@60Hz with RGB 4:4:4 colorspace, 36 bit deep color and HDCP 2.2.

These devices have massive, solid aluminum casings, providing excellent cooling, safety, and maximum reliability. There are loops in the chassis for self-fastening straps (commonly known as Velcro straps), to fasten the extender to basically anywhere. The device has an SC optical connector.

Features:

- Resolutions up to 4K@60Hz with RGB 4:4:4 colorspace
- HDMI 2.0, HDMI 1.x and DVI 1.0 compliant
- HDCP 2.2, HDCP 1.4 compliant and CEC, EDID transparent
- 36-bit deep color support
- 3D signal compatibility with frame packing, side-by-side and top-bottom formats
- Zero frame delay: no compression, no latency
- SC connector: one MultiMode fiber cable to up to 600 m distance
- 1200 m extension range for FullHD signals
- HDMI audio formats: Dolby TrueHD and DTS-HD Master Audio
- 5-color Status LED
- Massive metal chassis for safety, security and passive cooling
- Loopholes for mounting with self-fastening straps
- Top and bottom threads for mounting on rack power tray
- Easily replaceable, fixed port saver USB and 80 cm long HDMI 'pigtail' cables
- 3-year warranty (extendable to 5 years)
- Available PowerTray mounting for 16x units with power source for rack installation

HDMI20-OPTJ-Series front view

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Specifications

Data rate:	18 Gbps (6 Gbps per color)
Resolution:	Up to 4K@60Hz with RGB 4:4:4 colorspace
Video delay:	0 frames
HDCP 2.2 and 1.4 pass through:	Yes
EDID emulation:	Transparent EDID
HDR Modes:	HDR 10, HDR 12 and Dolby Vision
RS-232 pass through:	No
Micro-USB B cable:	Power Feed and Firmware Upgrade
Cooling:	Passive
Power consumption TX (1080p60 / 4K60):	1,5 W / 2W
Power consumption RX (1080p60 / 4K60):	0,8 W / 1W
Operating temperature:	0 to +50°C (+32 to +122°F)
Storage temperature:	-40 to +85°C (-38 to +185°F)
Operating humidity:	10% to 90%, non condensing
Material:	Aluminium
Enclosure dimension:	110,5 W x 35,5 D x 11x4 H (mm)
Weight:	130 g
Rack mountable:	Yes, with 1U high rack shelf
Lenght of pigtail HDMI cable:	800 mm*
Lenght of pigtail USB cable:	1000 mm
Warranty:	3 years

* Production of devices with the 250 mm fixed HDMI cable are being phased out, and the availability of the 800 mm long HDMI cable version is limited. Please inquire at your Lightware sales contact about the currently available versions.

Fiber Optical Port

Connector type:	SC simplex receptacle
Laser wavelenghts:	HSL: 780, 800, 825, 850 nm; LSL: 910, 980 nm
Laser class specification:	Class 1 (if enclosure removed: Class 3R)
Complience:	IEC/EN 60825-1:2014-05 Ed. 3.0 21CFR Subchapter J Pearts 1040.40 and 1040.11

HDMI Port

Connector type:	19-pole HDMI Type A plug
Standard:	DVI 1.0, HDMI 1.4, HDMI 2.0
Color space:	RGB, YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
Maximum resolution:	3840x2160@60 Hz 36 bit deep color support
HDCP compliency:	HDCP 1.4 and HDCP 2.2

Power

Power supply (TX):	External power adaptor / USB / HDMI
Power supply (RX)::	External power adaptor / USB
Power adaptor:	In: 100-240 V AC 50/60 Hz Out: 5V DC, 1 A
Power connector:	USB-A plug

User Interface

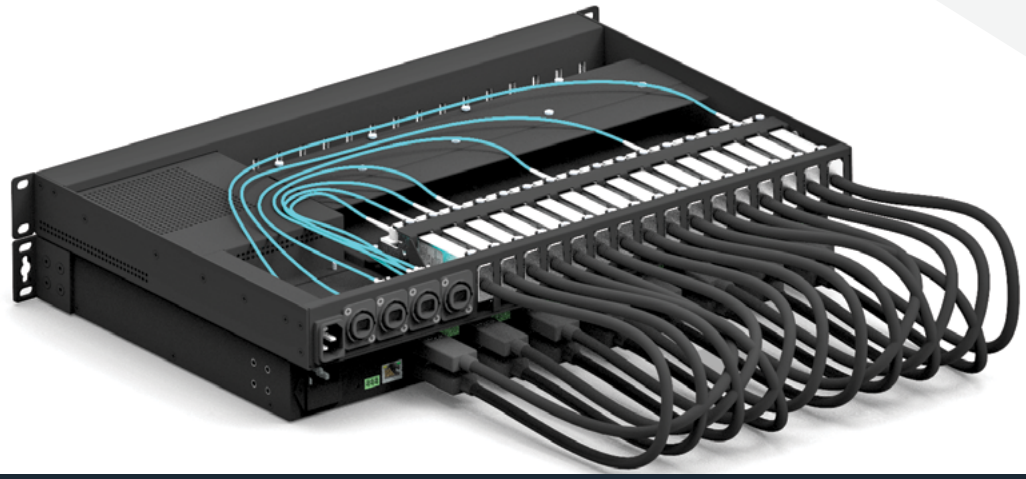
Status LED:	Power, Video and HDCP Status feedback
Power supply (RX)::	External power adaptor / USB
Power adaptor:	In: 100-240 V AC 50/60 Hz Out: 5V DC, 1 A
Power connector:	USB-A plug

Maximum Extension Distances

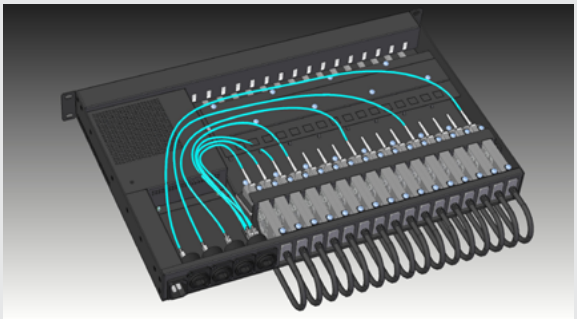
	Pixel clock	OM1	OM2	OM3	OM4
1280x720p60Hz	74 Mhz	800m	1000m	1200m	1200m
1920x1080p60Hz	148,5 MHz	500m	1000m	1200m	1200m
3840x2160p30Hz (4K@30 Hz 4:4:4)	297 MHz	200m	600m	1200m	1200m
3840x2160p60Hz (4K@60Hz 4:2:0)	297 MHz	200m	600m	1200m	1200m
3840x2160p60Hz (4K@30Hz 4:4:4)	594 MHz	Not supported	300m	600m	600m
4096x2160p60Hz (DCI 4K@60Hz)	594 MHz	Not supported	300m	600m	600m

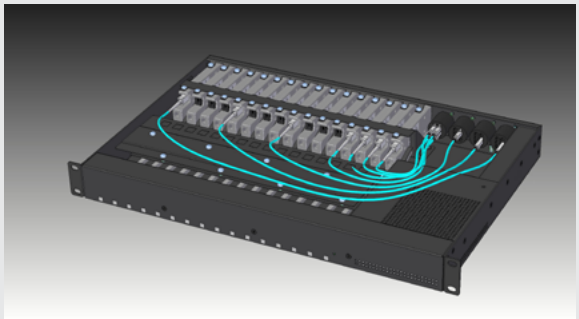
HDMI20-OPTJ-TX90 and HDMI20-OPTJ-RX90

Rack-mountable PowerTray for 16x HDMI20-OPTJ-TX/RX90 Optical Extenders



Combine an **MX2-8x8-HDMI20-Audio** matrix with a fully populated rack tray to create a **Full 4K HDMI 2.0 optical matrix.**





The PowerTray is a 1RU size housing accessory which can enclose up to 16 HDMI20-OPTJ-TX/RX90 units, also providing power source for every installed device. The optical fibers are connected to the four Neutrik OpticalCON Quad connectors, each carrying four signal fibers from four of the extenders. The HDMI tail cables of the extenders are accessible directly at the back of the PowerTray.

HDMI 2.0 optical matrix assembly: by connecting the HDMI connectors otputs of the fully populated PowerTray with the input and output ports of an MX2-8x8-HDMI20-Audio matrix a HDMI 2.0 optical matrix system can be created with Full 4K UHD at 60 Hz 4:4:4 maximum resolution.

Features:

- 1RU size mounting
- Universal full range AC input with standard C14 socket
- Protections: Short circuit / Overload /
- 3 years warranty
- The extender units can be freely aded or removed by users, TX and RX units can mix in any combination in the tray
- 4x Neutrik OpticalCON Quad OR 8 x SC Duplex connectors
- Noiseless passive cooling
- Status LED lights on the units are mirrored to the front panel of power tray
- +1 status LED for 5V DC power feedback
- Powering USB port protection: in case a USB port fails the rest of the units keep on working
- Uniquely designed optical and USB cable management
- Optical cables within the power tray are numbered for easy identification and installation

Specifications:

DC output number	16
Power comsuption	23,7 W
DC output voltage	5V
Rated current per output port	500 mA
Input voltage range	85 - 264 VAC
Input frequency range	47 - 63 Hz
Operating temperature range	Between 0 and +50 °C (+32 .. +122 °F)
Optical connector type	4 x Neutrik OpticalCON Quad OR 4 x Neutrik OpticalCON Duo OR 8 x SC Duplex
Rack height	1RU
Enclosure	1 mm metal casing
Dimensions	482,6 (19”) x 43,7 (1RU)x300mm
Weight	4.13 kg
Compliance	CE
Warranty	3 years

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