Analog/digital video and audio extension over CATx cable

Highlight features

- Extends VGA, YPbPr, DVI and HDMI 1.3 signals
- Accepts analog and digital audio signals
- Autoswitch and autosync function for video and audio inputs with priority
- HDCP compliant

Lightware's **UMX-TP-TX100R** is an all-round, universal video and audio transmitter for ever-changing environments such as small board rooms and classrooms. The extender was designed to handle digital and analog video and audio signals e.g. VGA, YPbPr, DVI and HDMI 1.3 with analog stereo, 5.1 S/PDIF and even 7.1 HDMI embedded audio.
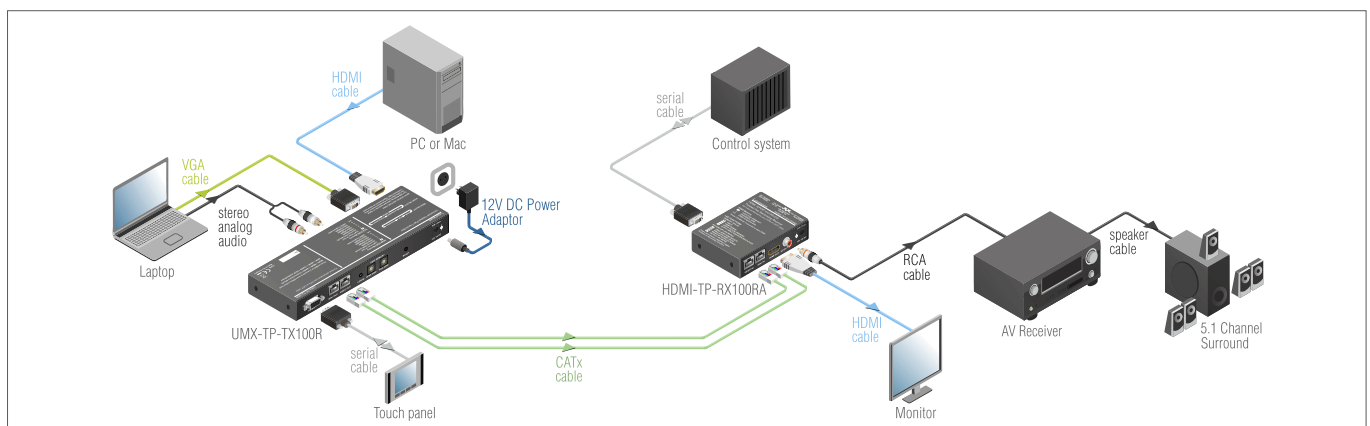
Analog signals are converted to digital formats and digital or digitized analog audio is embedded in the video stream. UMX-TP-TX100R handles HDCP encryption and has an HDCP enable/disable function.

Using the factory, custom or transparent EDID emulation (separate rotate switch for VGA and HDMI inputs), the user can fix and lock EDID data on the transmitter's input connector. Advanced EDID Management forces the required resolution from any VGA or HDMI laptop and fixes the output format conforming to the system performance.
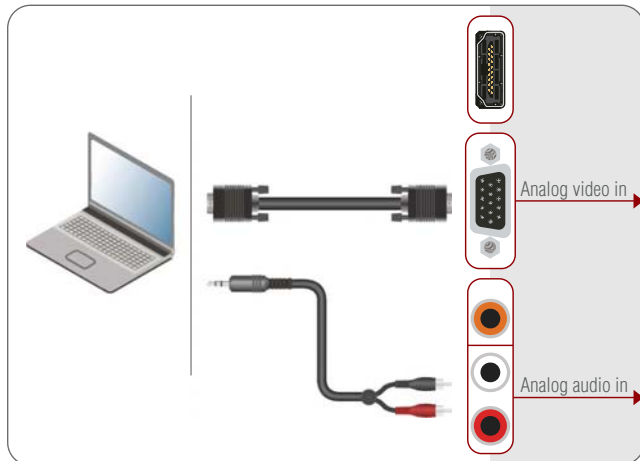
Control options available through RS-232: UMX-TP-TX100R can be controlled from either Touch controller or Control System. The transmitter has RS-232 pass-through option which allows direct bi-directional communication between Touch controller and Control System.

Cross compatibility between all the devices in the product series is ensured thanks to Lightware's attentive design. The transmitter can be paired with any receiver without restriction. With Lightware's Hybrid Modular Matrix concept, it is even possible to connect the UMX-TP-TX100R directly to the matrix router using an MX-HDMI-TP or MX-DVI-TP series input board.
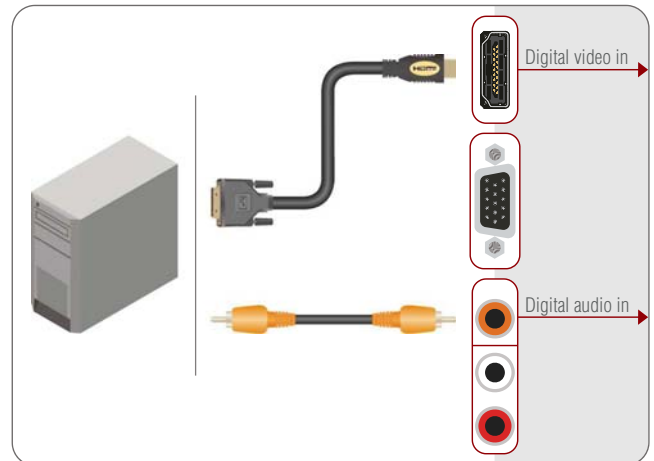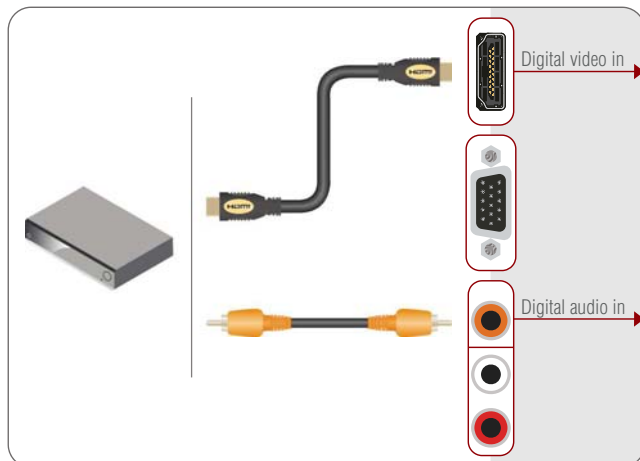
Standalone diagram

Input ports - solutions for various video and audio environment

Digital video in
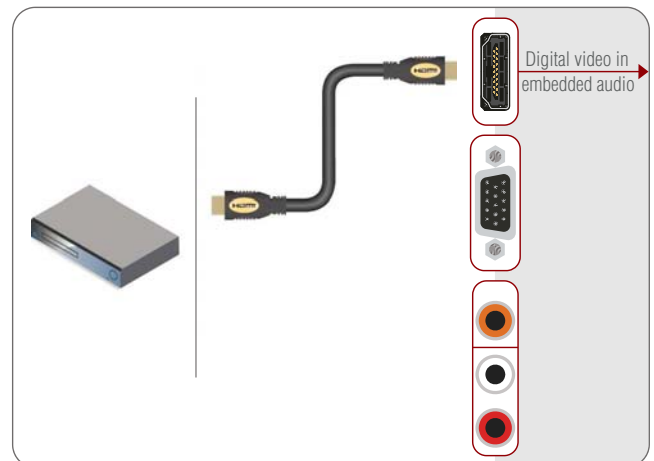
Analog video in

Analog audio in

The laptop is connected with a VGA to VGA video cable and a mini-jack to RCA audio cable to the transmitter. The analog video and audio signals are converted to digital format.

Digital video in

Digital audio in

The PC is connected with a DVI to HDMI video cable and a S/PDIF to S/PDIF audio cable to the transmitter. The DVI video and digital audio is converted and embedded in an HDMI video stream.

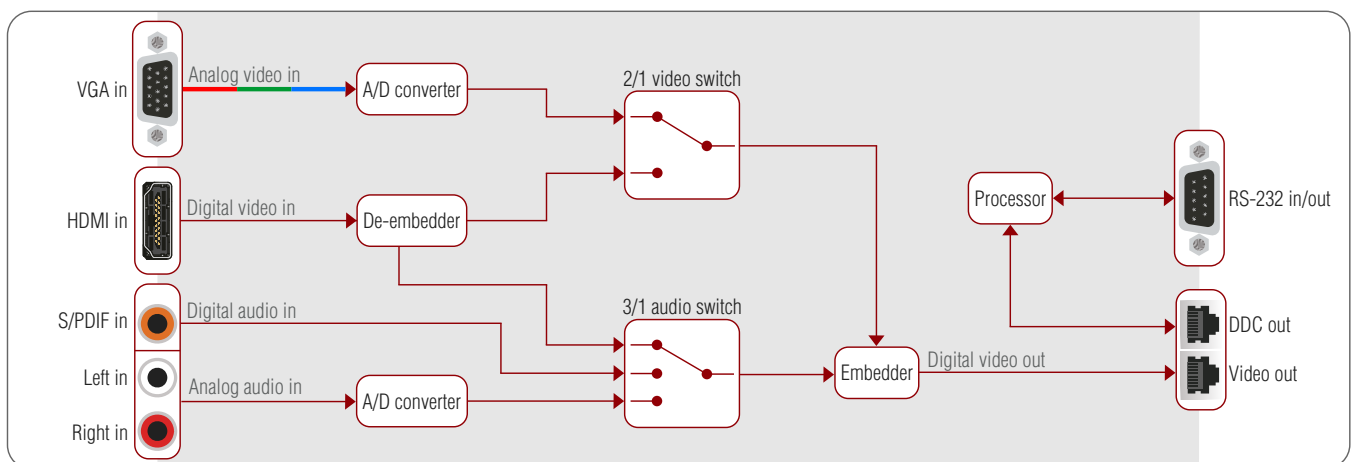Digital video in

Digital audio in

The set-top box is connected with an HDMI to HDMI video cable and a S/PDIF to S/PDIF audio cable to the transmitter. The digital audio is embedded in the HDMI stream.

Digital video in
embedded audio

The blue-ray player is connected with an HDMI to HDMI video cable to the transmitter. The HDMI video with the embedded audio is transmitted through the UMX-TP-TX100R.

Functional diagram

VGA in — Analog video in — A/D converter — 2/1 video switch

HDMI in — Digital video in — De-embedder

Processor — RS-232 in/out

S/PDIF in — Digital audio in — 3/1 audio switch

Left in — Analog audio in — A/D converter — Embedder — Digital video out

Right in

DDC out

Video out

Applications

- Small classrooms
- Conference rooms, collaborative telepresence
- Control room
- Home cinema

Features

- Supports VGA, YPbPr, DVI and HDMI 1.3 signals
- Accepts analog stereo; 5.1 S/PDIF and even 7.1 HDMI embedded audio signals
- Audio embedding on output
- Max cable length of 65m (CAT7 SFTP)@1080p60, 40m (CAT5e UTP) @1080p60, 60m (CAT6 FTP) @1080p60
- All analog signals are converted to digital formats
- Auto select function for video and audio inputs
- Uncompressed video/audio up to 6.75 Gbps
- Input (video & audio) status LEDs
- Selectable local or remote power source
- HDCP compliant
- RS-232 control
- Rack mounting options
- Locking DC connector

Specifications

Data rate:	6.75 Gbps (2.25 Gbps per color)
Resolution:	up to 1080p / 1920 x 1200 / 2048 x 1080
Digital audio formats:	stereo PCM, 5.1 Dolby Digital, 5.1 DTS
Input cable equalization:	automatic max 30m
EDID emulation:	yes, Advanced EDID Management
EDID memory:	2 x 5 factory preset, 2 x 4 user programmable
VGA to digital conversion:	0 microseconds delay
HDCP pass-through:	yes
RS-232 pass-through:	yes
RS-232:	9600, 19200, 38400, 57600, 115200 Baud Rx,Tx (local or through CATx)(default: 57600)
Power:	universal power adaptor, DC 12V 1 A
Power consumption:	3.2 W (typ) 4 W (max), 4.8 W (remote power for RX)
Enclosure:	1U half rack metal
Dimensions:	221 W x 181 D x 42.2 H mm
Weight:	470 g
Compliance:	CE
Warranty:	3 years

Connectors

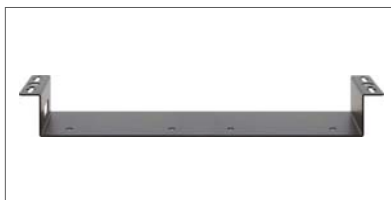|	
Digital video input:	HDMI connector
Analog video input:	VGA connector
Digital audio input:	S/PDIF (RCA)
Analog audio input:	L+R RCA (Analog Stereo)
TP output:	2 x RJ45
Serial port:	9-pole D-sub
Power:	locking DC connector (2.1 / 5.5 mm)

Supplied accessory

Universal DC adaptor
Wall power adaptor with interchangeable plug for international use.
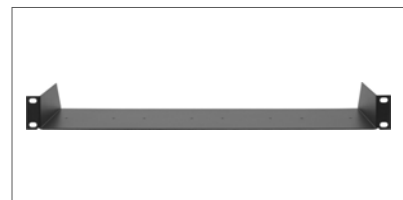Universal input: 100-240 V AC, 50-60 Hz
Output: 12V DC, 1A

Optional accessories

Under desk mounting kit double
The UD-kit double makes it easy to mount a single device on any flat surface (e.g. furniture).

Rack shelf
The 1U high rack shelf provides mounting holes for fastening two half-rack or four quarter-rack sized units.

Front and rear view

UMX-TP-TX100R front view

UMX-TP-TX100R rear view