DTP T USW 333

LONG DISTANCE THREE INPUT SWITCHER WITH INTEGRATED DTP TRANSMITTER AND AUDIO EMBEDDING

DTP SYSTEMS

The Extron DTP T USW 333 switcher provides signal extension for up to three sources, sending HDMI or analog video, audio, and control up to 330 feet (100 meters) over a shielded CATx cable to Extron DTP® 330-enabled products. The HDCP-compliant switcher includes several integrator-friendly features in a low profile enclosure that enables discreet installation in a wide variety of applications.

- **Transmits HDMI or analog video, control, and analog audio up to 330 feet (100 meters) over a shielded CATx cable**
- **Two HDMI inputs and one VGA input**
- **Auto-switching between inputs**
- **Analog stereo audio embedding**
- **Extron XTP DTP 24 shielded twisted pair cable is strongly recommended for optimal performance**
- **DTP® output is compatible with HDBaseT-enabled devices**
- **Bidirectional RS-232 and IR pass-through for AV device control**
- **Remote power capability**
- **HDCP compliant**
- **Supported HDMI specification features include data rates up to 6.75 Gbps, 3D, and HD lossless audio formats**
- **EDID Minder®**
- **Audio input assignment**
- **Compatible with all DTP 330 Series receivers and DTP 330-enabled products**
- **1" (2.5 cm) high, half rack width metal enclosure**
- **Highly reliable, energy-efficient external universal power supply included**

DESCRIPTION

The Extron **DTP T USW 333** is a three input switcher for sending HDMI or analog video, audio, and control up to 330 feet (100 meters) over a shielded CATx cable to Extron DTP 330-enabled products. It is HDCP compliant and provides two HDMI inputs, one VGA input, and one DTP twisted pair output. The DTP T USW 333 supports video signals at resolutions up to 1920x1200, including 1080p/60 and 2K. The switcher offers many integrator-friendly features, such as analog stereo audio embedding, EDID Minder, auto-switching between inputs, audio input assignment, remote power capability, and compatibility with HDBaseT-enabled devices. These features, plus the low profile enclosure, make the DTP T USW 333 ideal for discreet placement in lecterns, beneath tables, or wherever needed to meet application requirements.

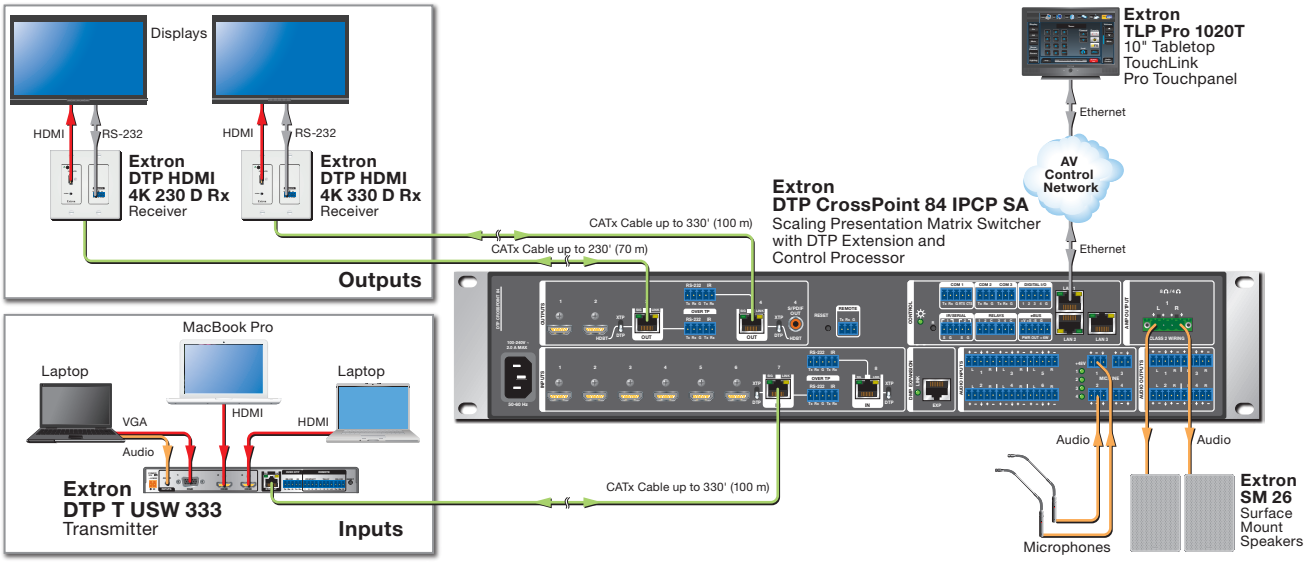
The DTP T USW 333 provides reliable switching and long distance transmission of HDMI and analog video signals. The DTP T USW 333 can automatically switch between the digital and analog sources, plus it supports RS-232 and contact closure remote control with tally output for easy operation in unmanaged locations. In addition, the analog audio input can be assigned to any of the three video inputs, or it can be set to follow the input switch.

To enhance and simplify integration, the DTP T USW 333 features EDID Minder, an Extron-exclusive technology that manages EDID communication between the display device and input sources to ensure that the correct video formats are displayed reliably.

The switcher supports simultaneous transmission of bidirectional RS-232 and IR signals from a control system for AV device control. For added installation flexibility, the DTP T USW 333 transmitter can be remotely powered over the shielded twisted pair cable by a DTP 330-enabled product. This simplifies installation and allows both devices to share one power supply. The DTP T USW 333 can be integrated with an Extron DTP CrossPoint® Presentation Matrix Switcher to support sources at remote locations.

FEATURES

- **Transmits HDMI or analog video, control, and analog audio up to 330 feet (100 meters) over a shielded CATx cable**
- **Two HDMI inputs and one VGA input**
- **Auto-switching between inputs** – Auto-switching allows for simple, unmanaged installation in locations such as in a podium or under a conference table. When multiple inputs are active, the switching priority is configurable.
- **Supports computer and video resolutions up to 1920x1200, including 1080p/60 and 2K**
- **Analog stereo audio embedding**
- **Compatible with CATx shielded twisted pair cable**
- **Extron XTP DTP 24 shielded twisted pair cable is strongly recommended for optimal performance**
- **DTP output is compatible with HDBaseT-enabled devices**
- **Audio input assignment** – The analog audio input can be assigned to any video input, or it can be set to follow the input switch.
- **Supports multiple embedded audio formats**
- **Bidirectional RS-232 and IR pass-through for AV device control**
- **Remote power capability**
- **HDCP compliant**
- **Supported HDMI specification features include data rates up to 6.75 Gbps, 3D, and HD lossless audio formats**
- **EDID Minder automatically manages EDID communication between connected devices**
- **RS-232 control port**
- **Contact closure remote control with tally output**
- **Compatible with all DTP 330 Series receivers and DTP 330-enabled products**



COMPATIBLE WITH ALL EXTRON DTP RECEIVERS

Extron offers a wide selection of HDCP-compliant DTP twisted pair receivers for extending video, audio, and control signals over a shielded twisted pair cable. Designed for rack mount and architectural applications, the DTP receivers provide convenient connection points at remote display locations.

- **Models available to support DisplayPort, HDMI, and DVI**
- **Built-in signal conversion** – Any DTP receiver is compatible with any DTP Transmitter regardless of video format
- **Remote power capability** – For simplified installation, a DTP receiver can be remotely powered by a DTP-enabled product over the twisted pair connection

COMPATIBLE WITH ALL EXTRON DTP SYSTEMS PRODUCTS

Extron DTP switchers and matrix switchers are powerful, all-in-one AV integration solutions for presentation environments. Products range from the MPS 602 six input presentation switcher to the DTP CrossPoint 108 4K scaling matrix switcher with exclusive Vector 4K scaling. Models are available to deliver all the core functionality of an AV system including high performance switching, scaling, comprehensive audio DSP, a choice of energy efficient 100 watt Class D mono or stereo audio power amplifiers, a built-in Extron IPCP Pro 350 control processor for complete AV system control, as well as integrated extension of video, audio, and control signals over a shielded CATx cable.

- **MPS 602** – Media Presentation Switcher with DTP Extension
- **IN1608** – Eight-Input Scaling Presentation Switcher with DTP Extension
- **DTP CrossPoint 84** – 8x4 Scaling Presentation Matrix Switcher
- **DTP CrossPoint 4K Series** –10x8, 8x6, 8x4, and 8x2 Seamless 4K Scaling Presentation Matrix Switchers

SPECIFICATIONS

VIDEO

VGA	
Bandwidth	170 MHz (-3 dB)
HDMI	
Maximum data rate	6.75 Gbps (2.25 Gbps per color)
Maximum pixel clock	165 MHz
Resolution range	Up to 1920x1200 or 1080p @ 60 Hz; 2k
Standards	DVI 1.0, HDMI, HDCP 1.1, CEA-861E

VIDEO INPUT — HDMI

Number/signal type	2 HDMI inputs (or single link DVI-D with the appropriate DVI-HDMI adapters)
Connectors	2 female HDMI type A

VIDEO INPUT — VGA

Number/signal type	1 VGA-QXGA; RGBHV
Connectors	1 female 15-pin HD

NOTE: The VGA input is digitized and output as DTP. The VGA signal is not scaled.

SYNC — VGA

Input type	RGBHV, bi-level and tri-level sync
Input level	1.9 V to 5.0 Vp-p
S/N	>90 dB at maximum input (unweighted)
Max. input voltage	5.0 Vp-p

INTERCONNECTION BETWEEN TRANSMITTER AND RECEIVER

Number/signal type	1 DTP 330 output
Connector	1 female RJ-45
Termination standard	TIA/EIA T568B
Transmission distance	Up to 330' (100 m) using shielded twisted pair cable or XTP DTP 24 STP cable
Cable requirements	Solid conductor, 24 AWG or better
Cable recommendations	400 MHz bandwidth, STP (shielded twisted pair)

NOTE: Extron XTP DTP 24 shielded twisted pair cable is strongly recommended for optimal performance.

AUDIO

Gain	Unbalanced output: 0 dB; balanced output +6 dB
Frequency response	20 Hz to 20 kHz, ±0.5 dB
THD + Noise	0.01% @ 1 kHz at nominal level
S/N	>90 dB, at maximum input (unweighted)
Crosstalk	<-45 dB @ 20 kHz, or -72 dB @ 1 kHz or below
Stereo channel separation	>80 dB @ 1 kHz to 20 kHz

AUDIO INPUT

Number/signal type	1 analog stereo, unbalanced or 2-digital audio, embedded in the HDMI
Connectors	1 female 3.5 mm mini stereo jack 2 female HDMI type A (shared with video input)
Source formats	
HDMI	LPCM up to 7.1/24-bit/192 kHz, Dolby TrueHD, Dolby Digital Plus, Dolby Digital EX, Dolby Digital 5.1, Dolby Digital 2/0 Surround, Dolby Digital 2/0, DTS-HD Master Audio, DTS-HD, DTS-ES Discrete 6.1, DTS-ES Matrix 6.1, DTS Digital Surround 5.1, DTS 2 Channel
Analog	Analog stereo audio

AUDIO OUTPUT

Number/signal type	1 analog audio over DTP signal, or 1 embedded digital audio over DTP signal
Connectors	1 RJ-45 jack

COMMUNICATIONS — SWITCHER

Serial control port	RS-232 via (1) 3.5 mm, 3 pole captive screw connector
Tally port	(1) 3.5 mm, 4 pole captive screw connector
Contact closure remote control	(1) 3.5 mm, 4 pole captive screw connector
USB control port	1 front panel female mini USB, type B
USB standards	USB 2.0, high speed
Program control	Extron Simple Instruction Set (SIS™)

COMMUNICATIONS — RS-232/IR OVER DTP

NOTE: Protocol is mirrored between the connected DTP 330 Rx and the Over DTP output port. Signals from a control device pass into the Over DTP port, are embedded with the DTP signal, and sent to the DTP 330 Rx endpoint for control of remote sink and source devices.

The Over DTP port is a pass-through connection to the DTP endpoint. There is no RS-232 or IR insertion from the DTP T USW 333 control port to the Over DTP port.

Serial control pass-through port	1 RS-232 and IR via (1) 3.5 mm, 5-pole captive screw connector
Baud rates	300 to 38400 baud
IR pass-through control port	TTL level (0 to 5 V) modulated infrared control from 30 kHz up to 60 kHz

GENERAL

Power supply	External Input: 100-240 VAC, 50-60 Hz Output: 12 VDC, 1 A, 12 watts
Power consumption	
Device	5.5 watts
Device and power supply	7.2 watts

NOTE: The DTP T USW 333 can be powered either locally by the external power supply or remotely by a receiver on the other end of the twisted pair cable.

Cooling	Convection, vents on top and sides
Mounting	
Rack mount	Yes, with optional 1U high rack shelf
Furniture mount	Yes, with optional under-desk mounting kit
Enclosure type	Metal
Enclosure dimensions	1.0" H x 8.75" W x 6.0" D (half rack wide) (2.5 cm H x 22.2 cm W x 15.2 cm D) (Depth excludes connectors.)
Product weight	0.6 lbs (0.3 kg)
Vibration	ISTA 1A in carton (International Safe Transit Association)
Regulatory compliance	
Safety	CE, c-UL, UL
EMI/EMC	CE**, C-tick, FCC Class A**, ICES, VCCI
Environmental	Complies with the appropriate requirements of RoHS, WEEE

NOTE: **CE and FCC testing is conducted with STP (shielded twisted pair) I/O cable.

Model	Version Description	Part number
DTP T USW 333	Three Input Switcher w/ DTP Tx - 330 feet (100 m)	60-1551-13

For complete specifications, please go to www.extron.com
Specifications are subject to change without notice.

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