The Extron DTP T DSW 4K 233 and DTP T DSW 4K 333 switchers provide signal extension for up to three sources, sending DisplayPort, HDMI, or analog video, audio, and control up to 230 feet (70 meters) or 330 feet (100 meters) over a shielded CATx cable to Extron DTP®-enabled products. The HDCP-compliant switchers include several integrator-friendly features in a low profile enclosure that enables discreet installation in a wide variety of applications.
The Extron DTP T DSW 4K 233 and DTP T DSW 4K 333 are three input switchers for sending DisplayPort, HDMI, or analog video, audio, and control over a shielded CATx cable to Extron DTP-enabled products. The DTP T DSW 4K 233 extends signals up to 230 feet (70 meters), while the DTP T DSW 4K 333 extends signals up to 330 feet (100 meters). They provide DisplayPort, HDMI, and VGA inputs, and one DTP output. The DTP T DSW 4K models support digital video resolutions up to 4K, including 2560x1600 and 1080p/60 Deep Color. Analog stereo audio embedding and RS-232 remote control facilitate integration in professional environments. Integrator-friendly features include EDID Minder, auto-switching between inputs, audio input assignment, and bidirectional RS-232 and IR pass-through for remote AV device control. The low profile enclosure and remote power capability enable discreet placement in lecterns, beneath tables, or wherever needed to meet application requirements.

The DTP T DSW 4K models provide reliable switching and transmission of DisplayPort, HDMI, and analog video signals. They can automatically switch between digital and analog sources, plus they support RS-232 and contact closure remote control with tally output for easy operation in unmanaged locations. Stereo analog audio can be embedded onto the digital video output signal for transport over DTP. The analog audio 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 of sources and displays, the DTP T DSW 4K switchers feature EDID Minder. EDID Minder is 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 switchers support simultaneous transmission of bidirectional RS-232 and IR signals from a control system for AV device control. For added installation flexibility, the DTP T DSW 4K transmitters can be remotely powered over the shielded twisted pair cable by a DTP-enabled product. This simplifies installation and allows both devices to share one power supply. The DTP T DSW 4K can be integrated with an Extron DTP CrossPoint Presentation Matrix Switcher, or other DTP-enabled products to support sources at remote locations. It also offers an HDBaseT output mode for sending digital video and embedded audio, plus bidirectional control signals to any HDBaseT-enabled display.

**KEY FEATURES**

- Transmits DisplayPort, HDMI, or analog video plus control and analog audio over a shielded CATx cable
- One DisplayPort input, one HDMI input, 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 4K, including 1080p/60 Deep Color
- 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
- Supports DisplayPort SST - Single Stream Transport data rates up to 10.8 Gbps
- Supported HDMI specification features include data rates up to 10.2 Gbps, Deep Color up to 12-bit, 3D, and HD lossless audio formats
- Digital conversion of analog input signals
- RS-232 control port
- Contact closure remote control with tally output – Allows for remote selection of an input channel, while a tally output provides +5 VDC to light an LED to indicate the currently selected input.
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
- All DTP receivers support 4K video

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 108 4K – 10x8 Seamless 4K Scaling Presentation Matrix Switcher
## SPECIFICATIONS

### 4K SPECIFICATION

<table>
<thead>
<tr>
<th>Max. 4K Capabilities</th>
<th>Resolution and Refresh Rate</th>
<th>Chroma Sampling</th>
<th>Max Bit Depth per Color</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4096 x 2160 at 30 Hz</td>
<td>4:4:4</td>
<td>8 bit</td>
</tr>
<tr>
<td></td>
<td>3840 x 2160 at 30 Hz</td>
<td>4:4:4</td>
<td>8 bit</td>
</tr>
<tr>
<td></td>
<td>4096 x 2160 at 60 Hz</td>
<td>4:2:0</td>
<td>8 bit</td>
</tr>
<tr>
<td></td>
<td>3840 x 2160 at 60 Hz</td>
<td>4:2:0</td>
<td>8 bit</td>
</tr>
</tbody>
</table>

Frame rate\(^1\) 24, 25, 30, 50, or 60 fps

Chroma sampling\(^1\) 4:4:4, 4:2:2, or 4:2:0

Color bit depth\(^1\) 8 bits per color

Signal type\(^1\) HDMI 1.4, DisplayPort 1.1a, HDCP 1.4

Max. video data rate\(^1\)

- HDMI: 10.2 Gbps (3.4 Gbps per color)
- DisplayPort: 10.8 Gbps (2.7 Gbps per lane)

NOTE: Subject to the maximum data rate limit. Use our calculator at www.extron.com/4Kdata rate to determine video parameters supported by this data rate.

### VIDEO

#### VGA input
- Gain: Unity
- Bandwidth: 170 MHz (-3 dB)
- Crosstalk: -50 dB @ 10 MHz, -30 dB @ 100 MHz

#### HDMI input
- Maximum data rate: 10.2 Gbps (3.4 Gbps per color)
- Maximum pixel clock: 300 MHz

#### DisplayPort input
- Maximum data rate: 10.8 Gbps (2.7 Gbps per lane)
- Maximum pixel clock: 300 MHz

### VIDEO OUTPUT

#### Connectors
- VGA input: 1 female 15-pin HD
- HDMI input: 1 female HDMI, type A
- DisplayPort input: 1 female DisplayPort

#### VGA input
- Minimum/maximum levels: Analog 0.3 V to 1.5 Vp-p with no offset
- Horizontal frequency: 15 kHz to 145 kHz
- Vertical frequency: 30 Hz to 170 Hz

#### Number/signal type
- DTP T DSW 4K 233: 1 DTP 230 (output)
- DTP T DSW 4K 333: 1 DTP 330 (output)

### INTERCONNECTION BETWEEN TRANSMITTER AND RECEIVER

#### Connectors
- 1 RJ-45 jack

#### DTP signal
- Signal transmission distance:
  - 1080p @ 60 Hz: Up to 230’ (70 m) using shielded twisted pair (STP) cable or XTP DTP 24 cable
  - 2560x1600 @ 60 Hz: Up to 130’ (40 m) using STP cable or XTP DTP 24 cable
  - 4K/UHD @ 30 and 60 Hz: Up to 130’ (40 m) using STP cable or XTP DTP 24 cable

### AUDIO

#### Frequency response
- 20 Hz to 20 kHz, ±0.5 dB

#### THD + Noise
- 0.03% @ 1 kHz at nominal level

#### S/N
- >80 dB at maximum input (unweighted)

#### Stereo channel separation
- >80 dB @ 1 kHz

### CONTROL/REMOTE — SWITCHER

#### Serial control port
- RS-232 via 1 rear panel 3.5 mm, 3-pole captive screw connector

#### Contact closure
- (1) 3.5 mm, 4-pole captive screw connector

#### Tally output
- (1) 3.5 mm, 4-pole captive screw connector

#### USB control port
- 1 front panel female mini USB B

#### Program control
- Extron Simple Instruction Set (SIS™)

### CONTROL/REMOTE — EXTERNAL DEVICE (RS-232/IR OVER TP)

#### Serial control port
- Bidirectional RS-232 via 1 rear panel 3.5 mm, 5-pole captive screw connector (connector is shared with IR control port)

#### Baud rate and protocol
- 300 to 115200 baud, 8 or 7 data bits, 1 or 2 stop bits, non-parity (default), even or odd parity

#### IR pass-through control port
- 1 bidirectional rear panel 3.5 mm, 5-pole captive screw connector (connector is shared with RS-232 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, 2 A, 24 watts

#### Rack mount
- Yes, with optional rack shell kit

#### Enclosure dimensions
- 1.0” H x 8.75” W x 6.0” D (1” high, half rack wide)
- 25.4 cm H x 22.2 cm W x 15.2 cm D (depth excludes connectors)

### Regulatory compliance

- **CE, c-UL, UL**
- **EMI/EMC**: CE, C-tick, FCC Class A, ICES
- **Environmental**: Complies with the appropriate requirements of RoHS, WEEE

NOTE: **CE and FCC testing is conducted with STP cable.**

For complete specifications, please go to www.extron.com

Specifications are subject to change without notice.