DTP CrossPoint 4K Series

4K PRESENTATION MATRIX SWITCHERS WITH SCALING AND SEAMLESS SWITCHING

Complete AV System Integration in One Box

- All-in-one matrix switcher, scaler, audio DSP with AEC, audio power amplifier, and control processor
- 4K matrix switching
- Available in four sizes: 8x2, 8x4, 8x6, and 10x8
- Extron-exclusive Vector™ 4K scaling with seamless switching and logo keying
- DTP® and XTP® signal extension
- Advanced DSP with AEC and expansion capabilities
- Integrated IPCP Pro control processor and audio amplifier with Pro Audio performance
Introduction

The industry-leading Extron **DTP CrossPoint® 4K Series** is a definitive game-changer for 4K presentation systems. These highly versatile presentation matrix switchers deliver all of the technologically advanced capabilities necessary to design and integrate advanced AV systems in one box. They incorporate a matrix switcher with 4K inputs and outputs, built-in scalers that are powered by Extron Vector™ 4K scaling technology and support seamless switching, integrated DTP and XTP signal extension, comprehensive audio DSP and AEC capabilities unmatched in the industry, a high performance mono or stereo amplifier, and an advanced control processor for complete AV system control. The internal audio DSP can be linked to an additional Extron DSP for unprecedented audio system scalability. The DTP CrossPoint 4K Series sets the new industry standard for fully integrated AV systems, greatly simplifying system design and installation, and dramatically reducing total cost of ownership.

The DTP CrossPoint 4K delivers all of the core functionality required for today’s AV system in a single enclosure that replaces as many as eleven separate components. In addition to saving substantial rack space, the single enclosure makes it easy to standardize on a common system design throughout a facility. The DTP CrossPoint 4K adapts to many different environments in which equipment space may be limited. These fully-featured presentation matrix switchers are highly versatile and ideal for applications where content must be presented on multiple displays. They are also well-suited for multi-purpose rooms and divisible rooms that require flexible system configuration.

**Exclusive Vector 4K Scaling**

**VECTOR 4K**

The DTP CrossPoint 4K Series streamlines integration with the latest 4K sources and displays. All HDMI and DTP inputs accept high resolution signals up to 4K, and these signals can be passed to any output. The DTP CrossPoint 4K incorporates the Extron exclusive Vector 4K scaling engine that is specifically designed with best-in-class image upscaling and downscaling. The Vector 4K engine embodies a new set of image processing algorithms that deliver uncompromising performance with 30-bit precision processing and 4:4:4 chroma sampling. This enables independent scaling up to 4K for each of the DTP outputs, or downscaling for interoperability with lower resolution displays.

**High Performance 4K Matrix Switching**

**4K UHD**

The DTP CrossPoint 4K Series has all the standard convenience features common to Extron matrix switchers, including a user-friendly front panel interface with tri-color backlit buttons, I/O memory presets, and more. Matrix switching between the inputs and outputs enables a wide range of design possibilities to meet the audio and video requirements of boardrooms, lecture halls, or other applications with multiple sources and displays. They offer flexible signal routing and reliable digital video switching capabilities. For professional transitions between sources, the DTP CrossPoint 4K offers a range of switching effects on the scaled DTP outputs such as freeze/fade, cut through black, and fade through black. A custom graphic logo may also be inserted into any presentation when using the scaled video outputs.

**HDMI Inputs and Outputs, Plus Integrated DTP Transmitters and Receivers**

The DTP CrossPoint 4K Series provides HDMI inputs and HDMI outputs for integration with HDMI sources and displays. The DTP twisted pair inputs and outputs offer extraordinary flexibility in how and where AV and control signals can be distributed. They are compatible with DTP Series products, the industry’s most complete offering of digital twisted pair transmitters and receivers, which are available in a wide variety of single and multi-input models for furniture and wall-mount applications. These endpoint devices are ideal for installation on a wall, in a lectern, under a table, in a floor box, or near a display. The breadth of DTP endpoints allows great versatility in specifying the appropriate transmitters and receivers to suit the exact needs of the application.
Compatible with DTP 230, DTP 330 and DTP2 Series Extenders
When the DTP CrossPoint 4K is paired with DTP2 or DTP 330 transmitters and receivers, video, bidirectional RS-232 and IR signals, and analog audio can be extended up to 330 feet (100 meters) over a single shielded CATx cable. With a DTP 230 endpoint, the same signals can be extended up to 230 feet (70 meters). Select DTP endpoints can be powered by the DTP CrossPoint 4K over the same shielded CATx cable used for extending HDMI, DisplayPort, DVI, 3G-SDI, or VGA, plus audio and control signals. This convenience streamlines system design and installation.

HDBaseT-Compatible Outputs
The DTP outputs can be configured for compatibility with HDBaseT-enabled displays to send digital video and embedded audio, plus control signals up to 330 feet over a shielded CATx cable.

Compatible with XTP CrossPoint Matrix Switchers
In addition to supporting DTP endpoints, the DTP CrossPoint 4K can be integrated into an XTP CrossPoint matrix switcher system with digital video and embedded audio, plus control signals extended up to 330 feet. This is ideal for providing connectivity between presentation spaces and a larger, facility-wide system. A DTP CrossPoint 4K in a room can connect into an XTP CrossPoint matrix switcher in a central equipment rack or closet for accessing shared AV sources, or sending local content to several destinations in a facility.

Extron Exclusive Digital Video Technologies for Reliable, High Performance Operation
The DTP CrossPoint 4K Series is HDCP compliant and delivers highly reliable digital switching of HDMI signals. For integration of HDMI sources and displays with plug-and-play simplicity, and to help ensure optimal system performance and dependability, the DTP CrossPoint 4K features three Extron-exclusive technologies: EDID Minder®, Key Minder®, and SpeedSwitch®.

Designed for Full Audio System Integration
In addition to video matrix switching and scaling, the DTP CrossPoint 4K can serve as the central component for full audio system integration. It includes audio switching and breakaway for all video sources, four mic/line inputs that can be matrix mixed into any output, as well as HDMI audio embedding and de-embedding. It also provides highly flexible configuration and processing options for the audio inputs and outputs, and for distributing the audio in a system. Each video input, including the DTP endpoints, can be accompanied by embedded digital audio or separate analog audio.

Audio from the DTP CrossPoint 4K can be output with or without processing, as HDMI embedded audio, two-channel analog audio, S/PDIF digital audio, or amplified with the matrix switcher’s integrated mono 70 volt or two-channel stereo power amplifier - MA and SA models. Multi-channel bitstream formats are routed directly to the outputs, without de-embedding or processing.

Built-In Extron ProDSP, AEC, and Automixer
All DTP CrossPoint 4K models include a powerful audio matrix processor with Extron ProDSP™, the same full-featured, high performance audio signal processing found in the Extron DMP digital signal processors. Extron’s exclusive ProDSP is engineered from the ground up using a powerful 64-bit floating point DSP engine for a very wide dynamic range and to reduce the potential for clipping. ProDSP also uses studio grade 24-bit audio converters with 48 kHz sampling for audio signal transparency.

The built-in, professional grade DSP delivers many of the capabilities found in a standalone DSP, including a complete set of audio processing tools, highly flexible matrix mixing options, an automixer, AEC, and more. It allows full audio system design, precise optimization and fine tuning, and proper gain structure. The four mic/line inputs can be matrix mixed into any of the eight stereo output buses. These inputs can also be routed to any of the eight

DTP CrossPoint 4K Series matrix switchers are available in 10x8, 8x6, 8x4, and 8x2 configurations.
“virtual” buses for group processing and then routing into the output buses. The flexible routing and mixing capabilities allow system designers to create simple or complex signal management schemes to accommodate a wide variety of system application requirements.

The DTP CrossPoint 4K includes four independent channels of high performance AEC - acoustic echo cancellation, and selectable noise cancellation, for conferencing applications. Extron AEC features advanced algorithms that deliver fast echo canceler convergence for optimal intelligibility. The automixer includes gated and gain sharing modes for managing up to eight groups of microphone signals. Setup and optimization is easy with the intuitive DSP Configurator™ Software, which offers fast access to all digital signal processing tools, plus AEC and noise cancellation settings.

**Easily Expand with Extron DMP 128 Plus Audio Processors for Larger Systems**

The DTP CrossPoint 4K Series allows unprecedented audio system expansion possibilities with an Extron digital audio expansion port that links the internal DSP to an Extron DMP 128 Plus Digital Matrix Processor. This allows for 16x16 I/O channel transport between devices, and the DMP 128 Plus provides an additional 12 inputs and eight outputs. Additionally, many unique and scalable system designs are possible when linking a DTP CrossPoint 4K to a DMP 128 Plus AT in a Dante™ network.

**Integrated XTRA Series Audio Amplifier Technologies**

The DTP CrossPoint 4K IPCP amplifier-equipped models deliver stereo power amplification with 50 watts rms per channel into 4 ohms and 25 watts rms per channel into 8 ohms, or mono 70 volt amplification with 100 watts rms output. The integrated amplifiers feature an Extron exclusive, highly efficient Class D amplifier design and patented CDRS™ - Class D Ripple Suppression, the same core amplifier technologies found in the renowned, ENERGY STAR® qualified XTRA™ Series amplifiers. CDRS provides a smooth, clean audio waveform and a dramatic improvement in signal fidelity over conventional Class D amplifier designs. The DTP CrossPoint 4K IPCP completes a sound reinforcement system with absolutely no compromises in audio performance or power efficiency.

**Powerful Integrated Control Processor**

DTP CrossPoint 4K IPCP models feature a built-in Extron IPCP Pro control processor with a secure, dedicated three-port AV LAN switch and one standard Ethernet port. The network switch ports of the AV LAN are designed to control local AV devices, and safeguard them from outside intrusion or interference. The DTP CrossPoint 4K IPCP delivers high-speed processing and abundant control port capacity for complete, customizable control of an entire AV system, including all source devices and displays, lighting, window shades, projection screens, occupancy sensing, and more. Select an Extron TouchLink® Pro touchpanel, available in a variety of screen sizes and form factors, and connect it to one of the AV LAN ports to create a complete AV control system.

As with all Extron control systems, the DTP CrossPoint 4K IPCP is very intuitive and easy to configure with Global Configurator software. The latest version includes powerful, advanced features such as conditional logic, local variables, and macros. Global Configurator Professional adds unprecedented scalability with Controller Groups, a unique feature that allows a DTP CrossPoint 4K IPCP to be combined with additional IP Link Pro processors to create a large-scale control system. DTP CrossPoint 4K IPCP systems throughout a facility, building, campus, or offices worldwide can be monitored and managed using Extron GlobalViewer® Enterprise server-based software.

Extron LinkLicense® is an easy, cost-effective way for people to add even more powerful capabilities to Extron products. Purchasing a LinkLicense for User Interfaces upgrade for the DTP CrossPoint 4K IPCP will enable a mobile device or computer to serve as the primary control interface for the AV system. This expands AV control options, and promotes BYOD - Bring Your Own Device convenience. LinkLicense is applied per-system, not per-user, and there are no hidden costs.

**Reliable, Energy Efficient, and Low Total Cost of Ownership**

The unique features and capabilities of the DTP CrossPoint 4K help reduce a client’s total cost of ownership. The compact enclosure houses all essential AV system functions. With the energy efficient, highly reliable power supply and Class D amplifier, the DTP CrossPoint 4K IPCP runs cool to maximize reliability and significantly enhance operating life.
The high performance video scaling within the DTP CrossPoint 4K allows for uncompromised image quality. Driven by Vector 4K scaling technology, the DTP video outputs of these matrix switchers provide powerful processing capabilities, including selectable seamless switching transition effects and logo keying. These capabilities serve the needs of environments where superior quality presentations are crucial.

**SEAMLESS SWITCHING TRANSITIONS**

Critical presentations do not tolerate video glitches. To ensure glitch-free, professional quality presentations, several transition effects can be selected when switching between video sources. These transition effects are available for each of the scaled DTP video outputs.

Effects include:

- **Cut through black** – Instantly cut the current input to black, then cut to the newly selected input.
- **Fade through black** – Fade the current input to black, then fade to the new input.
- **Seamless cut** – Freeze the current input video frame, then cut to the newly selected input.
- **Seamless fade** – Freeze the current input video frame, then fade to the new input.

**LOGO KEYING**

A graphic image such as a company or school logo can be uploaded and inserted on the output video signal to enhance branding and to identify the source of valuable video content. Logo keying is available for each of the scaled DTP video outputs. Custom images up to 4096x2400 resolution are supported and can be used at any point in the presentation.

- Logos can be placed anywhere on the active video.
- Uploaded logos can be inserted above live video using either level keying, RGB color keying, or an alpha channel when supported by the graphic file format.
- Logo images in BMP, JPG, PNG, or TIFF graphic file formats are supported.
- 16 logo presets are available to store the logo filename, position, and key settings for quick recall and switching between multiple logo images.
When it comes to delivering unsurpassed image quality, Extron has the proven technology and expertise to do it right. For over 20 years, Extron has been engineering and designing scaling and signal processing solutions, with 24 worldwide patents awarded to date.

Extron Vector™ 4K is the latest generation of our video scaling engines and is specifically engineered for critical-quality 4K imaging. Innovative applications utilizing 4K content and displays continue to emerge, with end users demanding sharp, detailed, and professionally crafted imagery from their systems.

To meet this important criterion, Extron has created a new series of signal processing technologies for upsampling, downscaling, and optimally converting 4K signals or any other source content.

Designing Scaling Technology from the Ground Up
The Vector 4K scaling engine is the result of our extensive R&D operations with in-house engineering expertise in signal processing, image rendering, software engineering, and computing platform integration. With the vast knowledge we’ve acquired over the years through our research into high resolution video and graphics imaging, we’re able to deliver patented image processing technologies that meet our exact specifications for visual performance.

In addition to high performance image processing, Vector 4K incorporates essential integration features that help address frequent AV system design and integration challenges, while simplifying setup and commissioning. Having our own “home-grown” scaling and signal processing technology allows us to respond to specific AV integration needs in a timely manner.

Unparalleled Scaling Quality
The Vector 4K scaling engine incorporates Extron-engineered, multi-tap, bicubic interpolation, which creates a new pixel by averaging adjacent pixels above, below, to the sides, and diagonally of the new pixel. This produces sharp, accurate output, preserving single-pixel detail as content is downscaled or upscaled.

Color Bit Depth
Vector 4K scaling technology processes video at 30 bits per pixel to maximize grayscale and color accuracy. This maintains color fidelity and detail present in native 30-bit source content, while delivering better color accuracy for 24-bit sources. It also ensures compatibility with the BT.2020 color standard for 4K, which has a minimum requirement of 30-bit color resolution.

4:4:4 Chroma Sampling
4:2:2 or 4:2:0 chroma subsampling may be acceptable for processing full-motion video, but can produce color smearing, missing lines, jagged lines, and other artifacts with PC-generated content. Vector 4K scaling processes video and computer graphics in the RGB domain with full 4:4:4 color sampling, which is critical for processing fine image details such as single pixel, colored lines and text in computer content.
Motion-Adaptive Deinterlacing
Extron patented motion-adaptive deinterlacing integrates two different processing techniques within each video frame. Blended odd and even fields are best for static content, while line doubling is optimal for areas of motion between fields. To best apply these two modes, Vector 4K scaling utilizes motion estimation at the single-pixel level for the greatest accuracy in detecting dynamic content. Though complex and computationally intensive, this method allows interlaced motion to be averaged to avoid artifacts, while static areas are blended to perfectly preserve the original detail.

Frame Rate Conversion
Vector 4K scaling includes high performance frame rate conversion that always delivers images free of visual motion artifacts. In addition to eliminating on-screen video tear, frame rate conversion avoids the need for a display to readjust to changes in source frame rates, which eliminates re-syncing and minimizes latency when switching between sources.

Automatic Film Cadence Detection
Vector 4K scaling features 3:2, 2:2, and 24:1 cadence detection which examines interlaced signals and instantaneously identifies, within a fraction of a second, content that originated from 24 Hz source material. Repeated fields, generated during the 3:2, 2:2, or 24:1 pulldown process, are discarded to recreate the original, progressive 24 frame-per-second content. Frame rate conversion is then applied to the reconstructed 24 Hz content to match the scaler’s selected output frame rate.

Dynamic Digital Input Detection
Today’s evolving computer video standards allow for a wide range of signal resolutions, which may be customized to suit the needs of a particular application or display. These resolutions may be unique to military or medical sources, or the latest consumer laptops or tablets. Vector 4K Scaling technology incorporates dynamic input detection, which analyzes incoming resolutions, and accurately measures the signal parameters to enable precise capture, conversion, and scaling of both standard and unconventional video signals.

Aspect Ratio Control
Extron Aspect Ratio Control, featured in all products with Vector 4K Scaling, automatically detects the aspect ratio of an incoming source signal, and provides two user-selectable modes to optimize the content presentation. FOLLOW mode preserves the original aspect ratio of the input signal, while FILL mode provides full-screen output so every pixel of the display contains active content. Additionally, custom aspect ratios can be configured with options for manual or automatic recall of settings.

For more information about Vector 4K, visit www.extron.com/vector4k
Model Summary

Extron DTP CrossPoint 4K models are all-in-one products featuring 4K matrix switching, scaling, audio DSP with AEC, integrated audio power amplification, and a built-in IPCP Pro control processor. Each model also offers additional integration-friendly features, such as seamless transitions between sources, logo insertion on the scaled video outputs, and mirrored HDMI connections for local monitoring of the same digital video that is delivered via shielded CATx cable.
Overview

Extron Vector 4K scaling engine
The exclusive 4K scaling engine is specifically designed for critical-quality 4K imagery, with best-in-class image upsampling and downsampling. Scaling and video format conversion are performed at 30-bit precision for signals up to 4K to provide enhanced color accuracy and picture detail.

Flexible video and audio routing options
AV signals can be routed together or independently, including embedded HDMI stereo audio signals.

Complete AV system integration in one box
The DTP CrossPoint 4K IPCP is an all-in-one matrix switcher, scaler, audio DSP with AEC, audio amplifier, and control processor.

Tri-color, backlit buttons
The QS-FPC - QuickSwitch Front Panel Controller allows for simple, intuitive matrix switcher operation.

The QS-FPC - QuickSwitch Front Panel Controller allows for simple, intuitive matrix switcher operation.

HDCP compliant
The DTP CrossPoint 4K is fully HDCP compliant at all inputs and outputs.

USB configuration port
Provides convenient user access for configuring, controlling, and monitoring the matrix switcher

Volume controls
Allow for adjustment of master volume and microphone level, with accompanying LEDs to indicate volume level.

Powerful IPCP Pro control processor
DTP CrossPoint 4K IPCP models are available with an integrated IP Link® Pro control processor for complete and secure AV system control.

Built-in three-port AV LAN switch
Enables local control of AV devices while isolating the AV LAN network traffic from outside interference or intrusion.

DMP digital audio expansion port
Allows the matrix switcher and an Extron DMP 128 Plus DSP to be linked together via a shielded CAT 6 cable for system expansion.

Mic/line inputs with 48 volt phantom power and ducking
Four mic/line inputs are available for mixing microphones or line level sources into the audio outputs.

Scaled DTP outputs
The DTP CrossPoint 4K provides individual scaling up to 2560x1600 and 4K for each DTP output.

Integrated XTRA Series audio amplifier technologies
DTP CrossPoint 4K IPCP models are available with an integrated stereo or mono amplifier.

HDMI inputs and HDMI outputs
Enable easy integration with HDMI sources and displays.

Two DTP outputs with mirrored HDMI connections
Two DTP outputs on the DTP CrossPoint 4K feature mirrored HDMI connections to support local monitoring.

DTP inputs and DTP outputs
The DTP inputs and outputs are compatible with DTP Systems, including DTP 230 and DTP 330 products, or XTP CrossPoint matrix switchers. They support digital signal transmission up to 330 feet (100 meters) over a single shielded CATx cable.

Extron ProDSP
Provides full control of audio input and output levels, plus a wide array of audio processing tools and matrix mixing options for program and microphone signals.

Compatible with HDBaseT-enabled displays
The DTP outputs can be configured to send video and embedded audio, plus bidirectional RS-232 and IR signals to projectors and flat-panel displays equipped with HDBaseT inputs.
Features

All-in-one matrix switcher, scaler, audio DSP with AEC, audio power amplifier, and control processor

Choose from 10x8, 8x6, 8x4, and 8x2, matrix switcher configurations

Independently scaled DTP outputs
Two DTP outputs feature mirrored HDMI connections to support local monitoring.

4K matrix switching and scaling with logo keying
The DTP CrossPoint 4K supports 4K signals at all video inputs and outputs. Each DTP output features a built-in high performance Vector 4K video scaler, with the ability to insert a logo image.

Integrated DTP inputs and outputs support transmission of video, control, and audio up to 330 feet (100 m) over a shielded CATx cable
Select DTP endpoints can be remotely powered over each twisted pair connection.

Advanced Extron Vector 4K scaling engine
The Vector 4K scaling engine is specifically designed for critical-quality 4K imagery, with best-in-class image upscaling and downscaling. Scaling and video format conversion are performed at 30-bit precision for signals up to 4K to provide enhanced color accuracy and picture detail.

Selectable scaled DTP output rates from 640x480 to 4K
The output rate can be individually selected for each of the scaled DTP outputs. Available output rates include computer and video up to 4K.

Compatible with DTP 230, DTP 330, DTP2 Series, plus XTP CrossPoint Matrix Switchers
This enables mixing and matching with desktop and wallplate transmitters and receivers, as well as other DTP-enabled products. The DTP CrossPoint 4K can also be integrated with an XTP CrossPoint matrix switcher to provide connectivity between presentation spaces and a larger, facility-wide system.

DTP outputs are compatible with HDBaseT-enabled devices
The DTP outputs can be configured to send video and embedded audio, plus bidirectional RS-232 and IR signals to HDBaseT-enabled displays.

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

Bidirectional RS-232 and IR insertion for AV device control
Bidirectional RS-232 and IR signals can be inserted from a control system via dedicated control ports on the matrix switcher. Bidirectional RS-232 signals can also be inserted via the Gigabit switch.

HDMI audio embedding and de-embedding
Two-channel audio signals can be embedded onto the HDMI and DTP outputs. Embedded HDMI two-channel PCM audio can be extracted for routing and further processing. Embedded multi-channel bitstream formats are routed with the video to the HDMI and DTP outputs.

Output volume control
Master volume control is provided for the variable line level and amplified audio outputs. A separate control is provided for mic volume.

Audio input gain and attenuation, plus audio breakaway
Gain or attenuation can be adjusted for each two-channel audio input to eliminate noticeable differences when switching between sources. Audio breakaway provides the capability to break the two-channel audio away from its corresponding video signal and route to the audio outputs.

Integrated audio digital signal processor with ProDSP 32/64-bit floating point signal processing
The DTP CrossPoint 4K features 32/64-bit floating point audio DSP processing, which maintains very wide dynamic range and audio signal transparency, to simplify management of gain staging while reducing the possibility of DSP signal clipping.

Four channels of AEC
The matrix switcher includes four independent channels of high performance AEC, and selectable noise cancellation. Extron AEC features advanced algorithms that deliver fast echo canceler convergence for optimal intelligibility in situations that challenge AEC performance, including double talk and the use of wireless microphones.

Automixer with eight groups
The matrix switcher features an automixer with gated and gain sharing modes for managing up to eight groups of microphone signals. Gating threshold, signal level reduction, and timing parameters are user adjustable per channel, allowing for fine tuning to avoid the "chopped" sound characteristic of a traditional automixer when a mic is gated off.

Digital audio expansion port provides interfacing to an Extron DMP 128 Plus processor for audio system scalability
An expansion port allows the DTP CrossPoint 4K and any DMP 128 Plus model to be linked together via a single shielded CAT 6 cable for 16x16 I/O channel transport between devices. This allows for audio system scalability with expanded audio processing and signal routing capabilities.

Four mic/line inputs with 48 volt phantom power
Four mic or line level audio sources can be independently mixed with program audio.

Mic ducking
Automatically reduces program audio when a microphone or other incoming audio signal is detected, eliminating the need for a separate audio ducking processor.

Studio grade 24-bit/48 kHz analog-to-digital and digital-to-analog converters
Professional converters fully preserve the integrity of the original audio signal.

Low latency DSP processing
The DTP CrossPoint 4K features very low, deterministic latency from input to output, regardless of the number of active channels or processes. While latency...
increases marginally in channels with AEC enabled, overall latency remains extremely low. This keeps audio in sync with video, and prevents distractions to the presenter resulting from delayed live audio.

**DSP Configurator Software**

DSP Configurator Software is a powerful yet user-friendly PC-based software tool for managing all audio operations of the DTP CrossPoint 4K. It enables complete setup and configuration of digital audio processing tools on the ProDSP platform, as well as routing and mixing.

**Flexible matrix design provides output, virtual, and expansion routing options**

The DSP architecture employs an intuitive matrix design that offers substantial flexibility in routing, mixing, and processing audio input sources.

**Available with integrated energy efficient Class D audio amplifier**

The DTP CrossPoint 4K IPCP includes a stereo power amplifier with 50 watts rms per channel into 4 ohms and 25 watts rms per channel into 8 ohms, or a mono 70 volt amplifier with 100 watts rms output.

**Professional grade audio performance**

The integrated amplifier delivers professional grade signal-to-noise ratio and THD+N performance.

**Extron Patented CDRS - Class D Ripple Suppression**

CDRS is an Extron patented technology that provides a smooth, clean audio waveform and an improvement in signal fidelity over conventional Class D amplifier designs. CDRS eliminates the high frequency switching ripple characteristic of Class D amplifiers, a source of RF emissions which can interfere with sensitive AV equipment such as wireless microphones.

**Supported HDMI specification features include data rates up to 10.2 Gbps, Deep Color up to 12-bit, 3D, and HD lossless audio formats**

**HDCP compliant**

**User-selectable HDCP authorization**

This allows individual inputs to appear HDCP compliant or non-HDCP compliant to the connected source, which is beneficial if the source automatically encrypts all content when connected to an HDCP-compliant device. Protected material is not passed in non-HDCP mode.

**Logo image keying and display**

A logo graphic may be placed at any position on any scaled video output as a foreground image. Logo graphics in BMP, JPG, PNG, or TIFF format may be uploaded to the unit. Full screen images up to 4096x2400 resolution can also be displayed to eliminate blank screens between presentations.

**OK, sending video to fit your format.**

**Seamless switching**

Seamless freeze/fade, cut through black, and fade through black transition effects are available at the scaled video outputs.

**Extron-exclusive digital video technologies**

The DTP CrossPoint 4K includes EDID Minder, Key Minder, and SpeedSwitch to simplify integration of HDMI sources and displays, and to help ensure optimal system performance and dependability.

**HDCP Visual Confirmation**

When processing HDCP-encrypted content, the DTP CrossPoint 4K outputs a full-screen green signal on any video output connected to a non-HDCP compliant display, providing immediate visual confirmation that protected content cannot be viewed.

**QS-FPC™ - QuickSwitch Front Panel Controller**

Provides a discrete button for each input and output, allowing for simple, intuitive operation. Buttons can be custom labeled for easy identification. The buttons illuminate red, green, or amber depending on function, for ease of use in low-light environments.

**View I/O mode**

Users can easily view which inputs and outputs are actively connected.

**Global presets**

Frequently used I/O configurations may be recalled either from the QuickSwitch Front Panel Controller, Ethernet, USB, or RS-232.

**Output muting control**

One or all outputs can be muted at any time. This allows, for example, content to be viewed on a local monitor prior to appearing on the main presentation display.

**Aspect ratio control**

For the scaled DTP outputs, the aspect ratio of the video can be controlled by selecting a FILL mode, which provides a full screen output, or a FOLLOW mode, which preserves the original aspect ratio of the input signal.

**Available with integrated IPCP Pro control processor**

DTP CrossPoint 4K IPCP models include a built-in IPCP Pro control processor for complete and secure AV system control.

**Multiple options for control, configuration, and monitoring**

In addition to front panel controls, the DTP CrossPoint 4K offers Ethernet monitoring and control, built-in Web pages, RS-232 control, plus a front panel USB configuration port.

**Easy setup and commissioning with Extron’s PCS - Product Configuration Software**

Conveniently configure multiple products, including the DTP CrossPoint 4K, using a single software application.
The integrated IPCP Pro control processor includes all of the same advanced features, processing power, and breakthrough technologies found in standalone Extron Pro Series control systems. It enables the DTP CrossPoint 4K IPCP to provide powerful AV and room control capabilities, including control of all sources and displays, lighting, window shades, projection screens, occupancy sensing, and much more. The DTP CrossPoint 4K IPCP can also be grouped with up to three additional IPCP Pro control processors using Global Configurator Professional software to create large, sophisticated control systems. This is ideal for controlling multiple systems, rooms, or even remote locations around the world.

- Two bidirectional RS-232 serial ports with software handshaking
- One bidirectional RS-232/RS-422/RS-485 serial port with hardware and software handshaking
- Two IR/serial ports for one-way control of external devices
- Four digital I/O ports and four relays
  - Provide control of various room functions
  - Supports LinkLicense
  - Enhances the capabilities of Extron Pro Series control systems
- Integrated three-port AV LAN switch
  - Allows AV devices to be isolated from the corporate network
  - Supports secure industry standard communications protocols
  - Uses industry standard communication protocols, including HTTP (insecure), HTTPS, SSH, SFTP, SMTP, NTP, Discovery Service, DHCP, DNS, ICMP, and IPv4
- Multi-level password protection
  - Allows security to be set based on user roles
- Fully customizable using Extron control system software
  - GUI Designer combined with Global Configurator Plus or Global Configurator Professional
- Controller Groups
  - Allow multiple IP Link Pro control processors to be grouped together to function as one, when configured with Global Configurator Professional

**PAIR WITH TOUCHLINK PRO TOUCHPANELS FOR A POWERFUL AV CONTROL SYSTEM**

The DTP CrossPoint 4K IPCP supports direct connectivity with Extron TouchLink Pro touchpanels through the Gigabit switch on the presentation matrix switcher. TouchLink Pro touchpanels feature enhanced processing and memory, plus capacitive touchscreens for select models. These touchpanels are available in a variety of form factors and sizes to suit a wide range of applications.
Global Configurator is Extron’s most powerful and versatile control system configuration software. It is ideal for a wide variety of control systems and applications, and helps streamline integration within today’s demanding AV control environments. Within this latest version, powerful features, such as conditional logic, variables, and macros provide even greater flexibility for more elaborate control system designs. Global Configurator has two modes. Global Configurator Plus is ideal for smaller scale applications requiring one control processor and one control interface. Global Configurator Professional duplicates all of the powerful features within Global Configurator Plus but is especially suited for applications requiring multiple control processors, enhanced functionality, and advanced configuration.

One of the many features of Global Configurator Professional is the ability to create controller groups. Multiple control processors can be grouped together with the DTP CrossPoint 4K IPCP to function as one. This provides unique control system scalability, and is beneficial when more control ports are needed than offered on a single control processor, especially in larger-scale projects spanning multiple rooms.

GUI DESIGNER

Extron GUI Designer is a software application used for the design, creation, and maintenance of Extron TouchLink Pro user interfaces. Begin with ready-to-use design templates and resource kits, or start from scratch and build your own layout using our comprehensive software. The available design elements are fully customizable and matched carefully to popular AV system applications. In many cases, all of the input sources, display control, and environmental settings are already in place. These resources are fully developed and include complete, detailed documentation.
Extron LinkLicense® is an easy, cost-effective way to add even more powerful capabilities to Extron products. Purchasing a LinkLicense for User Interfaces upgrade for the DTP CrossPoint 4K IPCP will enable people to use a mobile device or computer as the primary control interface for the AV system. With the purchase of a LinkLicense with the DTP CrossPoint 4K IPCP, integrators can create custom user interfaces for tablets or laptops, and duplicate them to additional devices with no per-user fees.

- Purchase LinkLicense and activate it with a single click to take immediate advantage of all the benefits
- Unlock features that add convenience, expand system options, and enhance the capabilities of your Extron products
- No central management of licenses required
- Use a mobile device or computer as the primary control interface in an Extron control system
- Simplify deployment of BYOD – Bring Your Own Device control designs
- Streamlines support by standardizing on a consistent BYOD control approach across your organization
- Operates seamlessly with the Extron Control App
The DTP CrossPoint 4K Series can be easily configured using Extron’s PCS - Product Configuration Software via the front panel USB port or over Ethernet. The user-friendly GUI of the configuration software allows for expedited audio and video setup. You are able to use the DTP CrossPoint 4K out of the box, in just a few steps. Users can view details about the current input and output, such as video signal presence, HDCP status, and audio format. In addition to creating AV matrix switching ties, picture settings are available for the four independently scaled DTP outputs. These include resolution selection, image brightness, contrast, positioning, sizing, and more. PCS offers preset management and provides the ability to configure multiple DTP CrossPoint 4K units in the same session, making it easy for AV integrators to quickly set up systems across different rooms in a facility.

AV integrators and technicians can adjust audio levels in PCS using the graphical sliders available for each input. Real-time meters are available at all inputs and outputs to set proper gain structure for the audio system. For full audio system optimization and fine-tuning, integrators can take advantage of the DSP Configurator Software which is conveniently accessible from PCS.
The DSP Configurator Software allows AV integrators and technicians to take advantage of the professional grade DSP in the DTP CrossPoint 4K for full audio system design, precise optimization and fine tuning, and proper gain structure. The intuitive Graphical User Environment offers fast access to all digital audio signal processing tools for the matrix switcher, including level control, dynamics, filters, delay, loudness, feedback suppression, and matrix mixing. The DSP Configurator Software is also used to configure and manage AEC and automixing, providing real-time metering for echo return or echo reduction levels. Designers can quickly get a snapshot of the entire audio system, including all processing blocks, AV matrix switching ties, and audio matrix mixing, without having to access multiple windows or menus.

Using the DSP Configurator Software, users can matrix mix any of the mic/line inputs into any of the eight stereo output buses to create finely tuned audio zones for the corresponding outputs. With virtual buses, the inputs can be processed together as a group, before routing into the output buses. These flexible routing and mixing capabilities allow designers to create simple or complex signal management schemes to accommodate a wide variety of system application requirements. For added convenience, the DSP Configurator Software offers an Emulate mode, in addition to a Live mode, so that settings can be configured and saved offline. The configuration file can then be uploaded to the DTP CrossPoint 4K when you are ready to install the unit into a system. Available Building Blocks processor settings and the ability to save presets of any or all DSP parameters provide additional ease when setting up a fully optimized audio system.
ACOUSTIC ECHO CANCELLATION

In conferencing applications, hearing the talker’s voice returned as an echo is disruptive to natural communication. AEC processing prevents far end audio, as reproduced in the near end, from being returned back to the remote talker as echo, ensuring clear, natural conversations. However, AEC processing can be challenged by conditions such as double-talk, when talkers from both ends are speaking simultaneously, and when near end talkers use wireless microphones. Extron AEC delivers fast echo cancelling optimized for these challenging conditions.

AUTOMIXER

The DTP CrossPoint 4K offers an automixer with gated and gain sharing modes, and includes several advanced features for optimizing microphone management. Multiple trigger protection allows only the microphone with the highest signal to be active while the rest are gated off. The NOM - number of open microphones can be specified to limit the number of active microphones at one time. For a natural sounding mic mix, the automixer also offers a gain sharing mode when the NOM is bypassed, allowing all mics to gate on. A global automixer configuration screen in the DSP Configurator Software enables fast, intuitive management of all microphones and groups in a centralized user interface.
The DTP CrossPoint 4K works in conjunction with all Extron DTP 230 and DTP 330 transmitters and receivers to extend video, audio, and control signals in AV switching applications. When the DTP CrossPoint 4K is paired with a DTP 330 transmitter or receiver, HDMI, DisplayPort, DVI, 3G-SDI, or VGA, plus control and analog audio signals can be extended up to 330 feet (100 meters). With a DTP 230 endpoint, signals can be extended up to 230 feet (70 meters). The ability to extend these signals and provide remote power to select DTP endpoints with just one shielded CATx cable greatly streamlines system designs and installation.

Designed for rack mount and architectural applications, the DTP transmitters and receivers provide convenient connection points at remote source and display locations. Decorator-style models are available for placement in walls, lecterns, floor boxes, or behind flat-panel displays. Compact, low-profile versions can be discreetly installed beneath tables, in lecterns, above ceiling-mounted projectors, or behind flat-panel displays.

DTP transmitters and receivers are HDCP compliant and support computer and video resolutions up to 2560x1600, including 1080p/60 and 2K. Single input transmitters and receivers, as well as select multi-input transmitters, also support 4K resolutions. In addition, DDC communication of EDID and HDCP is continuously maintained between a source and display, ensuring direct compatibility and optimal signal transmission between devices. Multi-input transmitter models allow convenient sub-switching at a wall location, in a lectern, or under a conference room table. In addition, the multi-input transmitters offer auto-switching between inputs, plus contact closure and RS-232 control, for simplified operation. DTP 230 and DTP 330 transmitters also accept direct analog stereo audio connections from Blu-ray Disc players, laptops, or other devices for simultaneous transmission over the shielded CATx cable to the DTP CrossPoint 4K, eliminating the need for separate cable runs.
The Next Generation of DTP
DTP2 products build upon the extensive DTP platform to reach new heights in professional AV integration. They incorporate advanced features and functions to let you create the sophisticated, yet simple to use systems that customers demand.

Advanced 18 Gbps Performance
All DTP2 products accommodate the full 18 Gbps data rate of HDMI 2.0b and support video signals up to 4K/60 with 4:4:4 chroma sampling. These HDCP 2.2 compliant products can also be used for distribution of 4K HDR. All extend video, audio, and control up to 330 feet (100 meters) at every video resolution.

Designed to Simplify Integration
DTP2 products add unique capabilities to enable innovative professional AV systems.

- Analog audio inputs on all DTP2 products support audio embedding
- Audio de-embedding supported on analog audio outputs of all DTP2 products
- DTP2 T 212 transmitters feature an independently assignable HDMI output for local monitoring in addition to a long distance DTP2 output
- DTP2 R 212 receivers have a local HDMI input to support BYOD in collaboration spaces and an integrated audio power amplifier for premium sound quality

Compatibility
Even as they offer all-new performance and capability, DTP2 products retain backward compatibility with existing DTP products. Any DTP or DTP2 transmit port can be connected to any DTP or DTP2 receive port to extend video, audio, and control signals. This maintains the simple format conversion functionality of DTP Systems and allows use of unique DTP2 product features. While DTP and DTP2 products can be intermixed, DTP2 transmitters and DTP2 receivers are necessary to support remote power and transmission of signals with data rates above 10.2 Gbps.
DTP2 T 211
HDMI 4K/60 DTP2 Transmitter with Audio Embedding
- Transmits HDMI plus control and analog audio up to 330 feet (100 meters) over a shielded CATx cable
- Supports computer and video resolutions up to 4K/60 @ 4:4:4
- Analog stereo audio embedding
- Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats
- Support for HDR – High Dynamic Range video
- HDCP 2.2 compliant
- Remote power capability

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<tr>
<th>Model</th>
<th>Description</th>
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<tbody>
<tr>
<td>DTP2 T 211</td>
<td>HDMI 4K/60 Tx – 330 feet (100 m)</td>
<td>60-1631-52</td>
</tr>
</tbody>
</table>

DTP2 R 211
HDMI 4K/60 DTP2 Receiver with Audio De-Embedding
- Receives HDMI plus control and analog audio up to 330 feet (100 meters) over a shielded CATx cable
- Supports computer and video resolutions up to 4K/60 @ 4:4:4
- Stereo audio de-embedding
- Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats
- Support for HDR – High Dynamic Range video
- HDCP 2.2 compliant
- Remote power capability

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<tr>
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<tbody>
<tr>
<td>DTP2 R 211</td>
<td>HDMI 4K/60 Rx – 330 feet (100 m)</td>
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APPLICATION
4K HDR AV and control signal extension up to 330 feet (100 meters)
**DTP2 R 212**
HDMI 4K/60 DTP2 Receiver and Switcher with Audio De-Embedding
- Receives HDMI plus control and analog audio up to 330 feet (100 meters) over a shielded CATx cable
- One DTP2 and one HDMI input
- Auto-switching between inputs
- Supports computer and video resolutions up to 4K/60 @ 4:4:4
- Stereo audio de-embedding
- Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC pass-through
- HDCP 2.2 compliant
- Support for HDR – High Dynamic Range
- DTP2 R 212 standard model features video remote power capability
- DTP2 R 212 SA model features energy efficient Class D stereo amplifier: 2 x 15 watts @ 4 ohms; 2 x 8 watts @ 8 ohm

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<th>Model</th>
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<td>HDMI 4K/60 Rx Switcher - 330 feet (100 m)</td>
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<tr>
<td>DTP2 R 212 SA</td>
<td>HDMI 4K/60 Rx Switcher w/ Amp - 330 feet (100 m)</td>
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**APPLICATION**
Collaboration solution featuring 4K HDR and audio amplification
DTP2 Products

**DTP2 T 212**

Two Input 4K/60 HDMI Switcher with Integrated DTP2 Transmitter and HDMI Output
- Transmits HDMI plus control and analog audio up to 330 feet (100 meters) over a shielded CATx cable
- Two HDMI inputs
- DTP2 and HDMI outputs
- Supports computer and video resolutions up to 4K/60 @ 4:4:4
- Auto-switching between inputs
- Analog stereo audio embedding
- Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC pass-through
- HDCP 2.2 compliant
- Remote power capability
- Support for HDR – High Dynamic Range video

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<td>Two Input 4K/60 HDMI Switcher - 330 feet (100 m)</td>
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**APPLICATION**

4K HDR collaboration solution featuring wireless connectivity and audio amplification
DTP Transmitters

Extron DTP twisted pair transmitters are HDCP compliant and enable reliable digital transmission of video, audio, and bidirectional control signals up to 230 feet (70 meters) or 330 feet (100 meters) over a shielded twisted pair cable. DTP transmitters can also be remotely powered by a DTP-enabled product over the same shielded CATx cable. Designed for rack mount and architectural applications, the DTP transmitters provide convenient connection points for local and remote source locations. These transmitters work in conjunction with DTP receivers and DTP-enabled products to extend video, audio, and control over a shielded CATx cable to destinations within an Extron DTP System.

**DTP HDMI 4K 230 Tx and DTP HDMI 4K 330 Tx**
DTP Transmitter for HDMI
- Inputs: HDMI, 3.5 mm stereo mini jack for audio pass-through
- Output: One DTP twisted pair output
- Supports computer and video resolutions up to 4K

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<td>DTP HDMI 4K 330 Tx</td>
<td>HDMI Tx - 330 feet (100 m)</td>
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**DTP T HD2 4K 230 and DTP T HD2 4K 330**
DTP Transmitter for HDMI with Input Loop-Through
- Inputs: HDMI with buffered input loop-through
- Output: One DTP twisted pair output
- Supports computer and video resolutions up to 4K
- Buffered HDMI input loop-through
- DTP output is compatible with HDBaseT-enabled devices

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<th>Version Description</th>
<th>Part Number</th>
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<tr>
<td>DTP T HD2 4K 230</td>
<td>HDMI Tx - 230 feet (70 m)</td>
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<td>DTP T HD2 4K 330</td>
<td>HDMI Tx - 330 feet (100 m)</td>
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**DTP T DP 4K 230 and DTP T DP 4K 330**
DTP Transmitter for DisplayPort
- Inputs: One DisplayPort, 3.5 mm stereo mini jack for audio pass-through
- Output: One DTP twisted pair output
- Supports computer and video resolutions up to 4K, including 2560x1600
- DTP output is compatible with HDBaseT-enabled devices

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**DTP DVI 4K 230 Tx and DTP DVI 4K 330 Tx**
DTP Transmitter for DVI
- Inputs: DVI-D with loop-through, 3.5 mm stereo mini jack for audio pass-through
- Output: One DTP twisted pair output
- Supports computer and video resolutions up to 4K
- Supported HDMI specification features include data rates up to 10.2 Gbps, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC pass-through

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</table>
**DTP Transmitters**

### DTP T HWP 4K 231 D and DTP T HWP 4K 331 D

**DTP Transmitter for HDMI – Decorator-Style Wallplate**

- **Inputs:** HDMI, 3.5 mm stereo mini jack for audio pass-through
- **Output:** One DTP twisted pair output
- **Supports computer and video resolutions up to 4K**
- **DTP output is compatible with HDBaseT-enabled devices**

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<tr>
<th>Model</th>
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### DTP T 3G-SDI 230 D and DTP T 3G-SDI 330 D

**DTP Transmitter for 3G-SDI – Decorator-Style Wallplate**

- **Inputs:** 3G-SDI/HD-SDI/SDI with buffered input loop-through on BNC connectors, 3.5 mm stereo mini jack for audio pass-through
- **Output:** One DTP twisted pair output
- **Accepts 3G-SDI/HD-SDI/SDI signals up to 2.97 Gbps**
- **Buffered 3G-SDI/HD-SDI/SDI input loop-through**
- **Mounts in an included single-gang decorator-style wallplate**

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<td>3G-SDI Decorator-Style Tx, White - 330 feet (100 m)</td>
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### DTP DVI 4K 230 D Tx

**DTP Transmitter for DVI – Decorator-Style Wallplate**

- **Inputs:** DVI-D with loop-through, 3.5 mm stereo mini jack for audio pass-through
- **Output:** One DTP twisted pair output
- **Supports computer and video resolutions up to 4K**
- **DVI input loop-through**
- **Supported HDMI specification features include data rates up to 10.2 Gbps, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC pass-through**
- **Mounts in an included two-gang decorator-style wallplate**

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### DTP T EU 4K and DTP T MK 4K

**DTP Transmitters for EU and MK Electrical Junction Boxes**

- **Input:** one HDMI
- **Output:** One DTP twisted pair output
- **Supports computer and video resolutions up to 4K**
- **DTP output is compatible with HDBaseT-enabled products**
- **Supported HDMI specification features include data rates up to 10.2 Gbps, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC pass-through**

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</table>
Extron DTP switching transmitters provide high performance input switching between multiple source devices for transmission of video, audio, and bidirectional control over a shielded CATx cable to destinations within a DTP System. DTP switching transmitters can also be remotely powered by a DTP-enabled product over the same shielded CATx cable. These transmitters offer convenient features such as automatic switching between inputs and Extron-exclusive EDID Minder technology. DTP switching transmitters are available in a variety of form factors for convenient sub-switching at a wall location, in a lectern, in a floor box, or under a conference room table.

### DTP T DWP 4K 232 D and DTP T DWP 4K 332 D
DTP Transmitter for DisplayPort and HDMI with Audio Embedding – Decorator-Style Wallplate
- Inputs: One DisplayPort, one HDMI, two 3.5 mm stereo mini jacks for audio pass-through
- Output: One DTP twisted pair output
- Auto-switching between inputs
- Analog stereo audio embedding

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<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
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### DTP T UWP 232 D and DTP T UWP 332 D
DTP Transmitter for HDMI and VGA with Audio Embedding – Decorator-Style Wallplate
- Inputs: One HDMI, one VGA on 15-pin HD, two 3.5 mm stereo mini jacks for audio
- Output: One DTP twisted pair output
- Auto-switching between inputs
- Analog stereo audio embedding

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<tr>
<th>Model</th>
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<tbody>
<tr>
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### DTP T HWP 232 D and DTP T HWP 332 D
Two Input DTP Transmitter for HDMI with Audio Embedding – Decorator-Style Wallplate
- Inputs: Two HDMI, two 3.5 mm stereo mini jacks for audio
- Output: One DTP twisted pair output
- Auto-switching between inputs
- Analog stereo audio embedding

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<tr>
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### DTP T FB 232 and DTP T FB 332
Two Input DTP Transmitter with Audio Embedding for Floor Boxes
- Inputs: One HDMI, one VGA on 15-pin HD, one 3.5 mm stereo mini jack for audio pass-through
- Output: One DTP twisted pair output
- Auto-switching between inputs
- Analog stereo audio embedding

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<td>DTP T FB 232</td>
<td>Two Input Floor Box Tx - 230 feet (70 m)</td>
<td>60-1568-12</td>
</tr>
<tr>
<td>DTP T FB 332</td>
<td>Two Input Floor Box Tx - 330 feet (100 m)</td>
<td>60-1568-52</td>
</tr>
</tbody>
</table>
**DTP T EU and DTP T MK**

Two Input DTP Transmitter with Audio Embedding for EU and MK Junction Boxes

- **Inputs:** One HDMI, one VGA on 15-pin HD, two 3.5 mm stereo mini jacks for audio pass-through
- **Output:** One DTP twisted pair output
- **Designed to mount in a standard two-gang EU and MK electrical junction box**
- **Analog stereo audio embedding**

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTP T EU 232</td>
<td>Two Input EU Tx - 230 feet (70 m)</td>
<td>60-1569-12</td>
</tr>
<tr>
<td>DTP T EU 332</td>
<td>Two Input EU Tx - 330 feet (100 m)</td>
<td>60-1569-52</td>
</tr>
<tr>
<td>DTP T MK 232</td>
<td>Two Input MK Tx - 230 feet (70 m)</td>
<td>60-1567-12</td>
</tr>
<tr>
<td>DTP T MK 332</td>
<td>Two Input MK Tx - 330 feet (100 m)</td>
<td>60-1567-52</td>
</tr>
</tbody>
</table>

**DTP T SW4 HD 4K**

Four Input HDMI Switcher with Integrated DTP Transmitter

- **Inputs:** Four HDMI
- **Output:** One DTP twisted pair output
- **Auto-switching between inputs**
- **Supports computer and video resolutions up to 4K**

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTP T SW4 HD 4K</td>
<td>Four Input HDMI Switcher with DTP Tx</td>
<td>60-1625-01</td>
</tr>
</tbody>
</table>

**DTP T USW 233 and DTP T USW 333**

Three Input Switcher with Integrated DTP Transmitter and Audio Embedding

- **Inputs:** Two HDMI, one VGA on 15-pin HD, one 3.5 mm stereo mini jack for audio pass-through
- **Output:** One DTP twisted pair output
- **Auto-switching between inputs**
- **Analog stereo audio embedding**

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTP T USW 233</td>
<td>2 HDMI, VGA Switcher – 230 feet (70 m)</td>
<td>60-1551-12</td>
</tr>
<tr>
<td>DTP T USW 333</td>
<td>2 HDMI, VGA Switcher – 330 feet (100 m)</td>
<td>60-1551-52</td>
</tr>
</tbody>
</table>

**DTP T DSW 4K 233 and DTP T DSW 4K 333**

Three Input Multi-Format Switcher with Integrated DTP Transmitter and Audio Embedding

- **Inputs:** One DisplayPort, one HDMI, one VGA on 15-pin HD, one 3.5 mm stereo mini jack for audio
- **Output:** One DTP twisted pair output
- **Auto-switching between inputs**
- **Analog stereo audio embedding**

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTP T DSW 4K 233</td>
<td>DisplayPort, HDMI, VGA Switcher – 230 feet (70 m)</td>
<td>60-1487-12</td>
</tr>
<tr>
<td>DTP T DSW 4K 333</td>
<td>DisplayPort, HDMI, VGA Switcher – 330 feet (100 m)</td>
<td>60-1487-52</td>
</tr>
</tbody>
</table>
Extron distribution amplifiers with DTP twisted pair outputs are engineered for reliable operation in commercial AV applications. They provide digital transmission of video, audio, and bidirectional control signals up to 230 feet (70 meters) or 330 feet (100 meters) over shielded CATx cable to destinations within a DTP System. They are HDCP compliant and include integrator-friendly features such as EDID Minder, Key Minder, remote power capability, and selectable output muting.

**DTP HD DA4 4K 230 and DTP HD DA4 4K 330**
Four Output DTP Distribution Amplifier
- Inputs: One HDMI with buffered input loop-through, one 3.5 mm stereo mini jack for audio with loop-through
- Outputs: Four DTP twisted pair outputs
- Supports computer and video resolutions up to 4K
- DTP outputs are compatible with HDBaseT-enabled devices

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTP HD DA4 4K 230</td>
<td>HDMI to Four Output DTP DA - 230 feet (70 m)</td>
<td>50-1437-01</td>
</tr>
<tr>
<td>DTP HD DA4 4K 330</td>
<td>HDMI to Four Output DTP DA - 330 feet (100 m)</td>
<td>50-1437-51</td>
</tr>
</tbody>
</table>

**DTP HD DA8 4K 230 and DTP HD DA8 4K 330**
Eight Output DTP Distribution Amplifier
- Inputs: One HDMI with buffered input loop-through, one 3.5 mm stereo mini jack for audio with loop-through
- Outputs: Eight DTP twisted pair outputs
- Supports computer and video resolutions up to 4K
- DTP outputs are compatible with HDBaseT-enabled devices

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTP HD DA8 4K 230</td>
<td>HDMI to Eight Output DTP DA - 230 feet (70 m)</td>
<td>50-1438-01</td>
</tr>
<tr>
<td>DTP HD DA8 4K 330</td>
<td>HDMI to Eight Output DTP DA - 330 feet (100 m)</td>
<td>50-1438-51</td>
</tr>
</tbody>
</table>

**DTP RECEIVERS**
A wide selection of HDCP-compliant DTP twisted pair receivers are also available for extending AV and control signals over a shielded CATx cable to destinations within a DTP System. Designed for rack mount and architectural applications, the DTP receivers provide convenient connection points at remote display locations.

**DTP R HWP 4K 231 D & DTP R HWP 4K 331 D**
DTP Receiver for HDMI – Decorator-Style Wallplate
- Input: One DTP twisted pair input
- Outputs: HDMI, captive screw for audio pass-through
- Supports computer and video resolutions up to 4K

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTP R HWP 4K 231 D</td>
<td>HDMI Decorator-Style Rx, Black - 230 feet (70 m)</td>
<td>50-1531-12</td>
</tr>
<tr>
<td>DTP R HWP 4K 231 D</td>
<td>HDMI Decorator-Style Rx, White - 230 feet (70 m)</td>
<td>50-1531-13</td>
</tr>
<tr>
<td>DTP R HWP 4K 331 D</td>
<td>HDMI Decorator-Style Rx, Black - 330 feet (100 m)</td>
<td>50-1531-52</td>
</tr>
<tr>
<td>DTP R HWP 4K 331 D</td>
<td>HDMI Decorator-Style Rx, White - 330 feet (100 m)</td>
<td>50-1531-53</td>
</tr>
</tbody>
</table>

**DTP DVI 4K 230 D Rx**
DTP Receiver for DVI – Decorator-Style Wallplate
- Input: One DTP twisted pair input
- Outputs: DVI-D, 3.5 mm stereo mini jack for audio pass-through
- Supports computer and video resolutions up to 4K

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTP DVI 4K 230 D Rx</td>
<td>DVI Decorator Style Rx, Black - 230 feet (70 m)</td>
<td>50-1214-22</td>
</tr>
<tr>
<td>DTP DVI 4K 230 D Rx</td>
<td>DVI Decorator Style Rx, White - 230 feet (70 m)</td>
<td>50-1214-23</td>
</tr>
</tbody>
</table>
DTP Receivers

DTP HDMI 4K 230 Rx and DTP HDMI 4K 330 Rx
DTP Receiver for HDMI
• Input: One DTP twisted pair input
• Outputs: HDMI, captive screw connector for audio pass-through
• Supports computer and video resolutions up to 4K

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTP HDMI 4K 230 Rx</td>
<td>HDMI Rx - 230 feet (70 m)</td>
<td>60-1271-13</td>
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<tr>
<td>DTP HDMI 4K 330 Rx</td>
<td>HDMI Rx - 330 feet (100 m)</td>
<td>60-1331-13</td>
</tr>
</tbody>
</table>

DTP DVI 4K 230 Rx and DTP DVI 4K 330 Rx
DTP Receiver for DVI
• Input: One DTP twisted pair input
• Outputs: One DVI-D, captive screw connector for audio pass-through
• Supports computer and video resolutions up to 4K

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTP DVI 4K 230 Rx</td>
<td>DVI Rx - 230 feet (70 m)</td>
<td>60-1272-13</td>
</tr>
<tr>
<td>DTP DVI 4K 330 Rx</td>
<td>DVI Rx - 330 feet (100 m)</td>
<td>60-1360-13</td>
</tr>
</tbody>
</table>

DTP R DP 4K 230 and DTP R DP 4K 330
DTP Receiver for DisplayPort
• Input: One DTP twisted pair input
• Outputs: DisplayPort, captive screw connector for audio pass-through
• Supports computer and video resolutions up to 4K, including 2560x1600

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTP R DP 4K 230</td>
<td>DisplayPort Rx - 230 feet (70 m)</td>
<td>60-1076-13</td>
</tr>
<tr>
<td>DTP R DP 4K 330</td>
<td>DisplayPort Rx - 330 feet (100 m)</td>
<td>60-1076-53</td>
</tr>
</tbody>
</table>
Extron XTP DTP 24 shielded twisted pair cable is specifically engineered for optimum signal transmission and signal path reliability in Extron DTP Systems. XTP DTP 24 cable has been independently tested in an HDBaseT™ Alliance Recognized Testing Facility, and verified to meet performance requirements for recommendation by the Alliance. To ensure an end-to-end cable infrastructure with maximum performance and integrity, Extron strongly recommends XTP DTP 24 shielded RJ-45 plugs, punch down jacks, and couplers when installing XTP DTP 24 cable.

### XTP DTP 24 Series

**Precision-terminated Shielded Twisted Pair Cable for XTP Systems and DTP Systems**
- Engineered for superior performance with Extron XTP Systems and DTP Systems
- Provides added protection from outside interference and ensures high quality signal transmission
- Certified to 475 MHz bandwidth at distances up to 330 feet (100 m)

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>XTP DTP/3</td>
<td>3' (90 cm)</td>
<td>26-702-03</td>
</tr>
<tr>
<td>XTP DTP/6</td>
<td>6' (1.8 m)</td>
<td>26-702-06</td>
</tr>
<tr>
<td>XTP DTP/9</td>
<td>9' (2.7 m)</td>
<td>26-702-09</td>
</tr>
<tr>
<td>XTP DTP/12</td>
<td>12' (3.6 m)</td>
<td>26-702-12</td>
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<tr>
<td>XTP DTP/25</td>
<td>25' (7.6 m)</td>
<td>26-702-25</td>
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<tr>
<td>XTP DTP/35</td>
<td>35' (10.6 m)</td>
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</tr>
<tr>
<td>XTP DTP/50</td>
<td>50' (15.2 m)</td>
<td>26-702-50</td>
</tr>
<tr>
<td>XTP DTP/75</td>
<td>75' (22.8 m)</td>
<td>26-702-75</td>
</tr>
<tr>
<td>XTP DTP/100</td>
<td>100' (30.4 m)</td>
<td>26-702-100</td>
</tr>
</tbody>
</table>

### XTP DTP 24P Series

**Precision-terminated Shielded Twisted Pair Cable for XTP Systems and DTP Systems - Plenum**
- Engineered for superior performance with Extron XTP Systems and DTP Systems
- Provides added protection from outside interference and ensures high quality signal transmission
- Certified to 475 MHz bandwidth at distances up to 330 feet (100 m)

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>XTP DTP P/3</td>
<td>3' (90 cm)</td>
<td>26-695-03</td>
</tr>
<tr>
<td>XTP DTP P/6</td>
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<td>XTP DTP P/9</td>
<td>9' (2.7 m)</td>
<td>26-695-09</td>
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<tr>
<td>XTP DTP P/12</td>
<td>12' (3.6 m)</td>
<td>26-695-12</td>
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<tr>
<td>XTP DTP P/25</td>
<td>25' (7.6 m)</td>
<td>26-695-25</td>
</tr>
<tr>
<td>XTP DTP P/35</td>
<td>35' (10.6 m)</td>
<td>26-695-35</td>
</tr>
<tr>
<td>XTP DTP P/50</td>
<td>50' (15.2 m)</td>
<td>26-695-50</td>
</tr>
<tr>
<td>XTP DTP P/75</td>
<td>75' (22.8 m)</td>
<td>26-695-75</td>
</tr>
<tr>
<td>XTP DTP P/100</td>
<td>100' (30.4 m)</td>
<td>26-695-100</td>
</tr>
</tbody>
</table>

### XTP DTP 24 Plug

**Shielded RJ-45 Plug Kit for Extron XTP DTP 24 Shielded Twisted Pair Cable**
- Engineered for use with XTP DTP 24 Shielded Twisted Pair Cable
- Metal strain relief and ground bonding
- Ideal for high EMI/RFI environments
- Conductor alignment guide reduces crosstalk and signal interference

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>XTP DTP 24 Plug</td>
<td>XTP DTP 24 Plug, Package of 10</td>
<td>101-005-02</td>
</tr>
</tbody>
</table>

### Model Specifications

- **Model**: XTP DTP 24 Plug
- **Version Description**: XTP DTP 24 Plug, Package of 10
- **Part Number**: 101-005-02

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**DTP Cable & Accessories**

Extron XTP DTP 24 shielded twisted pair cable is specifically engineered for optimum signal transmission and signal path reliability in Extron DTP Systems. XTP DTP 24 cable has been independently tested in an HDBaseT™ Alliance Recognized Testing Facility, and verified to meet performance requirements for recommendation by the Alliance. To ensure an end-to-end cable infrastructure with maximum performance and integrity, Extron strongly recommends XTP DTP 24 shielded RJ-45 plugs, punch down jacks, and couplers when installing XTP DTP 24 cable.
DTP Cable and Accessories

**XTP DTP 24 Punch Down Jack**
Shielded RJ-45 Punch Down Jack Kit for Extron XTP DTP 24 Shielded Twisted Pair Cable
- Engineered for use with XTP DTP 24 Shielded Twisted Pair Cable
- Keystone style snap-in design for ease of installation in wallplates, AAP - Architectural Adapter Plates, and similar mounting frames
- Metal strain relief and ground bonding

**XTP DTP 24 Coupler**
Shielded RJ-45 Plug Kit for Extron XTP DTP 24 Shielded Twisted Pair Cable
- Engineered for use with XTP DTP 24 Shielded Twisted Pair Cable
- Fully shielded design reduces noise due to high EMI/RFI interference
- Compatible with TIA/EIA 568A/B wiring standards

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>XTP DTP 24 Jack</td>
<td>XTP DTP 24 Jack, Package of 10</td>
<td>101-023-01</td>
</tr>
<tr>
<td>XTP DTP 24 Coupler</td>
<td>XTP DTP 24 Coupler, Package of 10</td>
<td>101-022-02</td>
</tr>
</tbody>
</table>

**CTU 45**
Universal RJ-45 Termination Tool
- Designed for use with Extron XTP DTP 24 shielded twisted pair cables and XTP DTP 24 Plugs
- Also compatible with other modular, shielded or unshielded RJ-45 plug types
- Compatible with keyed and non-keyed modular plugs

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTU 45</td>
<td>RJ-45 Crimp Tool</td>
<td>101-024-01</td>
</tr>
</tbody>
</table>

**WPD 100 Series**
Pass-Through Wallplates - Decorator-Style for XTP DTP 24 Cable
- Designed for use with Extron XTP DTP 24 Cables, Non-Plenum part #22-236-03 and Plenum part #22-235-03
- Fully shielded design reduces noise due to high EMI/RFI interference
- Metal strain relief and ground bonding

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>WPD 101 C</td>
<td>One XTP DTP 24 Coupler</td>
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<tr>
<td>WPD 102 C</td>
<td>Two XTP DTP 24 Couplers</td>
<td>70-1055-03</td>
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<tr>
<td>WPD 101 P</td>
<td>One XTP DTP 24 Punch Down Jack</td>
<td>70-1054-03</td>
</tr>
<tr>
<td>WPD 102 P</td>
<td>Two XTP DTP 24 Punch Down Jacks</td>
<td>70-1056-03</td>
</tr>
</tbody>
</table>
CLASSROOM PRESENTATION AND STREAMING SYSTEM

The DTP CrossPoint 82 4K IPCP MA 70 can be integrated with an Extron SMP 351 streaming media processor to manage live streaming and on-demand playback of recorded presentations and courses, for local participants and distant observers. Presenters can select from a variety of source devices, including a Blu-ray player, media player, PC, or personal device at the lectern. A high-definition PTZ camera provides a visual of the presenter and an Extron DTP T HWP 4K 231 D twisted pair transmitter is used to extend the camera video signal to the DTP CrossPoint 82 4K. Any source can be routed to the classroom projector through the matrix switcher using an Extron DTP R HWP 4K 331 D receiver.

Source video signals are routed from the matrix switcher to the SMP 351 to be processed, recorded, and streamed. The DTP CrossPoint 82 4K provides audio integration capabilities, including managing and processing audio from presentation sources and wireless microphones. The 100-watt mono amplifier built into the matrix switcher feeds a 70-volt speaker system for ample sound reinforcement. The audio signal is also embedded into one of the output signals fed to the SMP 351. For additional convenience, a TouchLink Pro touchpanel is connected to the matrix switcher’s built-in control processor and provides intuitive controls for source selection, audio system operation, and for presenting a live preview of the encoded source layout. The built-in control processor allows AV network control to be dedicated to an AV LAN for enhanced security and convenient management.
Many divisible room applications require an AV system that keeps the AV resources of two rooms exclusive to each other when the rooms are used for separate meetings, and supports sharing AV when both sections are combined into a single room. The DTP CrossPoint 86 4K provides highly reliable matrix switching and distribution to accommodate either room configuration. The independent outputs on the DTP CrossPoint 86 4K provide users with the flexibility to view a separate source at each room’s display. Users can also view the same signal at both displays when the rooms are tied together. Video content can be viewed at 4K resolution on a compatible display that is connected to one of the matrix switcher’s DTP outputs via a DTP receiver. Each DTP output can also be configured for viewing content on an HDBaseT-enabled display. The DTP transmission capabilities of the DTP CrossPoint 86 4K are ideal for reaching sources at the lectern, and the wall mounted displays.

Serving as the central component for full audio system integration, the DTP CrossPoint 86 4K IPCP MA 70 features powerful DSP to support distributed audio systems that can function independently or together, depending on room configuration. The internal DSP provides audio signal switching and processing for each of the source inputs and room microphones. The DTP CrossPoint 86 4K IPCP MA 70 includes an integrated 100 watt mono amplifier that can feed a 70 volt speaker system to provide ample sound reinforcement. As an additional integration convenience, source selection, transport control for a Blu-ray player and CATV tuner, and audio system control are easily accessible with TouchLink Pro touchpanels that are connected to the matrix switcher’s built-in control processor. This allows AV network control to be dedicated to an AV LAN for enhanced security and convenient management.
INTEGRATED AEC AND AUDIO SYSTEM EXPANSION FOR SCALABILITY

The DTP CrossPoint 108 4K enables complete audio system integration in one box. It accepts mic/line inputs, analog stereo inputs, additional analog stereo inputs from DTP transmitters, and HDMI embedded audio. The comprehensive selection of outputs includes analog stereo, S/PDIF digital audio, HDMI embedded audio, stereo outputs transmitted to DTP receivers, and amplified mono or stereo audio. The matrix switcher features Extron 64-bit ProDSP technology with fully configurable EQ, filters, dynamics, delay, ducking, feedback suppression, mic/line matrix mixing options, and much more. It also includes AEC - acoustic echo cancellation and automixing for conferencing applications.

The DTP CrossPoint 108 4K is easily scalable for integrating large system applications with numerous microphones or audio destinations. An Extron-exclusive audio expansion port is provided for linking the internal DSP of the DTP CrossPoint 108 4K to an Extron DMP 128 Plus ProDSP audio matrix processor. This allows audio channels to be exchanged between the two audio processors, with the DMP 128 Plus providing an additional 12 input channels and eight output channels. Several DMP 128 Plus models are available, including the DMP 128 Plus C with eight channels of AEC processing for additional microphones. Even greater system scalability is possible when linked to a DMP 128 Plus AT processor on a Dante network.
Integrate with Extron XTP Systems in Facility-Wide Applications

Many large-scale applications call for centralized AV distribution plus several localized AV systems in presentation spaces such as meeting rooms, training rooms, or classrooms. A facility-wide AV infrastructure may be needed for sharing resources such as videoconferencing codecs and digital signage players, and to broadcast a local AV presentation to common areas. At the same time, a dedicated AV system for each presentation space allows dedicated switching and processing functions specific to the devices in the room, including guest laptops and tablets.

A DTP CrossPoint 108 4K can easily be integrated into an XTP II CrossPoint matrix switcher system with the ability to extend video and embedded audio, plus bidirectional RS-232 and IR signals. A DTP input or output is connected over shielded CATx cable into an XTP II CrossPoint 1600, XTP II CrossPoint 3200, or XTP II CrossPoint 6400 matrix switcher at the central rack location. Each DTP output includes a dedicated scaler powered by the advanced Extron 4K scaling engine, so that graphics or video can be optimized as necessary for a codec, or a specific display resolution or aspect ratio.
Specifications

**DTP CrossPoint 108 4K**

### Scaled Resolutions

- 4096 x 2160 at 30 Hz
- 3840 x 2160 at 30 Hz

### Audio

- **Maximum video data rate:** 10.2 Gbps (2.4 Gbps per color)

**NOTE:** Subject to the maximum data rate limit. Use our calculator (http://www.extron.com/product/videoTools.aspx) to determine video parameters supported by this data rate.

**Routing**

- **Input and output mode signaling:**
  - DTP: HDMI with embedded audio, analog audio, RS-232 and IR, and remote power
  - XTP: HDMI with embedded audio plus RS-232 and IR
  - XTP DTP 24: HDMI with embedded audio plus RS-232 and IR

**Video**

- **Supported formats – Pass through HDMI connectors:**

**DTP Connectors:**

- De-embedded from HDMI (PCM only) or remote balanced/unaltered analog

**LOGOS**

- **Image file formats:** BMP, JPG, PNG, TIFF

- **Logo effects:** Transparency, RGB key, level key, alpha key

**SHIELDED TWISTED PAIR INTERCONNECTION**

- **Connectors:** Female RJ-45

**Signal transmission distance**

- **Resolutions up to 1920x1080 and 1080p:**
  - DTP 330: Up to 330' (100 m) using shielded twisted pair cable or XTP DTP 24 TP cable
  - DTP 230: Up to 230' (70 m) using shielded twisted pair cable or XTP DTP 24 TP cable

- **2560x1600** and **4K @ 30 Hz (reduced blanking):**
  - DTP 330: Up to 330' (100 m) using shielded twisted pair cable or XTP DTP 24 TP cable
  - DTP 230: Up to 130' (40 m) using shielded twisted pair cable or XTP DTP 24 TP 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.

**NOTE:** Input and output mode signaling:

- DTP: HDMI with embedded audio, analog audio, RS-232 and IR, and remote power
- XTP: HDMI with embedded audio plus RS-232 and IR

**Audio System (Mic/Line Input To Line Output)**

- **Frequency response:** 20 Hz to 20 kHz, ±0.2 dB
- **THD + Noise:** 0.01% at 1 kHz nominal level
- **S/N:** 105 dB at maximum balanced output (unweighted)

**Audio**

- **Routing**
  - **DTP CrossPoint 108 4K:**
    - 10 x 8 matrix
    - 4 x 8 microphone mixing matrix
    - 4 x 4 stereo mixing matrix
  - **DTP CrossPoint 86 4K:**
    - 8 x 6 matrix
    - 4 x 4 microphone mixing matrix
    - 4 x 4 stereo mixing matrix
  - **DTP CrossPoint 84 4K:**
    - 8 x 4 matrix
    - 2 x 2 matrix
  - **DTP CrossPoint 82 4K:**
    - 8 x 2 matrix
    - 2 x 1 matrix

**Video Input**

- **Number/signal type**
  - **DTP CrossPoint 108 4K:**
    - 6 HDMI digital video (HDCP compliant)
  - **DTP CrossPoint 86 4K:**
    - 2 HDMI digital video (HDCP compliant)
  - **DTP CrossPoint 84 4K:**
    - 2 HDMI digital video (HDCP compliant)
  - **DTP CrossPoint 82 4K:**
    - 2 HDMI digital video (HDCP compliant)

**Matrix Video Outputs (Non Scaled)**

- **Number/signal type**
  - **DTP CrossPoint 108 4K:**
    - 4 HDMI digital video (HDCP compliant)
  - **DTP CrossPoint 86 4K:**
    - 2 HDMI digital video (HDCP compliant)
  - **DTP CrossPoint 84 4K:**
    - 2 HDMI digital video (HDCP compliant)
  - **DTP CrossPoint 82 4K:**
    - 2 HDMI digital video (HDCP compliant)

**Scaled TP Outputs**

- **Number/signal type**
  - **DTP CrossPoint 108 4K:**
    - 4 DTP, XTP, or HDBaseT (configurable)
    - 2 buffered HDMI digital video (HDCP compliant)
  - **DTP CrossPoint 86 4K:**
    - 4 DTP, XTP, or HDBaseT (configurable)
    - 2 buffered HDMI digital video (HDCP compliant)
  - **DTP CrossPoint 84 4K:**
    - 2 DTP, XTP, or HDBaseT (configurable)
    - 2 buffered HDMI digital video (HDCP compliant)
  - **DTP CrossPoint 82 4K:**
    - 2 DTP, XTP, or HDBaseT (configurable)
    - 2 buffered HDMI digital video (HDCP compliant)

**Video Input**

- **Resolution range:**
  - 640x480 to 1920x1200 and 1920x1200 480i, 480p, 576i, 576p, 720p, 1080i, 1080p, and 2K through 4K @ 30Hz
  - *Reduced blanking*

- **Scaled resolutions:**
  - 640x480, 800x600, 852x480, 1024x768, 1024x853, 1280x720, 1280x800, 1280x1024, 1366x768, 1366x874, 1400x1050, 1440x900, 1600x900, 1600x1200, 1680x1050, 1920x1200 HDTV 480p/4, 576p, 720p, 1080i, 1080p, 2K, 4K
Specifications

2 female RJ-45
DTP CrossPoint 84 4K  (6) 3.5 mm captive screw connectors, 5-pole for analog line level inputs
6 female HDMI type A
2 female RJ-45
DTP CrossPoint 82 4K  (6) 3.5 mm captive screw connectors, 5-pole for analog line level inputs
6 female HDMI type A
2 female RJ-45

MIC/LINE INPUT
Number/signal type  4 mono, mic/line, balanced/unbalanced (with phantom power)
DC phantom power +48 VDC, ±10% (inputs 1-4) switched on or off

AUDIO OUTPUT
Connectors
DTP CrossPoint 108 4K  6 female HDMI
4 RJ-45
(4) 3.5 mm captive screw, 5-pole
1 RCA
DTP CrossPoint 86 4K  4 female HDMI
4 RJ-45
(4) 3.5 mm captive screw, 5-pole
1 RCA
DTP CrossPoint 84 4K  4 female HDMI
2 RJ-45
(4) 3.5 mm captive screw, 5-pole
1 RCA
DTP CrossPoint 82 4K  2 female HDMI
2 RJ-45
(2) 3.5 mm captive screw, 5-pole
1 RCA

EXP PORT
Connectors  1 RJ-45
Inputs  16 channels Rx
Outputs  16 channels Tx
EXP cable  Shielded CAT 6 up to 10 meters

POWER OUTPUT
Power amplifier (DTP CrossPoint 4K IPCP SA and DTP CrossPoint 4K IPCP MA models)
Number/signal type
SA models  1 stereo or mono (2 channels total)
MA models  1 mono, 70 V
Connector
SA models  (1) 5 mm screw lock captive screw connector, 4-pole
MA models  (1) 5 mm screw lock captive screw connector, 2-pole
Lead impedance
SA models  4 ohms minimum
MA models  50 ohms minimum
High pass filter (MA models)  80 Hz, 12 dB/octave roll off
Output power
SA models  25 watts rms per channel, 8 ohms, 1 kHz, 0.1% THD
50 watts per channel, 4 ohms, 1 kHz, 0.1% THD
100 watts rms@70 V, 1 kHz, 0.1% THD
MA models

Protection
Clip limiting, thermal, short circuit, DC output

Frequency response
SA models  20 Hz to 20 kHz, +1/3 dB @ 1 watt
MA models  80 Hz to 20 kHz, +1/3 dB @ 1 watt
S/N  >60 dB, 20 Hz to 20 kHz, unweighted

COMMUNICATIONS — SWITCHER
Serial control port  1 bidirectional RS-232, 3.5 mm captive screw connector, 3-pole (rear panel)
USB control port  1 front panel female USB mini-B
Ethernet control port  1 female RJ-45 connector

CONTROL PROCESSOR — DTP CROSSPOINT 4K IPCP MODELS
Software and control options
Software  Extron Global Configurator Plus and Professional for Windows®
Control options  GlobalViewer®, TouchLink® for Web, TouchLink for iPad®, or TouchLink Pro touchpanels

Ethernet control
Network interface controllers (NICs)
Connectors
LAN  1 female RJ-45 connector
AV LAN  3 female RJ-45 connectors
Data rate  10/100/1000Base-T, half/full duplex with autodetect
Serial control
Quantity/type  1 bidirectional RS-232, RS-422, RS-485 (port 1)
2 bidirectional RS-232 (ports 2 and 3)
Digital I/O control
Quantity/type  4 digital input/output (configurable)
IR/serial control
Quantity/type  2 programmable: unidirectional RS-232 (+5 V), TTL level (0 to 5 V) infrared (carrier and non-carrier) up to 300 kHz
Relay control
Quantity/type  4 normally open relays

GENERAL
Power supply  Internal
Input: 100-240 VAC, 50-60 Hz

Enclosure dimensions
DTP CrossPoint 108 4K  5.25” H x 17.4” W x 16” D (3U high, full rack wide)
(13.3 cm H x 43.2 cm W x 40.6 cm D)
(Depth excludes connectors and knobs. Width excludes rack ears.)
DTP CrossPoint 86 4K  3.5” H x 17.4” W x 15.3” D (2U high, full rack wide)
(8.9 cm H x 43.2 cm W x 38.9 cm D)
(Depth excludes connectors and knobs. Width excludes rack ears.)

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

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