

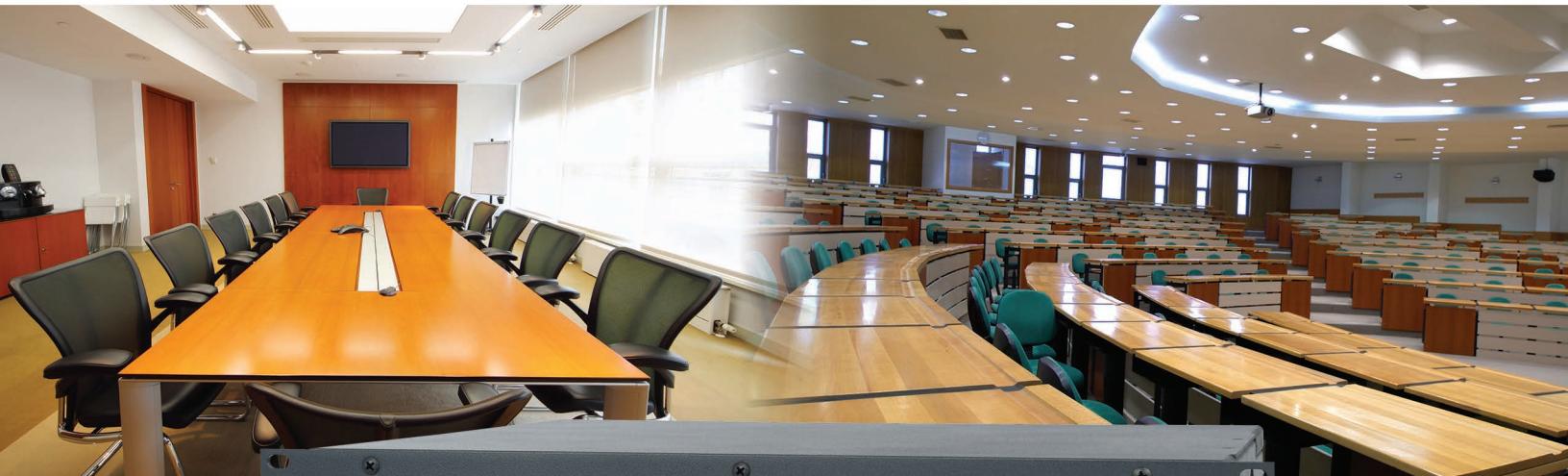
# DTP CrossPoint 84

8X4 SCALING PRESENTATION  
4K MATRIX SWITCHER



Complete AV System Integration  
in One Box

- ▶ All-in-one 8x4 matrix switcher, scaler, audio DSP, audio power amplifier, and control processor
- ▶ 4K matrix switching
- ▶ DTP™ and XTP® signal extension
- ▶ Integrated audio amplifier with Pro Audio performance
- ▶ Advanced DSP with expansion capabilities
- ▶ Two, built-in high performance video scalers
- ▶ Integrated IPCP Pro 350 control processor for complete AV System Control
- ▶ Compatible with DTP 230 Series and DTP 330 Series, plus XTP CrossPoint® matrix switchers



**Extron Electronics**  
INTERFACING, SWITCHING AND CONTROL

# Introduction



The new, industry-leading Extron **DTP CrossPoint® 84** is a definitive game-changer for presentation systems. This highly versatile, compact 2U presentation matrix switcher delivers all of the technologically advanced capabilities necessary to design and integrate a complete AV system in one box, including a 4K matrix switcher, two built-in independent scalers, integrated DTP and XTP signal extension, comprehensive audio DSP capabilities unmatched in the industry, a high performance mono or stereo amplifier, and an advanced control processor for complete AV system control. The internal DSP can be linked to an additional Extron DSP for unprecedented audio system scalability. The DTP CrossPoint 84 is 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 84 delivers all of the core functionality required for a conventional AV system, in a single 2U enclosure that replaces as many as eleven separate components. In addition to saving substantial space in a rack, the compact size also makes it easy to standardize on a common system design throughout a facility. The DTP CrossPoint 84 adapts to many different environments where equipment space may be limited. This full-featured presentation matrix switcher is highly versatile and is ideal for applications where content must be presented on multiple displays. The DTP CrossPoint 84 is also extremely well-suited for multi-purpose rooms and divisible rooms that require flexible system configuration.

## HDMI Inputs and Outputs, Plus Integrated

### DTP Transmitters and Receivers

The DTP CrossPoint 84 includes six HDMI inputs and two HDMI outputs. Two DTP twisted pair inputs and two DTP outputs offer extraordinary flexibility in how and where AV and control signals need to be distributed. They are compatible with the industry's most

complete offering of digital twisted pair transmitters and receivers. A wide variety of single and multi-input models are available 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.

DTP endpoints can be powered by the DTP CrossPoint 84 over the same shielded CATx cable for extending HDMI, DisplayPort, DVI, or VGA, plus audio and control signals. This convenience streamlines system design and installation.

### Compatible with DTP 230 and DTP 330 Series Extenders

When the DTP CrossPoint 84 is paired with a DTP 330 transmitter or receiver, video, bidirectional RS-232 and IR signals, and analog audio can be extended up to 330 feet (100 m) over a single shielded CATx cable. With a DTP 230 endpoint, the same signals can be extended up to 230 feet (70 m).

### HDBaseT-Compatible Outputs

The DTP outputs on the DTP CrossPoint 84 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

**XTP SYSTEMS** In addition to supporting DTP endpoints, the DTP CrossPoint 84 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 84 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.

### 4K Matrix Switching



The DTP CrossPoint 84 is a 4K-capable switcher for integration with computers equipped with compatible graphics cards, 4K media players, 4K cameras, and displays at 4K or UHD native resolution. All HDMI and DTP inputs accept high resolution signals up to 4K. These signals can be passed to both HDMI outputs.

Included with the DTP CrossPoint 84 are 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 HDMI and DTP 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. The flexible signal routing and reliable digital video switching capabilities of the DTP CrossPoint 84 allow support for multiple applications.

### **Extron Exclusive Digital Video Technologies for Reliable, High Performance Operation**

The DTP CrossPoint 84 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 84 features three Extron-exclusive technologies: EDID Minder®, Key Minder®, and SpeedSwitch®. EDID Minder manages EDID communication between the display devices and input sources to ensure that the correct video formats are displayed reliably. For HDMI signals with protected content, Key Minder authenticates and maintains continuous HDCP encryption between input and output devices to ensure quick and reliable switching. With SpeedSwitch Technology, the DTP CrossPoint 84 delivers virtually instantaneous switching speeds for HDCP-encrypted content.

### **Two Independent Scalers for DTP Outputs**

The DTP CrossPoint 84 includes two independent scalers for the two DTP outputs. Selectable rates up to 1920x1200 or 2048x1080 are available for converting and optimizing source signals, to ensure the highest quality image content for display. Two individually scaled DTP outputs enable content from two sources to be shown simultaneously on two remote displays. When connecting a guest device, independent scaling also optimizes the video output for a confidence monitor and a main display, where each may have a different resolution and aspect ratio. The DTP CrossPoint 84 also provides selectable FILL and FOLLOW modes on the DTP outputs to ensure the proper aspect ratio of the output. FILL mode provides full screen output, while the FOLLOW mode preserves the original aspect ratio of the input signal.

### **Designed for Full Audio System Integration**

In addition to video matrix switching and scaling, the DTP CrossPoint 84 can serve as the central component for full audio system integration. It includes audio switching and breakaway for all eight video sources, four mic/line inputs that can be matrix mixed into any output, as well as HDMI audio embedding and de-embedding. The DTP CrossPoint 84 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 84 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.

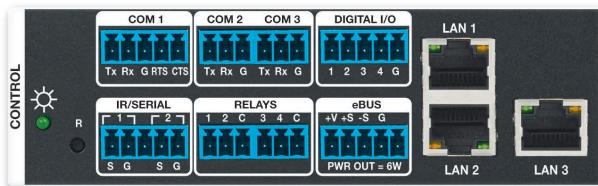
### **Integrated XTRA Series Audio Amplifier Technologies**



The DTP CrossPoint 84 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. These 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 84 IPCP completes a sound reinforcement system with absolutely no compromises in audio performance or power efficiency.



# Introduction



## Powerful Integrated Control Processor

The DTP CrossPoint 84 IPCP features a built-in Extron IP Link® Pro control processor, with the advanced features, processing power, and breakthrough technologies found in the standalone Extron IPCP Pro 350 control processor. The DTP CrossPoint 84 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, plus lighting, window shades, projection screens, occupancy sensing, and more. Select from a full line of Extron TouchLink® Pro touchpanels, available in screen sizes from 3.5" to 15" in tabletop, wall-mount and Extron Cable Cubby® form factors. Simply connect a TouchLink Pro touchpanel to the built-in Gigabit Ethernet switch to create a complete AV control system.

As with all Extron control systems, the DTP CrossPoint 84 IPCP is very intuitive and easy to configure with Global Configurator software. The latest version of Global Configurator 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 84 IPCP to be combined with additional IP Link Pro processors to create a large-scale control system. This is ideal for controlling multiple systems, rooms, or even remote locations around the world. DTP CrossPoint 84 IPCP systems throughout a facility, building, campus, or offices worldwide can be monitored and managed using Extron GlobalViewer® Enterprise server-based software.

With the purchase of an Extron LinkLicense™ with the DTP CrossPoint 84 IPCP, a tablet or laptop can serve as the primary control interface for the AV system. A unique benefit of LinkLicense is the ability to use Extron GUI Designer software to design interfaces for specific user roles in an organization. LinkLicense works seamlessly with the Extron Control app, and allows an interface to be duplicated to many additional devices. It simplifies deployment of BYOD with a single license purchase per system and no per-user fees, and allows a standardized BYOD strategy for AV control across an organization.

## Built-In Extron ProDSP for Complete Audio System Design and Optimization



All DTP CrossPoint 84 models feature Extron ProDSP™, the same full-featured,

high performance audio signal processing found in the Extron DMP 128 and DMP 64 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.

Professional grade DSP 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 four stereo output buses. These inputs can also be routed to any of the eight "virtual" buses for group processing and then routing into the output buses. The flexible routing and mixing capabilities of the DTP CrossPoint 84 allow system designers to create simple or complex signal management schemes to accommodate a wide variety of system application requirements.

Setup and optimization is easy with the intuitive DSP Configurator™ Software. The flexible on-screen layout offers fast access to all digital signal processing tools including level control, dynamics, filters, delay, ducking, loudness, feedback suppression, and matrix mixing.

## Easily Expand with Extron DMP 128 Audio Processors for Larger Systems and AEC

The DTP CrossPoint 84 allows unprecedented audio system expansion possibilities with an Extron digital audio expansion port that links the internal DSP to an Extron DMP 128 Digital Matrix Processor. This allows 8x16 I/O channel transport between devices, and the DMP 128 provides an additional 12 inputs and eight outputs. A linked DMP 128 offers additional capabilities such as automixing, AEC - acoustic echo cancellation, and POTS analog phone interfacing. Additionally, many unique and scalable system designs are possible when linking a DTP CrossPoint 84 to a DMP 128 AT in a Dante™ network.

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

The unique features and capabilities of the DTP CrossPoint 84 help reduce a client's total cost of ownership with a compact, 2U enclosure that houses all essential AV system functions, powers all DTP endpoints, and significantly reduces rack space and power requirements. With the energy efficient, highly reliable power supply and Class D amplifier, the DTP CrossPoint 84 runs cool to maximize reliability and significantly enhance operating life.

# Features

## All-in-one 8x4 matrix switcher, scaler, audio DSP, audio power amplifier, and control processor

The DTP CrossPoint 84 delivers all of the core functionality of a conventional AV system. Advanced technological capabilities from Extron allow complete system design and integration from a single 2U device.

## Two DTP inputs and six HDMI inputs

## Two HDMI outputs and two independently scaled DTP outputs

## Integrated DTP inputs and outputs support transmission of video, control, and audio up to 330 feet (100 m) over a shielded CATx cable

Two DTP inputs and two DTP outputs support digital signal transmission of HDMI, DisplayPort, DVI, or VGA, analog audio, and control up to 330 feet over a single shielded CATx cable. DTP endpoints can be remotely powered over each twisted pair connection.

## Supports 4K signals at all inputs and on both HDMI outputs

Incoming 4K signals are supported at all HDMI and DTP inputs, and can be passed only to the HDMI outputs.

## Selectable scaled DTP output rates from 640x480 to 1920x1200, including 1080p/60 and 2K

The output rate can be individually selected for each of the two scaled DTP outputs. Available output rates include computer and video up to 1920x1200, including 1080p/60 and 2K.

## Compatible with DTP 230 Series and DTP 330 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 84 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. This simplifies the wiring infrastructure, and reduces costs and labor.

## 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.

## S/PDIF audio output

The DTP CrossPoint 84 includes a S/PDIF output for two-channel PCM audio or encoded bitstream audio for Dolby® or DTS® multi-channel surround sound.

## Integrated digital audio matrix processor with ProDSP 32/64-bit signal processing

The DTP CrossPoint 84 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.

## Digital audio expansion port provides interfacing to an Extron DMP 128 processor for AEC and audio system scalability

An expansion port allows the DTP CrossPoint 84 and any DMP 128 model to be linked together via a single shielded CAT 6 cable for 8x16 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. Selectable 48 volt phantom power allows the use of condenser microphones.

## 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.

## Fixed, low latency DSP processing

Input to output latency is a constant 4.5 ms within the DTP CrossPoint 84, regardless of the number of active channels or processes. Fixed, low latency processing keeps audio in sync with video, and prevents distractions to the presenter resulting from delayed live audio.



# Features

## DSP Configurator Software

A powerful yet user-friendly PC-based software tool for managing all audio operations of the DTP CrossPoint 84. It enables complete setup and configuration of digital audio processing tools on the ProDSP platform, as well as routing and mixing.

## 32 DSP Configurator presets

Using the DSP Configurator Software, any or all parameters for DSP processing, levels, AV matrix switching ties, and audio matrix mixing can be saved as presets.

## 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.

## Integrated energy efficient Class D audio amplifier

The DTP CrossPoint 84 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.

## HDCP compliant

The DTP CrossPoint 84 fully supports HDCP-encrypted sources, with selectable authorization for unencrypted content.

## Extron-exclusive digital video technologies

The DTP CrossPoint 84 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 84 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.

## Auto Input Memory for scaled DTP outputs

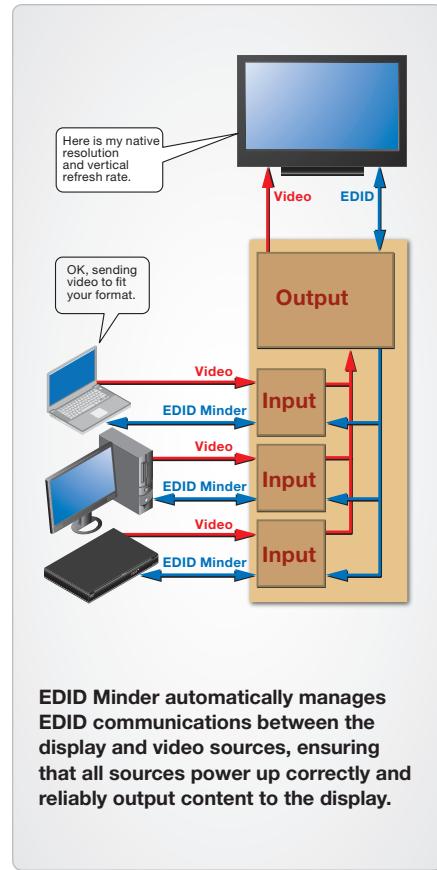
When activated for the scaled DTP outputs, the unit automatically stores size, position, and picture settings based on the incoming signal. When the same signal is detected again, these image settings are automatically recalled from memory.

## Output Standby Mode

The unit can be set to automatically mute video and sync output to the display device when no active input signal is detected. This allows the projector or flat-panel display to automatically enter into standby mode to save energy and enhance lamp or panel life.

## Automatic HDMI output reclocking

Reshapes and restores timing of digital video signals at each HDMI output, eliminating high frequency jitter to ensure reliable transmission over long cables.



**EDID Minder automatically manages EDID communications between the display and video sources, ensuring that all sources power up correctly and reliably output content to the display.**

## Integrated IPCP Pro 350 control processor

The DTP CrossPoint 84 IPCP includes a built-in IPCP Pro 350 control processor for complete AV system control.

## Multiple options for control, configuration, and monitoring

In addition to front panel controls, the DTP CrossPoint 84 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

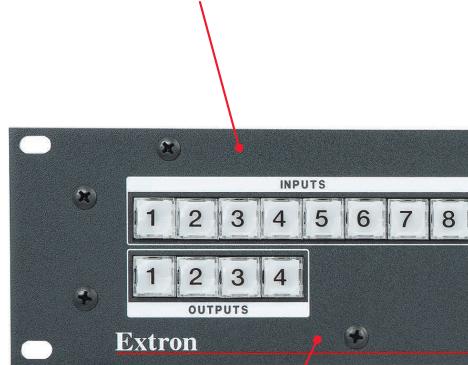
Conveniently configure multiple products, including the DTP CrossPoint 84, using a single software application.

## DTP CrossPoint 84 also available without integrated audio amplifier and control processor

# Overview

## Tri-color, backlit buttons

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



DTP CrossPoint 84 IPCP - Front

## HDCP compliant

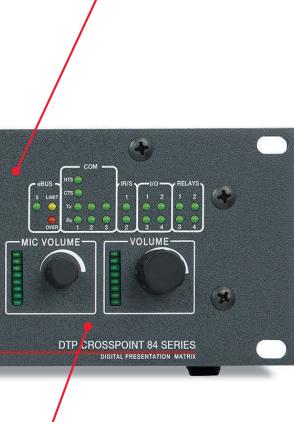
The DTP CrossPoint 84 is fully HDCP compliant at all inputs and outputs.

## 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 84 is an all-in-one 8x4 matrix switcher, scaler, audio DSP, audio amplifier, and control processor.



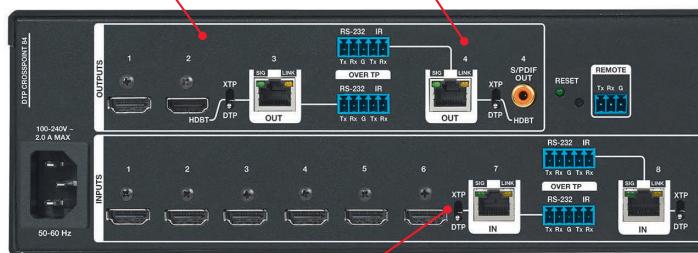
DTP CROSSPOINT 84  
DIGITAL PRESENTATION MATRIX

## Two independently scaled DTP outputs

The DTP CrossPoint 84 provides individual scaling up to 1920x1200 or 2048x1080 for each DTP output.

## 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.



DTP CrossPoint 84 IPCP SA - Back

## Two DTP inputs and two DTP outputs

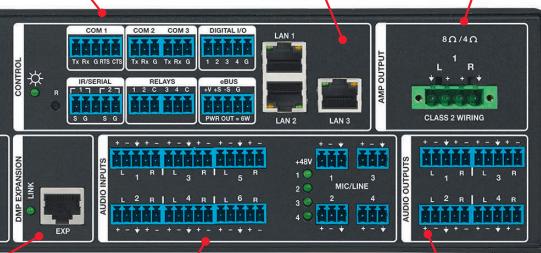
The DTP inputs and outputs are compatible with DTP Systems, including DTP 230 and DTP 330 products, or XTP CrossPoint matrix switchers. They support digital signal transmission up to 330 feet (100 meters) over a single shielded CATx cable.

## Built-in control processor

The DTP CrossPoint 84 IPCP includes high-speed processing and abundant control port capacity for complete, customizable control of an entire AV system, including sources, displays, and room functions.

## Built-in Gigabit switch

Allows convenient connection of a TouchLink Pro touchpanel or other network controlled devices



## DMP digital audio expansion port

Allows the matrix switcher and an Extron DMP 128 DSP to be linked together via a shielded CAT 6 cable for AEC and system expansion

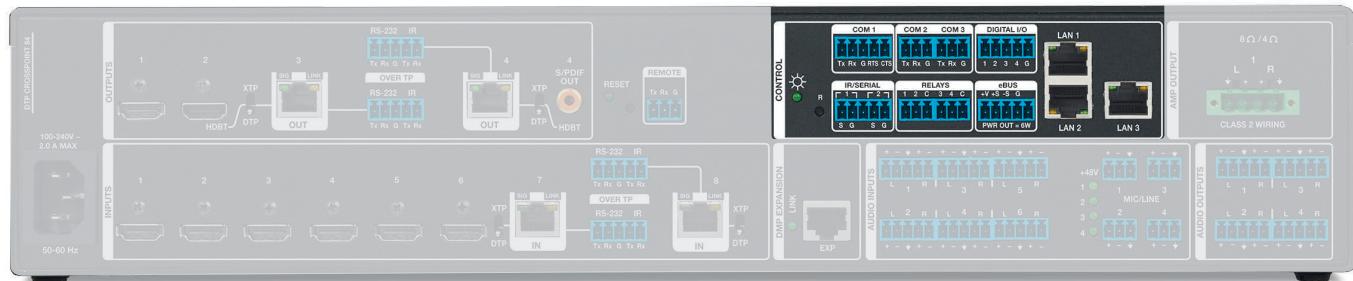
## Integrated XTRA Series audio amplifier technologies

DTP CrossPoint 84 IPCP models are available with an integrated stereo or mono amplifier.

## 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.

# Integrated Control Processor



## BUILT-IN IP LINK PRO CONTROL PROCESSOR

The integrated IPCP Pro 350 control processor includes all of the same advanced features, processing power, and breakthrough technologies found in the new Extron Pro Series control systems. It enables the DTP CrossPoint 84 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 84 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.

**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

**Integrated three port network switch**

Allows for easy connection of touchpanels or other network controlled devices

**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

**Supports LinkLicense**

Enables the use of third party devices as primary control interfaces

**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 84 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.

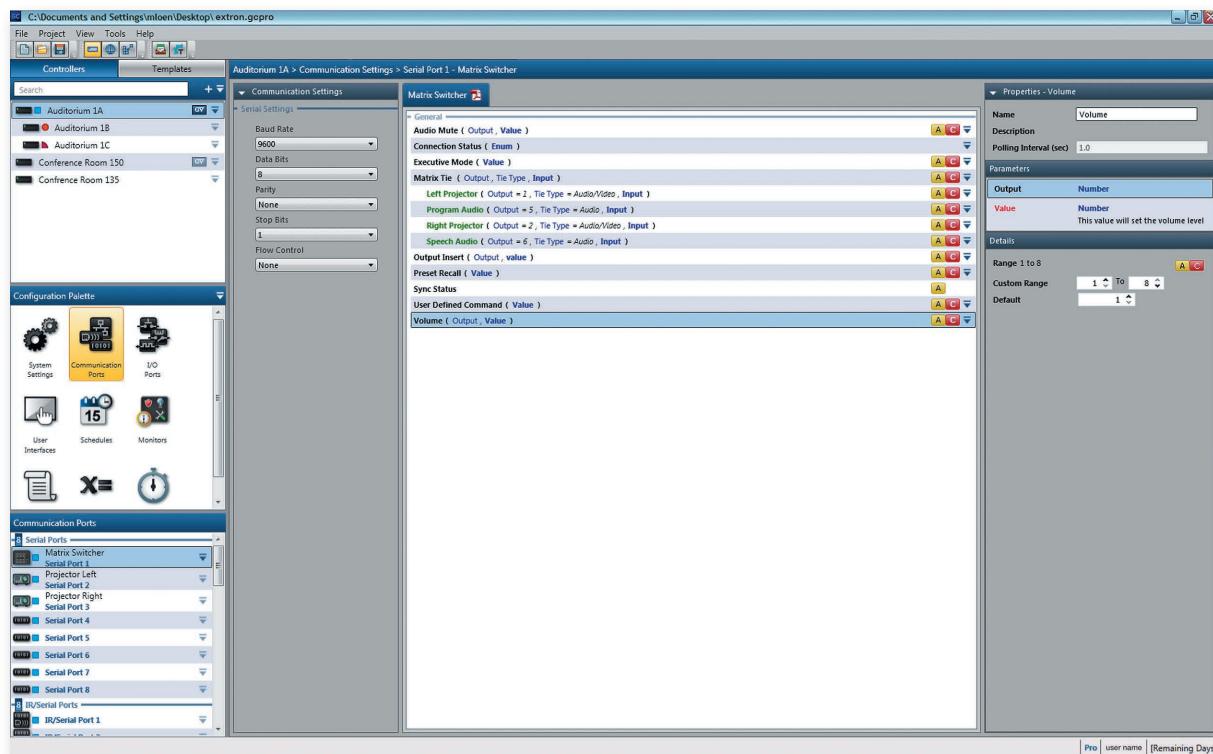


# Advanced Control System Configuration

## POWERFUL CONFIGURATION SOFTWARE

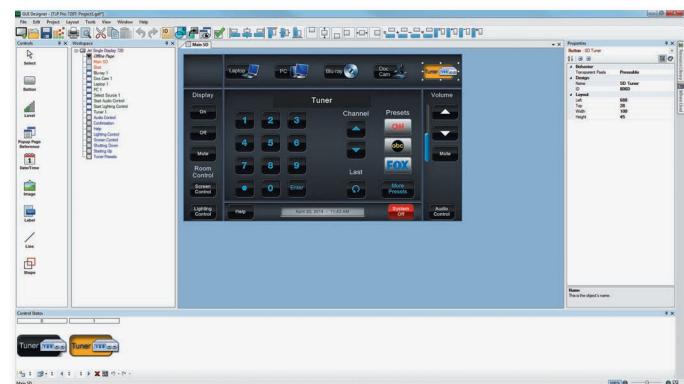
Global Configurator is Extron's most powerful and versatile control system configuration software. It is ideal for a wide variety of control systems and applications, and helps streamline integration within today's demanding AV control environments. Within this latest version, powerful features, such 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 84 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.



# Bring Your Own Device with LinkLicense



Extron LinkLicense™ is a simple way for people to use mobile devices or computers as primary control interfaces in an Extron control system. LinkLicense gives integrators the freedom to choose control interfaces based on their customers' specific needs, and simplifies BYOD control designs. With the purchase of a LinkLicense with the DTP CrossPoint 84 IPCP, integrators can create custom user interfaces for tablets or laptops, and duplicate them to additional devices with no per-user fees.



EXTRON  
CONTROL APP



INTERNET  
EXPLORER



MOZILLA  
FIREFOX



GOOGLE  
CHROME



APPLE  
SAFARI

**Cut costs by using a single license per system, not per user**

**Operates seamlessly with the Extron Control App**

**Use in a system where a TouchLink Pro touchpanel may not be present**

**Save money by using low cost Extron Apps for control**

**Simplify deployment of BYOD – Bring Your Own Device control designs**

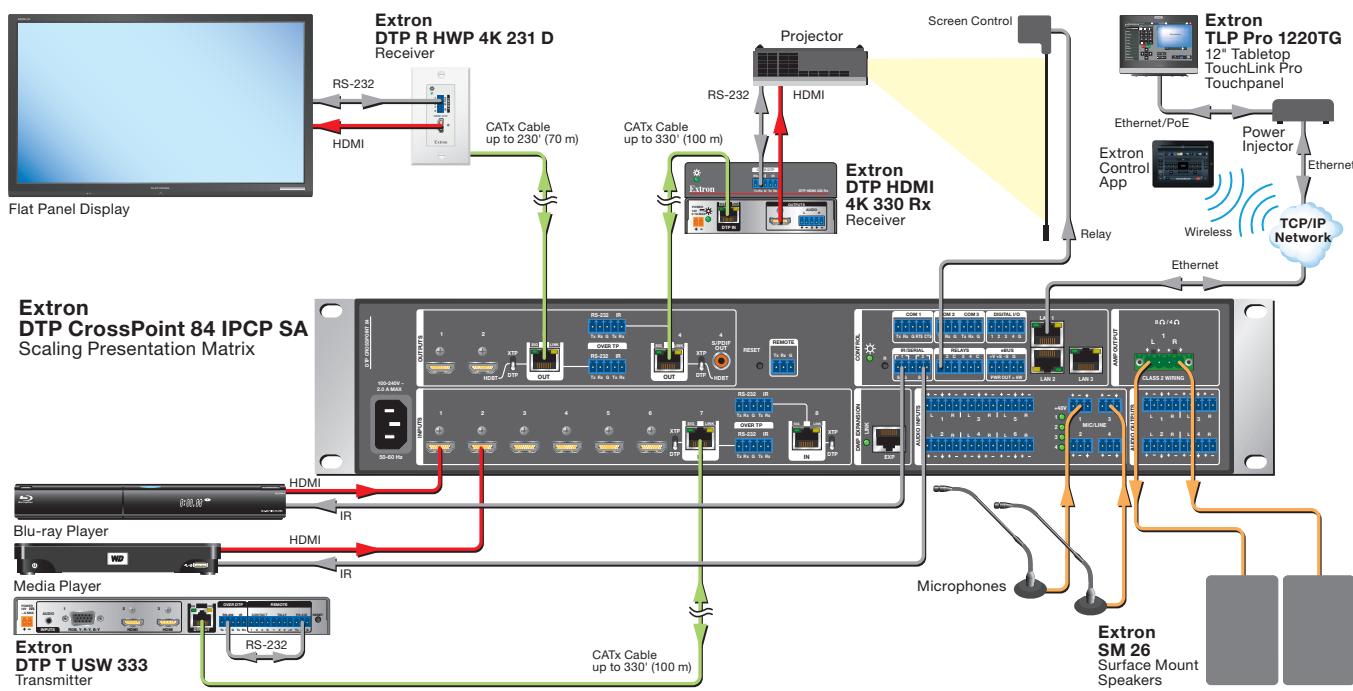
**Ease support by standardizing on a consistent BYOD control approach across your organization**

**Streamline the purchasing process and reduce administrative burdens**

**Enable user interfaces that are customized for your user's devices or the application needs**

**Management tools help you know exactly which control systems have additional user interface capabilities**

**No central management of licenses required**

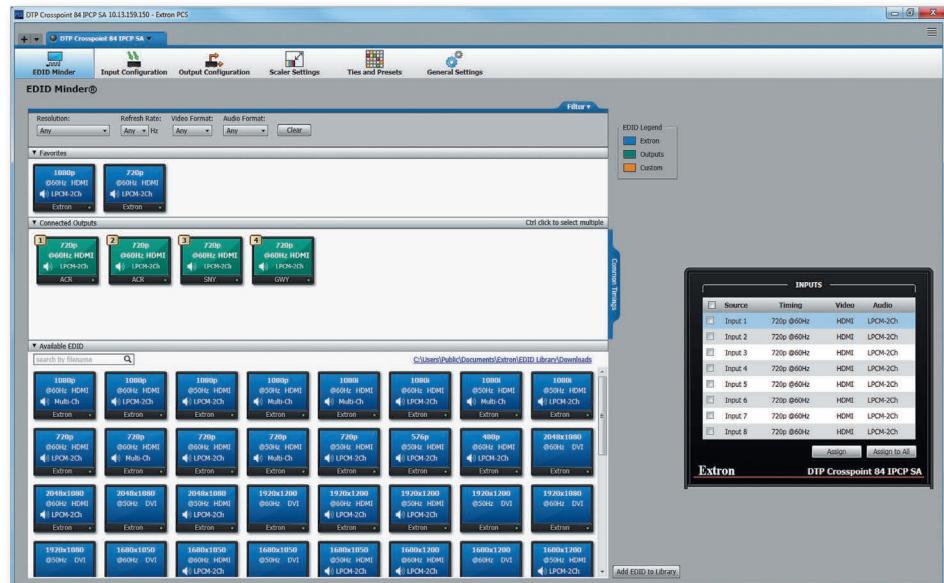


# Product Configuration Software

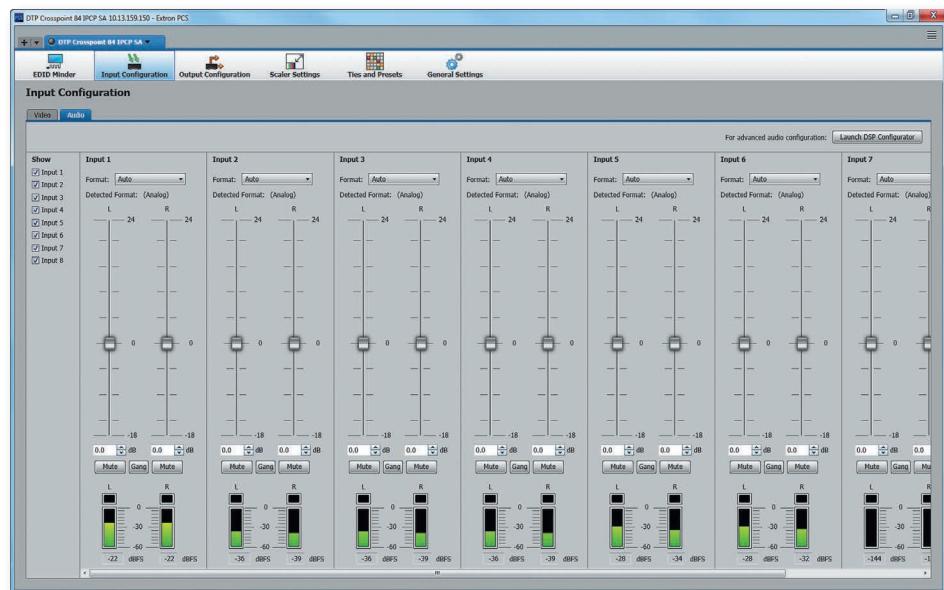
## INTUITIVE SYSTEM SETUP AND OPERATION

The DTP CrossPoint 84 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 84 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 two 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 84 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 intuitive user interface makes it easy to independently apply EDID settings to each input, allowing the user to select from EDID captured from connected output devices, factory default EDID, or custom EDID uploaded to the unit.



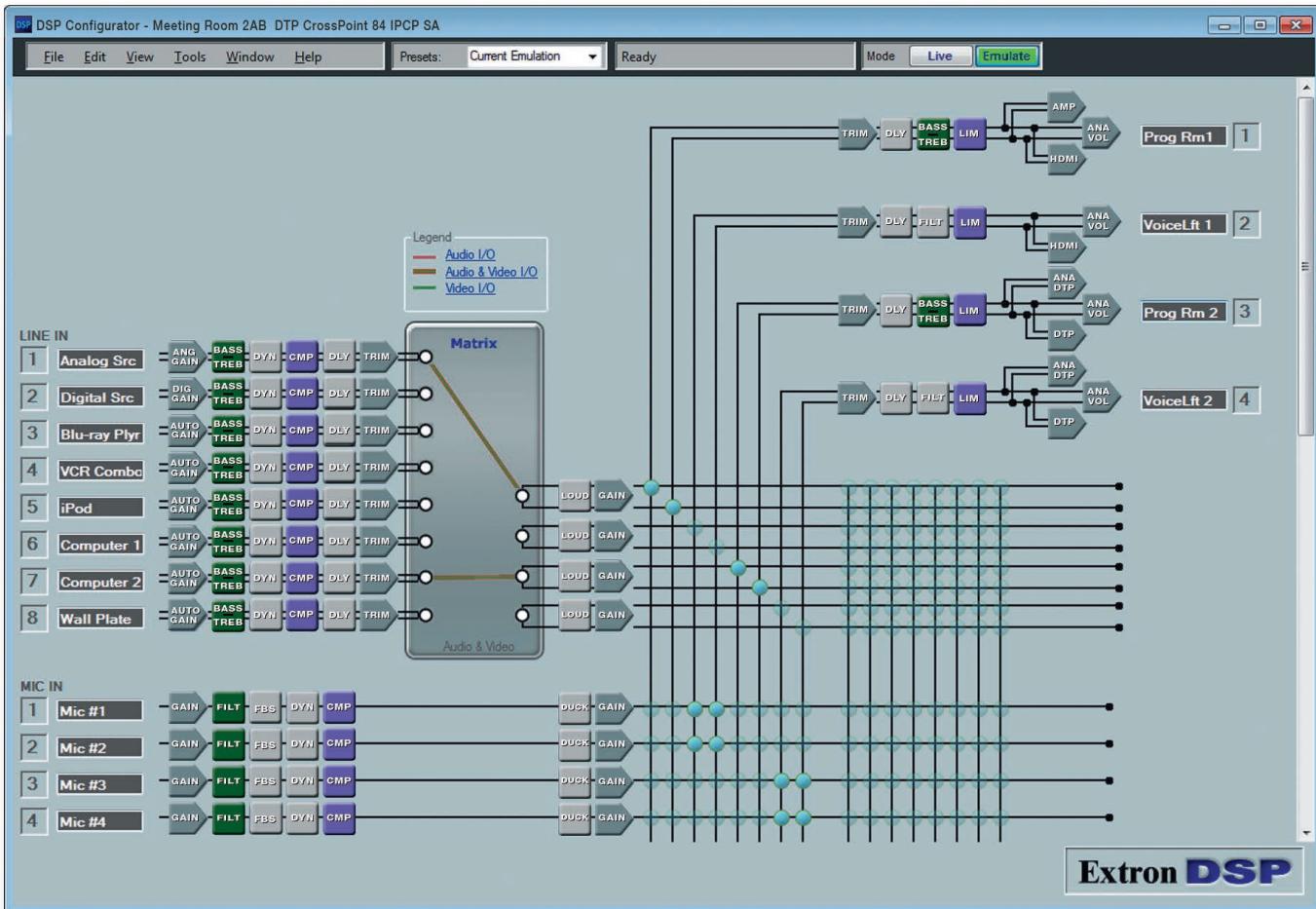
PCS enables expedited audio system setup with convenient audio input format selection, level adjustment, and real-time meters for each input and output.

# DSP Configurator Software

## EASY-TO-USE DSP CONFIGURATOR SOFTWARE FOR FAST SETUP

The DSP Configurator Software allows AV integrators and technicians to take advantage of the professional grade DSP in the DTP CrossPoint 84 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 DTP CrossPoint 84, including level control, dynamics, filters, delay, loudness, feedback suppression, and matrix mixing. 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 four 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 84 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.



The DSP Configurator Software provides a convenient snapshot of the entire audio system, including all processing blocks, AV matrix switching ties, and audio matrix mixing.

# Compatible with all DTP Products



The DTP CrossPoint 84 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 84 is paired with a DTP 330 transmitter or receiver, HDMI, DisplayPort, DVI, 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 each DTP endpoint with just one shielded CATx cable greatly streamlines system designs and installation.

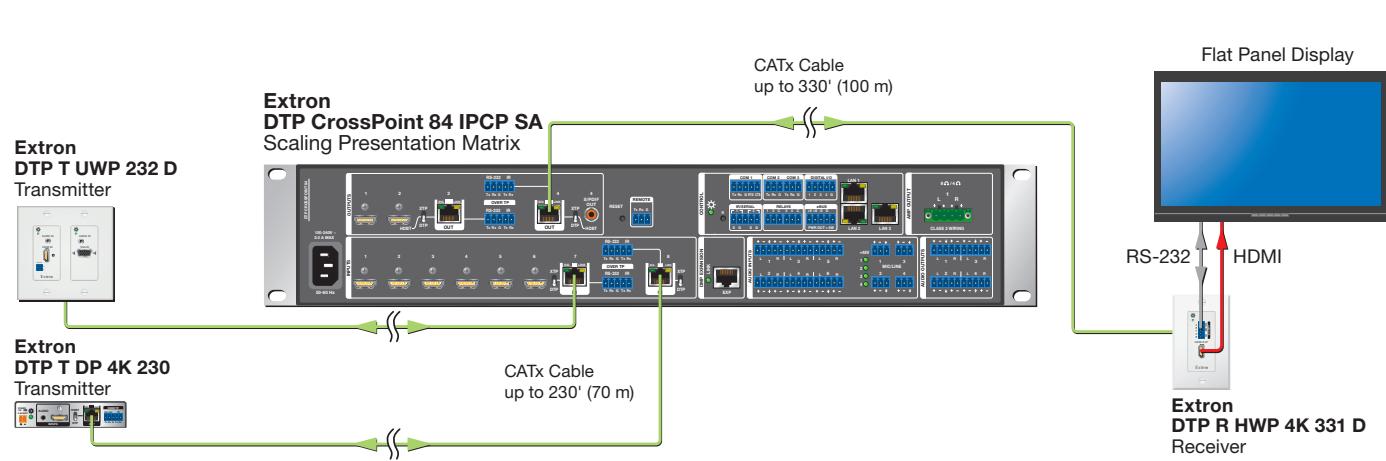
Designed for rack mount and architectural applications, the DTP transmitters and receivers provide convenient connection points at remote source and display locations. Decorator-style models are available for placement in walls, lecterns, floor boxes, or behind flat-panel displays. Compact, low-profile 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 also support 4K and UHD 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 84, eliminating the need for separate cable runs.



## Extends

- ✓ Digital Video
- ✓ Audio
- ✓ RS-232 Control
- ✓ IR Control
- ✓ Remote Power



# DTP Transmitters and Receivers

## DTP 230 AND DTP 330 SERIES TRANSMITTERS AND RECEIVERS

### COMMON FEATURES

- ▶ Transmits video, control, and analog audio up to 230 feet (70 m) or 330 feet (100 m) over a shielded CATx cable
- ▶ Supports computer and video resolutions up to 1920x1200, including 1080p/60 Deep Color and 2K
- ▶ Compatible with CATx shielded twisted pair cable
- ▶ Extron XTP DTP 24 shielded twisted pair cable is strongly recommended for optimal performance
- ▶ Accepts additional analog stereo audio signals
- ▶ Bidirectional RS-232 and IR pass-through for AV device control
- ▶ Remote power capability
- ▶ HDCP compliant
- ▶ Supports EDID and HDCP transmission

### DTP T DP 4K 230 and DTP T DP 4K 330

#### DTP Transmitter for DisplayPort

### UNIQUE FEATURES

- **Inputs:** One DisplayPort, one 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
- Supports DisplayPort data rates up to 10.8 Gbps
- 1" (2.5 cm) high, quarter rack width metal enclosure

Model	Version Description	Part Number
DTP T DP 4K 230	DisplayPort Tx - 230 ft (70 m)	60-1076-12
DTP T DP 4K 330	DisplayPort Tx - 330 ft (100 m)	60-1076-52



### DTP R DP 4K 230 and DTP R DP 4K 330

#### DTP Receiver for DisplayPort

### UNIQUE FEATURES

- **Input:** One DTP twisted pair
- **Outputs:** DisplayPort, captive screw connector for audio pass-through
- Supports computer and video resolutions up to 4K, including 2560x1600
- Output supports Type 2 dual-mode DisplayPort for interoperability with 4K-capable devices
- Supports DisplayPort data rates up to 10.8 Gbps
- 1" (2.5 cm) high, quarter rack width metal enclosure

Model	Version Description	Part Number
DTP R DP 4K 230	DisplayPort Rx - 230 ft (70 m)	60-1076-13
DTP R DP 4K 330	DisplayPort Rx - 330 ft (100 m)	60-1076-53



## DTP HDMI 4K 230 Tx and DTP HDMI 4K 330 Tx

### DTP Transmitter for HDMI

#### UNIQUE FEATURES

- 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
- 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
- 1" (2.5 cm) high, quarter rack width metal enclosure

Model	Version Description
DTP HDMI 4K 230 Tx	HDMI Tx - 230 ft (70 m)
DTP HDMI 4K 330 Tx	HDMI Tx - 330 ft (100 m)

Part Number
60-1271-12
60-1331-12



DTP HDMI 4K 330 Tx



## DTP HDMI 4K 230 Rx and DTP HDMI 4K 330 Rx

### DTP Receiver for HDMI

#### UNIQUE FEATURES

- Input:** One DTP twisted pair
- Outputs:** HDMI, captive screw connector for audio pass-through
- 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
- 1" (2.5 cm) high, quarter rack width metal enclosure

Model	Version Description
DTP HDMI 4K 230 Rx	HDMI Rx - 230 ft (70 m)
DTP HDMI 4K 330 Rx	HDMI Rx - 330 ft (100 m)

Part Number
60-1215-22
60-1331-13



DTP HDMI 4K 330 Rx



## DTP T USW 233 and DTP T USW 333

### Three Input Switcher with Integrated DTP Transmitter and Audio Embedding

#### UNIQUE FEATURES

- 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
- EDID Minder automatically manages EDID communication between connected devices
- RS-232 control port
- Contact closure port with tally output
- 1" (2.5 cm) high, half rack width metal enclosure

Model	Version Description
DTP T USW 233	Three Input Switcher w/DTP Tx - 230 ft (70 m)
DTP T USW 333	Three Input Switcher w/DTP Tx - 330 ft (100 m)

Part Number
60-1551-12
60-1551-52



DTP T USW 333

# DTP Transmitters and Receivers

## DTP T HWP 232 D and DTP T HWP 332 D

**Two Input DTP Transmitter for HDMI with Audio Embedding - Decorator-Style Wallplate**

### UNIQUE FEATURES

- **Inputs:** Two 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
- EDID Minder automatically manages EDID communication between connected devices
- RS-232 control port
- Contact closure control port



DTP T HWP 332 D

Model	Version Description	Part Number
DTP T HWP 232 D	Two Input Decorator-Style Tx, Black - 230 ft (70 m)	60-1365-12
DTP T HWP 232 D	Two Input Decorator-Style Tx, White - 230 ft (70 m)	60-1365-13
DTP T HWP 332 D	Two Input Decorator-Style Tx, Black - 330 ft (100 m)	60-1365-52
DTP T HWP 332 D	Two Input Decorator-Style Tx, White - 330 ft (100 m)	60-1365-53

## DTP T UWP 232 D and DTP T UWP 332 D

**Two Input DTP Transmitter for HDMI and VGA with Audio Embedding - Decorator-Style Wallplate**

### UNIQUE FEATURES

- **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
- Auto-switching between inputs
- Analog stereo audio embedding
- EDID Minder automatically manages EDID communication between connected devices
- RS-232 control port
- Contact closure control port



DTP T UWP 332 D

Model	Version Description	Part Number
DTP T UWP 232 D	Two Input Decorator-Style Tx, Black - 230 ft (70 m)	60-1366-12
DTP T UWP 232 D	Two Input Decorator-Style Tx, White - 230 ft (70 m)	60-1366-13
DTP T UWP 332 D	Two Input Decorator-Style Tx, Black - 330 ft (100 m)	60-1366-52
DTP T UWP 332 D	Two Input Decorator-Style Tx, White - 330 ft (100 m)	60-1366-53

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

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

### UNIQUE FEATURES

- **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
- 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 single-gang decorator-style wallplate



DTP T HWP 4K 331 D

Model	Version Description	Part Number
DTP T HWP 4K 231 D	HDMI Decorator-Style Tx, Black - 230 ft (70 m)	60-1421-12
DTP T HWP 4K 231 D	HDMI Decorator-Style Tx, White - 230 ft (70 m)	60-1421-13
DTP T HWP 4K 331 D	HDMI Decorator-Style Tx, Black - 330 ft (100 m)	60-1421-52
DTP T HWP 4K 331 D	HDMI Decorator-Style Tx, White - 330 ft (100 m)	60-1421-53

**4K/UHD**

# DTP Transmitters and Receivers

## DTP R HWP 4K 231 D & DTP R HWP 4K 331 D

### DTP Receiver for HDMI – Decorator-Style Wallplate

#### UNIQUE FEATURES

- **Input:** One DTP twisted pair input
- **Outputs:** HDMI, captive screw for audio pass-through
- Supports computer and video resolutions up to 4K

Model	Version Description	Part Number
DTP R HWP 4K 231 D	HDMI Decorator-Style Rx, Black - 230 feet (70 m)	60-1531-12
DTP R HWP 4K 231 D	HDMI Decorator-Style Rx, White - 230 feet (70 m)	60-1531-13
DTP R HWP 4K 331 D	HDMI Decorator-Style Rx, Black - 330 feet (100 m)	60-1531-52
DTP R HWP 4K 331 D	HDMI Decorator-Style Rx, White - 330 feet (100 m)	60-1531-53



DTP R HWP 4K 331 D

## DTP T EU 232 and DTP T EU 332

### Two Input DTP Transmitter with Audio Embedding for EU-type Junction Boxes

#### UNIQUE FEATURES

- **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-type electrical junction box
- Auto-switching between inputs
- DTP output is compatible with HDBaseT-enabled devices
- Independent analog audio inputs
- EDID Minder automatically manages EDID communication between connected devices
- Available in RAL9010 white
- RS-232 control port

Model	Version Description	Part Number
DTP T EU 232	Two Input EU Tx - 230 ft (70 m)	60-1569-12
DTP T EU 332	Two Input EU Tx - 330 ft (100 m)	60-1569-52



DTP T EU 332

## DTP T MK 232 and DTP T MK 332

### Two Input DTP Transmitter with Audio Embedding for MK-type Junction Boxes

#### UNIQUE FEATURES

- **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 MK-type electrical junction box
- Auto-switching between inputs
- DTP output is compatible with HDBaseT-enabled devices
- Analog stereo audio embedding
- EDID Minder automatically manages EDID communication between connected devices
- RS-232 control port

Model	Version Description	Part Number
DTP T MK 232	Two Input MK Tx - 230 ft (70 m)	60-1567-12
DTP T MK 332	Two Input MK Tx - 330 ft (100 m)	60-1567-52



DTP T MK 332

# DTP Transmitters and Receivers

## DTP T FB 232 and DTP T FB 332

### Two Input DTP Transmitter with Audio Embedding for Floor Boxes

#### UNIQUE FEATURES

- **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
- Designed to mount in a variety of floor boxes
- Auto-switching between inputs
- DTP output is compatible with HDBaseT-enabled devices
- Analog stereo audio embedding
- EDID Minder automatically manages EDID communication between connected devices
- RS-232 control port



DTP T FB 332

Model	Version Description	Part Number
DTP T FB 232	Two Input Floor Box Tx - 230 ft (70 m)	60-1568-12
DTP T FB 332	Two Input Floor Box Tx - 330 ft (100 m)	60-1568-52

## WPD 100 Series

### Pass-Through Wallplates - Decorator-Style for XTP DTP 24 Cable

#### FEATURES

- 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
- Gold plated contacts



WPD 102 P

Model	Version Description	Part Number
WPD 101 C	One XTP DTP 24 Coupler	70-1053-03
WPD 102 C	Two XTP DTP 24 Couplers	70-1055-03
WPD 101 P	One XTP DTP 24 Punch Down Jack	70-1054-03
WPD 102 P	Two XTP DTP 24 Punch Down Jacks	70-1056-03

## CTU 45

### Universal RJ-45 Termination Tool

#### UNIQUE FEATURES

- 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
- One-step operation simultaneously crimps plug contacts and metal strain relief
- Color-coded wiring diagram label
- Rugged, lightweight ratchet-controlled frame
- Extron engineered, precision-machined crimp die
- Tested for reliable performance to 50,000 cycles minimum



Model	Version Description	Part Number
CTU 45	RJ-45 Crimp Tool	101-024-01

# 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.



## XTP DTP 24

Shielded Twisted Pair Cable for XTP Systems and DTP Series Products

- Engineered for superior performance with Extron XTP Systems and DTP Series products
- 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)
- Independently tested and verified to meet performance requirements set by HDBaseT Alliance
- SF/UTP design with four unshielded twisted pairs inside an overall braid and foil shield
- 24 AWG solid copper construction
- Plenum and Non-Plenum rated versions available



## 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
- Gold plated contacts
- Available in quantities of 10

Model	Version Description	Part Number
XTP DTP 24/1000	Non-Plenum 1000' (305 m) spool	22-236-03
XTP DTP 24P/1000	Plenum 1000' (305 m) spool	22-235-03

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



## 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
- Ideal for high EMI/RFI environments
- Gold plated contacts
- Includes punch down tool for quick and easy termination
- Available in quantities of 10



## XTP DTP 24 Coupler

Shielded RJ-45 Coupler 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
- Keystone-style snap-in design for ease of installation in wallplates, AAP - Architectural Adapter Plates, and similar mounting frames
- Gold plated contacts
- Available in quantities of 10

Model	Version Description	Part Number
XTP DTP 24 Jack	XTP DTP 24 Jack, Package of 10	101-023-01

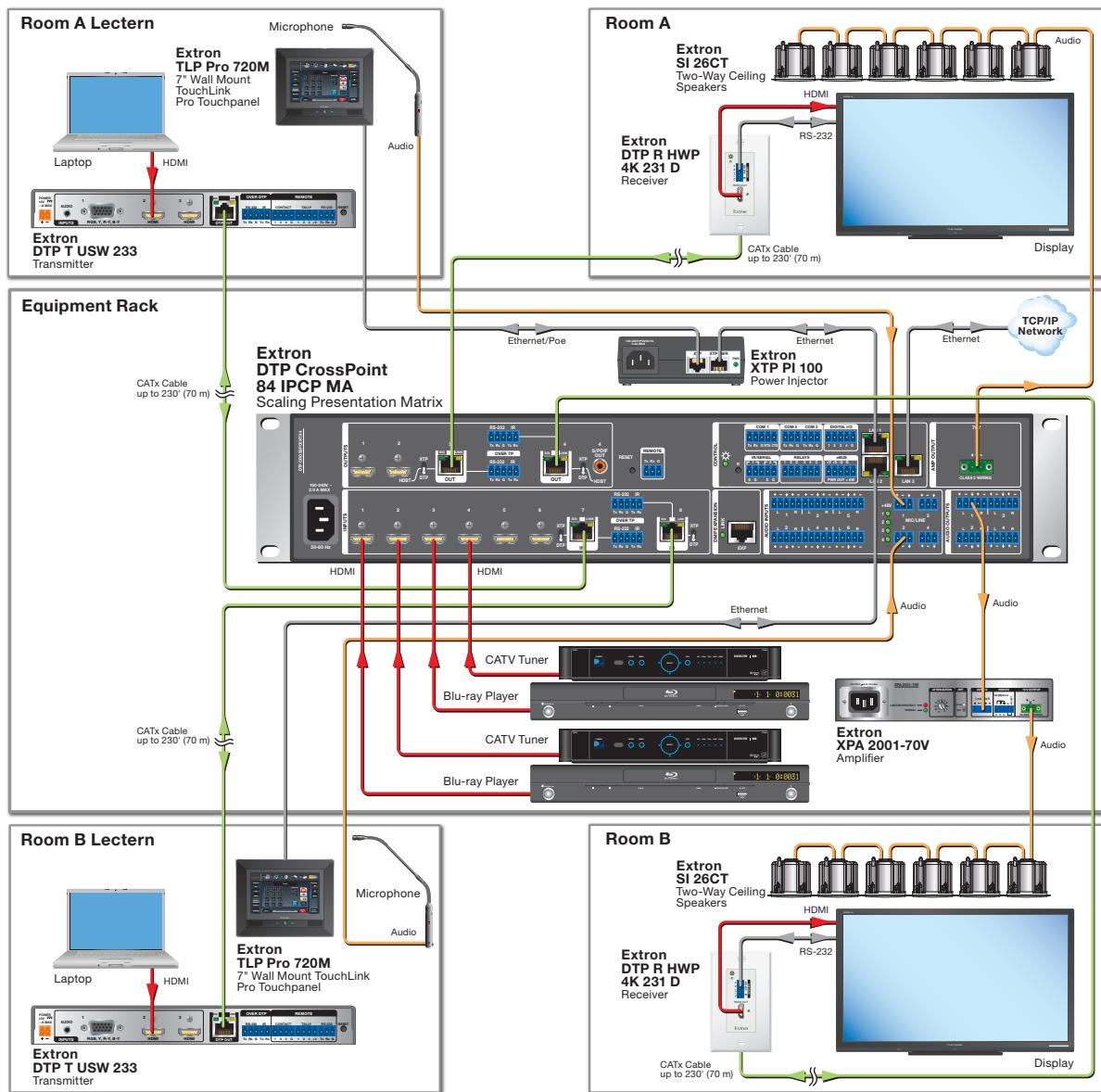
Model	Version Description	Part Number
XTP DTP 24 Coupler	XTP DTP 24 Coupler, Package of 10	101-022-02

# Application

## DIVISIBLE ROOM

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 84 provides highly reliable matrix switching and distribution to accommodate either room configuration. The independent outputs on the DTP CrossPoint 84 provide users with the flexibility to view a separate source at each room's display. When the rooms are tied together, users can choose to view the same signal at both displays or view independent signals at each display. The DTP transmission capabilities of the DTP CrossPoint 84 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 84 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 84 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.



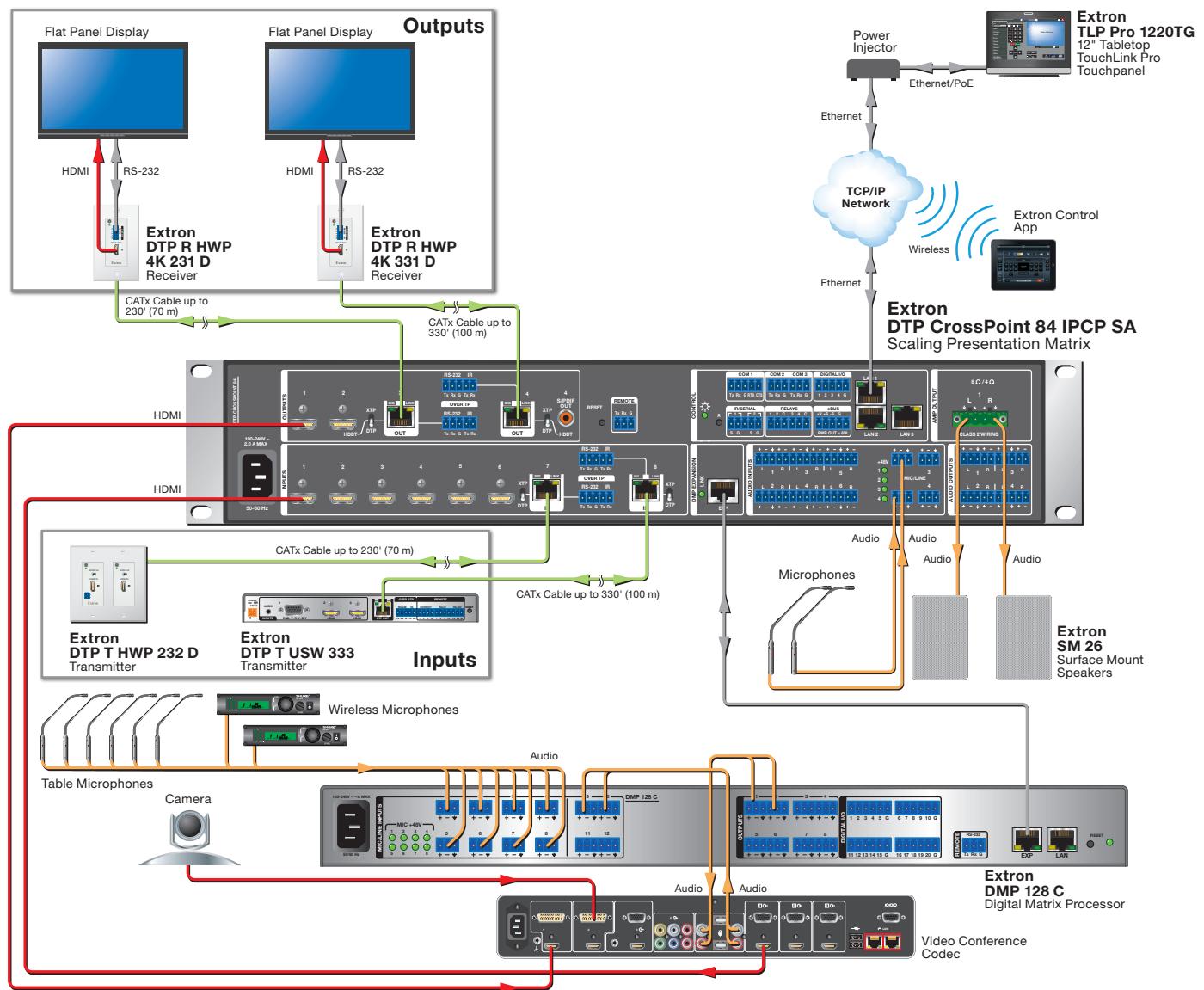
# Application

## AUDIO SYSTEM EXPANSION FOR SCALABILITY AND AEC

The DTP CrossPoint 84 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. A comprehensive selection of outputs is available including analog stereo, S/PDIF digital audio, HDMI embedded audio, stereo outputs transmitted to DTP receivers, and amplified mono or stereo audio.

The DTP CrossPoint 84 features Extron 64-bit ProDSP technology with fully configurable EQ, filters, dynamics, delay, ducking, feedback suppression, mic/line matrix mixing options, and much more.

The DTP CrossPoint 84 is easily scalable for integrating large system applications with numerous microphones or audio destinations, or to add AEC - acoustic echo cancellation for conferencing applications. An Extron-exclusive audio expansion port is provided for linking the internal DSP of the DTP CrossPoint 84 to an Extron DMP 128 ProDSP audio matrix processor. This allows audio channels to be exchanged between the two audio processors, with the DMP 128 providing an additional 12 input channels and 8 output channels. Several DMP 128 models are available, including the DMP 128 C with eight channels of AEC processing. Even greater system scalability is possible when linked to a DMP 128 AT processor on a Dante network of DMP 128 AT or Extron AXP 50 C AT units.

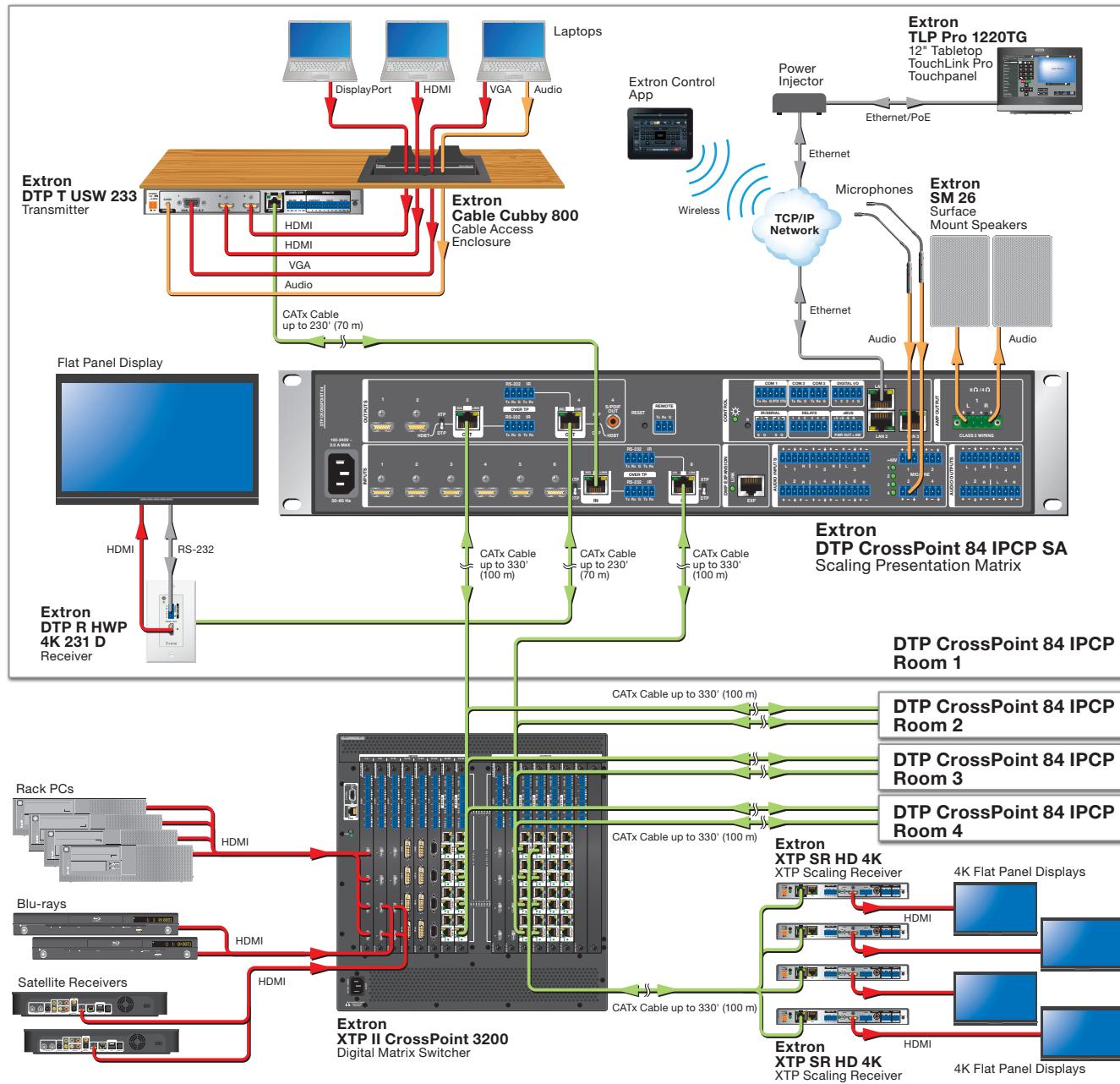


# Application

## **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 84 can easily be integrated into an XTP 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 CrossPoint 1600 or XTP CrossPoint 3200 matrix switcher at the central rack location. Each DTP output includes a dedicated scaler, so that graphics or video can be optimized as necessary for a codec, or a specific display resolution or aspect ratio.



# Specifications

<b>VIDEO</b>		<b>S/N</b>	>105 dB at maximum balanced output (unweighted)
Routing	8 x 4 matrix	Crosstalk	<-90 dB @ 20 Hz to 20 kHz, fully loaded
Maximum data rate	10.2 Gbps (3.4 Gbps per color)	Stereo channel separation	>80 dB @ 20 Hz to 20 kHz
Maximum pixel clock	300 MHz	Digital conversion	24-bit, 48 kHz
Resolution	Up to 2560x1600* @ 60 Hz or 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz (* reduced blanking)	<b>AUDIO</b>	
<b>VIDEO INPUT</b>		Routing	8 x 4 stereo switching matrix 4 x 4 microphone mixing matrix
Number/signal type	6 HDMI digital video (HDCP compliant) 2 DTP or XTP (configurable)	Supported formats — Pass through HDMI connectors	LPCM up to 7.1/24-bit/192kHz, Dolby TrueHD, Dolby Digital Plus, Dolby Digital EX, Dolby Digital 5.1, Dolby Digital 2/0 Surround, Dolby Digital 2/0, DTS-HD Master Audio, DTS-HD, DTS ES Discrete 6.1, DTS ES Matrix 6.1, DTS Digital Surround 5.1, DTS 2 Channel
Connectors	6 female HDMI type A 2 female RJ-45	Analog connectors	Analog stereo audio
<b>MATRIX VIDEO OUTPUTS (NON SCALED)</b>		DTP connectors	De-embedded from HDMI [PCM only] or remote balanced/unbalanced analog
Number/signal type	2 HDMI digital video (HDCP compliant)	<b>AUDIO INPUT</b>	
Connectors	2 female HDMI	Number/signal type	6 stereo, analog line level, balanced or unbalanced 6 stereo, de-embedded from HDMI (PCM only) 2 DTP (de-embedded from HDMI [PCM only] and remote balanced/unbalanced analog), or XTP (embedded digital)
<b>SCALED TP OUTPUTS</b>		Analog audio	
Number/signal type	2 DTP, XTP, or HDBaseT (configurable)	Nominal level	+4 dBu, -10 dBV adjustable via input gain
Connectors	2 female RJ-45	Maximum level	+21 dBu balanced, +15 dBu unbalanced
Video processing		Input gain adjustment	-18 dB to +24 dB, 0.1 dB steps, adjustable per input
Digital pixel data bit depth	8, 10, or 12 bits per channel; 165 MHz pixel clock (HDMI)	<b>MIC/LINE INPUT</b>	
Colors	1.07 billion (10-bit processing)	Number/signal type	4 mono, mic/line, balanced/unbalanced (with phantom power)
Video input		Connectors	(4) 3.5 mm captive screw connectors, 3 pole
Horizontal frequency	15 kHz to 100 kHz	Impedance	10k ohms unbalanced, 20k ohms balanced
Vertical frequency	24 Hz to 75 Hz	Nominal level	-60 dBV, +4 dBu, -10 dBV, adjustable via input gain
Resolution range	640x480 to 1600x1200 and 1920x1200* 480i, 480p, 576i, 576p, 720p, 1080i, 1080p, and 2K *reduced blanking	Maximum level	>+21 dBu at rated THD+N when mic gain is set to 0 dB
Scaled resolutions	640x480, 800x600*, 852x480*, 1024x768*, 1024x852*, 1024x1024*, 1280x768*, 1280x800*, 1280x1024*, 1360x768*, 1360x768*, 1365x768*, 1366x768*, 1365x1024*, 1400x1050*, 1440x900*, 1600x900*, 1600x1200*, 1680x1050*, 1920x1200* HDTV 480p <sup>7,8</sup> , 576p <sup>7,8</sup> , 720p <sup>3,4,5,6,7,8</sup> , 1080p <sup>6,7,8</sup> , 1080p <sup>1,2,3,4,5,6,7,8</sup> , 2048x1080 <sup>1,2,3,4,5,6,7,8</sup>	Equivalent input noise	<-120 dBV (1.0 µVRMS) at +40 dB input gain
	<sup>1</sup> = at 23.98 Hz, <sup>2</sup> = at 24 Hz, <sup>3</sup> = at 25 Hz, <sup>4</sup> = at 29.97 Hz, <sup>5</sup> = at 30 Hz, <sup>6</sup> = at 50 Hz, <sup>7</sup> = at 59.94 Hz, <sup>8</sup> = at 60 Hz	CMRR	>70 dB typical
<b>SHIELDED TWISTED PAIR INTERCONNECTION</b>		Input gain adjustment	-18 dB to +80 dB, in 0.1 dB steps, adjustable per input
Connectors	Female RJ-45	Microphone volume range	-100 dB to +12 dB
Termination standard	TIA/EIA T568B	DC phantom power	+48 VDC, ±10% (inputs 1-4) switched on or off
Signal transmission distance		<b>AUDIO OUTPUT</b>	
Resolutions up to 1920x1200 and 1080p		Number/signal type	2 HDMI embedded 2 DTP (embedded digital and remote balanced/unbalanced analog), XTP (embedded digital), or HDBaseT (embedded digital) 4 stereo balanced/unbalanced analog (variable)
DTP 330	Up to 330' (100 m) using shielded twisted pair cable or XTP DTP 24 TP cable	Connectors	2 female HDMI 2 RJ-45 (4) 3.5 mm captive screw, 5 pole
DTP 230	Up to 230' (70 m) using shielded twisted pair cable or XTP DTP 24 TP cable	Impedance	
2560x1600* and 4k @ 30 Hz (* reduced blanking)		Stereo audio	50 ohms unbalanced, 100 ohms balanced
DTP 330	Up to 330' (100 m) using shielded twisted pair cable or XTP DTP 24 TP cable	S/PDIF	75 ohms
DTP 230	Up to 130' (40 m) using shielded twisted pair cable or XTP DTP 24 TP cable	Gain error	±0.1 dB channel to channel
Cable requirements	Solid conductor, 24 AWG or better	Maximum level (Hi-Z)	>+21 dBu, balanced or +15 dBu unbalanced
Cable recommendations	400 MHz bandwidth, STP (shielded twisted pair)	Output volume range	0 to -100 dB in 0.1 dB steps
<b>NOTE:</b> Extron XTP DTP 24 shielded twisted pair cable is strongly recommended for optimal performance.		<b>EXP PORT</b>	
<b>NOTE:</b> Input and output mode signaling:		Transmission type	Proprietary
DTP: HDMI with embedded audio, analog audio, RS-232 and IR, and remote power		Connectors	1 RJ-45
XTP: HDMI with embedded audio plus RS-232 and IR		Inputs	8 channels Rx
HDBT: HDMI with embedded audio plus RS-232 and IR		Outputs	16 channels Tx
<b>AUDIO SYSTEM (MIC/LINE INPUT TO LINE OUTPUT)</b>		Audio format	24 bit, 48 kHz sampling, uncompressed
Gain	Unbalanced output: -6 dB; balanced output: 0 dB	EXP cable	Shielded CAT 6 up to 10 meters
Frequency response	20 Hz to 20 kHz, ±0.2 dB		
THD + Noise	0.01% at 1 kHz nominal level		

# Specifications

AUDIO OUTPUT – POWER AMPLIFIER		CONTROL/REMOTE – IPCP PRO 350 CONTROL PROCESSOR	
Number/signal type		Memory	
SA models	1 stereo or mono (2 channels total)	SDRAM	512 MB
MA models	1 mono, 70 V	Flash	4.5 GB
Connector		Software and control options	
NOTE: This connector accepts wires of 22 AWG to 12 AWG.		Software	Extron Global Configurator Plus and Professional for Windows®
SA models	(1) 5 mm screw lock captive screw connector, 4 pole	Control options	GlobalViewer®, TouchLink® for Web, TouchLink for iPad®, or TouchLink Pro touchpanels
MA models	(1) 5 mm screw lock captive screw connector, 2 pole	Ethernet control	
Load impedance		Network interface controllers (NICs)	1
SA models	4 ohms minimum	Network switch	1 unmanaged 3 port switch
MA models	50 ohms minimum	Connectors	3 female RJ-45 connectors
High pass filter (MA models)	80 Hz, 12 dB/octave roll off	Data rate	10/100/1000Base-T, half/full duplex with autodetect
Amplifier type	Class D	Protocols	DHCP, DNS, HTTP, HTTPS, ICMP, NTP, SFTP, SMTP, SNMP, SSH, TCP/IP, UDP/IP
Output power		Default settings	Link speed and duplex level = autodetected IP address = 192.168.254.250 Subnet mask = 255.255.255.0 Gateway = 0.0.0.0 DHCP = off DNS: 127.0.0.1
SA models	25 watts (rms) per channel, 8 ohms, 1 kHz, 0.1% THD	Serial control	
	50 watts per channel, 4 ohms, 1 kHz, 0.1% THD	Quantity/type	1 bidirectional RS-232, RS-422, RS-485 (port 1) 2 bidirectional RS-232 (ports 2 and 3)
MA models	100 watts (rms) @ 70 V, 1 kHz, 0.1% THD	Digital I/O control	
Protection	Clip limiting, thermal, short circuit, DC output	Quantity/type	4 digital input/output (configurable)
Frequency response		Digital inputs	
SA models	20 Hz to 20 kHz, +1/-3 dB @ 1 watt	Input voltage range	0 to 24 VDC, clamped at +30 VDC
MA models	80 Hz to 20 kHz, +1/-3 dB @ 1 watt	IR/serial control	
THD + Noise	<0.1%, 1 kHz, 3 dB below clipping	Quantity/type	2 programmable: unidirectional RS-232 ( $\pm 5$ V), or TTL level (0 to 5 V) infrared (carrier and non-carrier) up to 300 kHz
S/N	>90 dB, 20 Hz to 20 kHz, unweighted	Relay control	
CONTROL/REMOTE – SWITCHER		Quantity/type	4 normally open relays
Serial control port	1 bidirectional RS-232, 3.5 mm captive screw connector, 3 pole (rear panel)	Relay control contact rating	24 VDC, 1 A
USB control port	1 front panel female USB mini-B		
USB standards	USB 2.0, low speed		
Ethernet control port	1 female RJ-45 connector		
Ethernet data rate	10/100Base-T, half/full duplex with autodetect		
Ethernet protocol	DHCP, DNS, HTTP, HTTPS, ICMP, NTP, SFTP, SMTP, SNMP, SSH, TCP/IP, UDP/IP, ARP, Telnet		
Ethernet default settings	Link speed and duplex level = autodetected IP address = 192.168.254.254 Subnet mask = 255.255.0.0 Default gateway = 0.0.0.0 DHCP = off		
CONTROL/REMOTE			
External device (pass-through, unidirectional or bidirectional) (RS-232/IR over TP)			
Serial control pass-through ports			
DTP CrossPoint 84 input/TP Tx	RS-232 via (2) 3.5 mm, 5 pole captive screw connectors (shared with IR ports)	Power supply	Internal Input: 100-240 VAC, 50-60 Hz
DTP CrossPoint 84 output/TP Rx	RS-232 via (2) 3.5 mm, 5 pole captive screw connectors (shared with IR ports)	Remote power capability	Supports up to four endpoints (two DTP Tx, two DTP Rx) (remote power not available in XTP and HDBaseT modes)
Baud rates	300 to 115200 baud	Regulatory compliance	
IR pass-through control ports	TTL level (0 to 5 V) modulated infrared control from 30 kHz up to 60 kHz	Safety	CE, c-UL, UL
DTP CrossPoint 84 input/TP Tx	(2) 3.5 mm captive screw connectors, 5 pole (shared with RS-232 ports)	EMI/EMC	CE, C-tick, FCC Class A, ICES, VCCI
DTP CrossPoint 84 output/TP Rx	(2) 3.5 mm captive screw connectors, 5 pole (shared with RS-232 ports)	Environmental	Complies with the appropriate requirements of RoHS, WEEE.
		Model	Version Description
		DTP CrossPoint 84	Preamp Output, w/o Amplifier and Control Processor
		DTP CrossPoint 84 IPCP SA	2 x 50 Watt Stereo Power Amplifier
		DTP CrossPoint 84 IPCP SA	2 x 50 Watt Stereo Power Amplifier, LinkLicense
		DTP CrossPoint 84 IPCP MA 70	100 Watt 70V Mono Power Amplifier
		DTP CrossPoint 84 IPCP MA 70	100 Watt 70V Mono Power Amplifier, LinkLicense
			Part number
			60-1368-01
			60-1368-12
			60-1368-12A
			60-1368-13
			60-1368-13A

For complete specifications, please go to [www.extron.com](http://www.extron.com)  
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