XTP CrossPoint Systems
DIGITAL AV SWITCHING AND DISTRIBUTION

Flexible, reliable systems that support
digital/analog switching and management
of local and remote AV devices

- Fully digital signal routing with conversion of analog signals
- I/O sizes from 4x4 up to 32x32
- Supports transmission of video, audio, bidirectional RS-232 and IR, Ethernet, and power up to 330 feet (100 m) over a single CAT 5-type cable
- HDCP compliant and HDMI 1.3 compatible
- Wide variety of input and output boards and transmitters and receivers
- SpeedSwitch™ Technology

Extron Electronics
INTERFACING, SWITCHING AND CONTROL
The Extron XTP CrossPoint™ is a flexible, reliable signal switching and distribution system that provides a completely integrated solution for multiple digital and analog formats. XTP CrossPoint matrix switchers support local connectivity as well as extended transmission capability for sending high resolution video, audio, RS-232, Ethernet, and power up to 330 feet (100 m) over a single CAT 5-type cable. These modular systems are expandable, from 4x4 up to 16x16 or 32x32, and can be populated with input and output boards for long distance transmission when paired with XTP transmitters and receivers. I/O boards are also available for direct HDMI, DVI, VGA, video, and audio connections to support local sources and displays.

The XTP CrossPoint is HDCP compliant and delivers ultra-fast, highly reliable digital switching with Extron exclusive SpeedSwitch™ technology. Featuring advanced 24/7 system monitoring and hot-swappable modular components, the XTP CrossPoint is built for continuous, trouble-free operation in the most critical applications.

High Performance Matrix Switching
The XTP CrossPoint is designed to deliver consistently reliable switching with high resolution HDMI and DVI signals. Extron-exclusive technologies, including SpeedSwitch™, Key Minder®, and EDID Minder® manage HDCP key authentication and EDID communication between sources and displays, ensuring that HDMI and DVI signal switches are always quick and dependable. The XTP CrossPoint also accepts and digitizes a variety of analog video formats.

The XTP CrossPoint 1600 is configurable from 4x4 to 16x16, while the XTP CrossPoint 3200 supports from 4x4 up to 32x32. The modular design of the XTP CrossPoint allows the system to be configured with a wide variety of input and output boards to customize the system to the needs of the application. The high data-rate digital backplane designed into the matrix switcher ensures full compatibility with the highest resolution signals currently in use, while also providing a future-ready upgrade path for new formats with higher resolutions.

Input and Output Board Options
A family of four-input boards are available for the XTP CrossPoint, including the XTP CP input board for receiving video, audio, RS-232 and IR control, and Ethernet over a CAT 5-type cable from remote XTP transmitters, as well as XTP CP input boards for connecting local HDMI, DVI, or analog VGA sources. The VGA input board features universal analog video inputs that can automatically detect incoming RGBHV, HD component video, S-video, and composite video signals. These signals are converted to digital, and Extron-exclusive SD Pro processing deinterlaces 480i and 576i signals for compatibility with HDMI and DVI-equipped displays, without the need for additional scalers. The HDMI, DVI, and VGA input boards include analog stereo audio inputs. Select input boards provide downmixing for HDMI multichannel audio.

Several output boards are available, including the XTP CP output board for transmitting signals over a CAT 5 cable to remote XTP receivers, and XTP CP output boards for local HDMI, DVI, and analog audio output connections to displays and sound systems.

XTP Transmitters and Receivers
The XTP CrossPoint System includes a family of long distance XTP transmitters and receivers for sending or receiving video, audio, RS-232 and IR control, Ethernet, and power up to 330 feet (100 m) from the XTP CrossPoint matrix switcher over a single CAT 5 cable. XTP transmitters are available in desktop or Decora® wallplate models and accept HDMI, analog VGA, or standard definition video. As with the VGA input board, incoming analog video is converted to digital, and for select XTP transmitters, SD Pro processing deinterlaces 480i and 576i video to ensure compatibility with HDMI and DVI display inputs. Some XTP transmitters accept multiple inputs and feature automatic input switching.

Two desktop XTP receivers are available, both with HDMI outputs. They include HDMI audio de-embedding to provide digital S/PDIF and analog stereo audio outputs. One of the models also features integrated video scaling, so that all incoming video signals can be optimized to a common output rate for the display.

In a fully integrated XTP CrossPoint System with XTP transmitters and receivers, an overall transmission distance of 660 feet (200 m) is possible between two remote endpoints.
Enhance AV Device Control with RS-232 and IR Insertion

The XTP CrossPoint matrix switcher can be controlled via RS-232, Ethernet, and the USB port on the front panel. With the capability to transmit control signals over the same CAT 5 cabling for AV, XTP CrossPoint provides considerable flexibility to control the entire system. Bidirectional RS-232 signals can be inserted from a control system into the Ethernet control port of the XTP CrossPoint, enabling RS-232 control of devices attached to XTP transmitters and receivers.

Direct bidirectional RS-232 and IR insertion ports are included on all of the XTP transmitters and receivers. They are also on the XTP CP input and output boards. These insertion ports allow, for example, a control system to insert IR signals into an XTP CP input board, which are then communicated back to an XTP transmitter for controlling a Blu-ray Disc player. Similarly, the same control system can also insert RS-232 signals into an XTP CP output board for relaying to an XTP receiver interfaced with a display device.

All of this flexible system control capability is available using the same CAT 5 cable to send control signals alongside video, audio, Ethernet, and power. The end result is a simplified wiring infrastructure that reduces costs and labor.

Extend Ethernet to Expand Network Access and AV Control

An Ethernet port accompanies each XTP RJ-45 port on an XTP transmitter or receiver, and the XTP CP input and output boards. These ports can be used to extend Ethernet access from the XTP CrossPoint to remote endpoints over the same CAT 5 cable, without the need to provide additional network drops or IP addresses. For example, Blu-ray Disc players at the source endpoints can receive Internet access from the house LAN that is interfaced into the Ethernet ports of an XTP CP input board. A separate LAN for the control system can be used to control remote displays via the Ethernet ports on the XTP CP output boards.

The Ethernet ports on the XTP CP input and output boards can also be connected into a shared house LAN for both system control and network access. This also allows control system devices to be situated at remote endpoints. The capability to extend Ethernet to remote endpoints provides substantial flexibility to set LAN access in accordance with end user requirements and IT policy.

Integration Convenience Features

The XTP CrossPoint System includes numerous integrator-friendly features to simplify system configuration and operation, including the many features common to Extron matrix switchers such as I/O memory presets and the QS-FPC™ - QuickSwitch Front Panel Controller with tri-color backlit buttons. XTP transmitters and receivers can be powered over the CAT 5 cabling by the XTP CrossPoint matrix switcher, speeding up installation at remote endpoints by eliminating the need to provide AC power.

The XTP CrossPoint System also provides extensive audio management features, integrating analog stereo audio alongside digital HDMI audio. Extensive signal routing and management options are available, including HDMI audio embedding and de-embedding, audio breakaway, and down mixing multi-channel formats.

The XTP CrossPoint includes convenient, user-friendly control software, for configuring, operating, and monitoring the system. The software provides a complete view of the matrix switcher and remote XTP transmitters and receivers, and facilitates control and real-time status monitoring of all XTP devices on a PC desktop. With the software, EDID communication can easily be managed for all devices.

Designed for Continuous Reliability

The XTP CrossPoint System is designed for optimum performance and 24/7 reliability. A real-time monitoring system continuously provides self-diagnostics of the XTP CP input and output boards, XTP links, power supplies, internal fans, and general functions of the system. Each XTP CP input and output board is hot-swappable so that the matrix switcher can be serviced or reconfigured without powering down the unit. XTP CrossPoint also features available dual redundant supplies to ensure continuous, uninterrupted power.
I/O sizes from 4x4 up to 32x32
The XTP CrossPoint 1600 can be configured up to 16x16, and the XTP CrossPoint 3200 can be sized up to 32x32. Both matrix switchers can be populated with input and output boards to create customized system configurations starting from 4x4, with available I/O sizes in four-input and four-output increments.

Supports transmission of video, audio, bidirectional RS-232 and IR, Ethernet, and remote power over a single CAT 5-type cable
The XTP CrossPoint System provides high reliability and maximum performance on an economical and easily installed cable infrastructure.

Extends 1080p/60 Deep Color and 1920x1200 signals up to 330 feet (100 meters)
The XTP CrossPoint System supports digital signal transmission up to 330 feet over a single twisted pair cable and maintains superior image quality at the highest resolutions.

High data-rate digital backplane
The XTP CrossPoint System is designed to support the highest resolution HDMI and DVI signals currently in use, and is future-ready for emerging digital formats and applications requiring even higher signal resolutions.

Compatible with all XTP integrated system products
The XTP CrossPoint matrix switchers are compatible with all available XTP CP input and output boards for local AV devices, plus XTP transmitters and receivers for integrating sources and displays at remote endpoints.

Fully digital signal routing
Incoming analog signals are digitized so that a reliable, high quality digital video signal is sent to the output destination.

SD Pro processing
Baseband 480i and 576i input video is deinterlaced to ensure compatibility with HDMI and DVI-equipped display devices, without the need for scalers.

Wide selection of input and output boards
A family of XTP CP input and output boards provide integration for a variety of signal types and formats, enabling system customization for the specific application.

RS-232 control via Ethernet insertion
RS-232 control signals can be inserted, via Ethernet from a control system, into the Ethernet control port of the XTP CrossPoint matrix switchers. These signals can then be transmitted to remote endpoints to allow total system control without additional cabling.

Bidirectional RS-232 and IR insertion for AV device control
Control signals can be inserted into RS-232 and IR ports of the XTP CP input and output boards, and the XTP transmitters and receivers. Inserting RS-232 and IR control signals into the XTP CrossPoint allows a control system to interface with devices at remote endpoints via the matrix switcher.

Remote power to XTP transmitters and receivers
The XTP CrossPoint matrix switcher can power remote XTP transmitters and receivers over the same CAT 5 cable for sending AV signals. This avoids the need to separately power XTP devices at remote endpoints.
HDCP compliant
The entire XTP CrossPoint System is HDCP-compliant, including the matrix switcher and remote endpoints.

SpeedSwitch™ Technology
The XTP CrossPoint System delivers exceptional switching speed for HDCP-encrypted content.

EDID Minder®
Automatically manages EDID communication between all connected input sources. EDID Minder offers the ability to select from pre-stored settings, or choose from user-stored settings and apply to any or all inputs. EDID Minder ensures that all sources power up properly and reliably output content to the displays.

Key Minder®
Authenticates and maintains continuous HDCP encryption between input and output devices to ensure quick and reliable switching in professional AV environments, while enabling simultaneous distribution of a single source signal to one or more displays.

Modular, field-upgradeable and hot-swappable design
The XTP CrossPoint matrix switchers provide substantial flexibility, expandability, and affordability by allowing users to select the configuration required for a system. Additional input and output boards may be added at any time for quick and easy upgradeability or expansion. Hot-swappable components allow the user to replace an input or output board at any time without the need to power down the switcher. This is especially useful for mission-critical applications that require continuous system operation.

Audio breakaway
Provides the capability to separate audio signals from their corresponding video signals within the matrix switcher, including HDMI embedded audio. This allows the audio and video signals from one source to be switched to different destinations.

Ethernet extension
Ethernet access can be extended to remote endpoints over the same CAT 5 cable used for AV transmission, avoiding the need to provide additional network drops or switches. This provides convenient Internet access for remote devices as well as integration into Ethernet-based control systems.

HDMI 1.3 compatible
Supports HDMI 1.3 specification features, including data rates up to 6.75 Gbps, Deep Color up to 12-bit, 3D formats, Lip Sync, and HD lossless audio formats.

Active signal and HDCP verification
The XTP CrossPoint System provides real-time verification of signal presence and HDCP status for each input and output on the matrix switcher, as well as on the XTP transmitters and receivers. This allows for simple, quick and easy signal and HDCP verification through RS-232/RS-422 or Ethernet, providing valuable feedback to a system operator or helpdesk support staff.

HDCP Visual Confirmation
A full-screen green signal is transmitted when HDCP-encrypted content is routed to a non-HDCP compliant display, providing immediate visual confirmation that protected content cannot be viewed on the selected display.

Automatic color bit depth management
The matrix switcher automatically adjusts color bit depth based on the display EDID, preventing color compatibility conflicts between source and display.

Automatic cable equalization
Automatic cable equalization is provided for each HDMI or DVI input to 100 feet (30 meters) at 1920x1200/8-bit color when used with Extron HDMI or DVI Pro cables.

Automatic output reclocking
Reshapes and restores timing of signals at each HDMI or DVI output, enabling transmission over long cables.

Ethernet monitoring and control
Engineered to meet the needs of professional AV environments, Ethernet control provides proactive monitoring and system management over a LAN, WAN, or the Internet, using standard TCP/IP protocols. Ethernet control provides for remote selection of input and output ties, adjustment and control of audio input and output levels, and advanced system diagnostics.

Redundant power supply
The XTP CrossPoint 3200 includes a redundant power supply for continuous, mission-critical applications where power reliability is crucial. An optional version of the XTP CrossPoint 1600 features a redundant power supply.

Global presets
Frequently used I/O configurations may be saved and recalled either from the front panel, serial, USB, or Ethernet control. This time-saving feature allows I/O configurations to be set up and stored in memory for future use.

Rooming
The XTP CrossPoint matrix switcher can be configured to group selected outputs into specific “rooms,” each with its own set of unique presets. A total of 10 rooms, with 10 presets per room, are available.

Advanced computer-aided diagnostics
Provide 24-hour self-diagnostics of input/output boards, primary and redundant power supply voltages, XTP links, and overall functional status of the matrix. Using the Ethernet or RS-232/RS-422 communications port, status monitoring is possible for off-site or unmanned locations, such as government, military, medical, or any other sensitive, 24 hour a day, 7 day a week environments.

Front panel security lockout
Prevents unauthorized use in non-secure environments. In lockout mode, a special button combination is required to operate the switcher from the front panel controller.
Overview

Completely integrated solution for digital and analog video
The XTP CrossPoint features fully digital signal routing with digital conversion of analog signals.

Configurable from 4x4 to 32x32
The XTP CrossPoint modular matrix switchers can be appropriately sized to application requirements while allowing for future expansion.

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

Audio / video routing options
AV signals can be routed together or independently, including embedded HDMI audio signals.

Advanced system monitoring
Provides continuous self-diagnostics of the matrix switcher and its essential components, including the primary and redundant power supplies.

USB configuration port
Provides convenient user access for setting up, operating, and monitoring the XTP CrossPoint System.

HDCP compliant and HDMI 1.3 compatible
The entire XTP CrossPoint System is HDCP-compliant, and supports data rates up to 6.75 Gbps, Deep Color, Lip Sync, and HD lossless audio formats.

RS-232 and IR insertion
Bidirectional control signals can be inserted to control devices at remote endpoints.

Audio signal routing and management
The XTP CrossPoint System integrates analog audio alongside digital HDMI audio, with extensive signal routing and management options.

RS-232 insertion for system control
The entire XTP CrossPoint System, including the matrix switcher and devices at remote endpoints, can be controlled via RS-232 commands inserted into the Ethernet control port.

Variety of input and output board options
XTP I/O boards connect to remotely located XTP transmitters and receivers, while HDMI, DVI, VGA, video, and audio boards support local connections.

Supports long distance transmission of AV, bidirectional RS-232 and IR, Ethernet, and power over a single CAT 5 cable
The XTP CrossPoint System delivers digital signal transmission up to 330 feet (100 meters), including 1080p/60 and 1920x1200 video.

Remote powering
The XTP CrossPoint can power remote XTP transmitters and receivers over the same CAT 5 cable for AV.

Ethernet extension
Ethernet can be extended to remote endpoints for network access or system control.

High data-rate digital backplane
Supports the highest resolution HDMI and DVI signals currently in use, and is ready for future formats with higher resolutions.
The Extron XTP CrossPoint matrix switchers are the heart of the XTP CrossPoint System. They are modular and expandable from 4x4 up to 16x16 or 32x32, and can be populated with input and output boards for long distance transmission over a single CAT 5-type cable when paired with XTP transmitters and receivers. I/O boards are also available for direct HDMI, DVI, VGA, video, and audio connections to support local sources and displays. XTP CrossPoint matrix switchers deliver robust system reliability with ultra-fast digital video switching, advanced 24/7 system monitoring, and hot-swappable modular components.

**XTP CrossPoint 1600 Series**
Modular Digital Matrix Switchers from 4x4 to 16x16

**Features**
- Available in I/O sizes from 4x4 to 16x16
- Compatible with all XTP integrated system products
- Fully digital signal routing
- Wide selection of input and output boards
- RS-232 insertion from the Ethernet control port
- Remote power to XTP transmitters and receivers
- HDMI 1.3 compatible
- HDCP compliant
- SpeedSwitch™ Technology provides exceptional switching speed for HDCP-encrypted content
- SD Pro processing
- EDID Minder®
- Key Minder®
- Audio breakaway
- Ethernet extension
- Ethernet monitoring and control

**Model** | **Version Description** | **Part Number**
--- | --- | ---
XTP CrossPoint 1600 Frame | 5U, 8-slot Frame | 60-1250-01
XTP CrossPoint 1600 Frame | 5U, 8-slot Frame w/redundant power | 60-1250-11

**XTP CrossPoint 3200 Series**
Modular Digital Matrix Switchers from 4x4 to 32x32

**Features**
- Available in I/O sizes from 4x4 to 32x32
- Compatible with all XTP integrated system products
- Fully digital signal routing
- Wide selection of input and output boards
- RS-232 insertion from the Ethernet control port
- Remote power to XTP transmitters and receivers
- HDMI 1.3 compatible
- HDCP compliant
- SpeedSwitch™ Technology provides exceptional switching speed for HDCP-encrypted content
- SD Pro processing
- EDID Minder®
- Key Minder®
- Audio breakaway
- Ethernet extension
- Ethernet monitoring and control
- Redundant power supply

**Model** | **Version Description** | **Part Number**
--- | --- | ---
XTP CrossPoint 3200 Frame | 7U, 16-slot Frame | 60-1167-01
The Extron XTP CP I/O Boards enable long distance signal transmission between XTP CrossPoint matrix switchers and XTP transmitters and receivers for sending high resolution video, audio, RS-232, and Ethernet up to 330 feet (100 m) over a single CAT 5-type cable. They also support direct HDMI, DVI, VGA, video, and audio connections to local sources and displays. XTP CP I/O Boards can be mixed and matched to meet system application requirements for supporting sources and displays in local and remote locations, and integrating various digital and analog video formats into a single integrated system.

**XTP CP I/O Boards**

**XTP Transmitter and Receiver Boards with IR/RS-232 Insertion**

**Features**
- Supports 1080p/60 Deep Color and 1920x1200 signals
- Bidirectional RS-232 and IR insertion for AV device control
- HDCP compliant
- **SpeedSwitch™** Technology provides exceptional switching speed for HDCP-encrypted content
- EDID Minder®
- Key Minder®
- Ethernet extension
- Remote power to XTP transmitters and receivers
- XTP CP 4i DMA provides multi-channel audio downmixing

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<th>Model</th>
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<td>XTP CP 4o</td>
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**XTP CP HDMI I/O Boards**

**HDMI Input and Output Boards with Analog Stereo Audio**

**Features**
- Supports 1080p/60 Deep Color and 1920x1200 signals
- HDCP compliant
- **SpeedSwitch™** Technology provides exceptional switching speed for HDCP-encrypted content
- EDID Minder®
- Key Minder®
- Output volume control
- Automatic cable equalization
- Automatic output reclocking
- Provides +5 VDC, 250 mA power on HDMI outputs for external peripheral devices
- XTP CP 4i HDMI DMA provides multi-channel audio downmixing

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**XTP CP DVI Pro I/O Boards**
HDCP-Compliant DVI Input and Output Boards with Analog Stereo Audio

**Features**
- Supports 1080p/60 Deep Color and 1920x1200 signals
- HDCP compliant
- SpeedSwitch™ Technology provides exceptional switching speed for HDCP-encrypted content
- EDID Minder®, Key Minder®, Output volume control
- Automatic cable equalization
- Automatic output reclocking
- Provides +5 VDC, 250 mA power on DVI outputs for external peripheral devices

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<td>XTP CP 4o DVI Pro</td>
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**XTP CP 4i VGA Board**
Universal Input Board with Analog Stereo Audio

**Features**
- Accepts RGBHV, HD component video, S-video, and composite video
- Supports 1920x1200 and 1080p/60 signals
- Automatic input format detection
- Analog-to-digital signal conversion
- SD Pro processing
- EDID Minder®, Local analog stereo audio inputs

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**XTP CP 4o SA Board**
Analog Stereo Audio Board

**Features**
- Balanced or unbalanced audio outputs
- Audio output volume adjustment and muting

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Extron XTP transmitters and receivers are used to interface with remote sources and displays via long distance transmission of AV and control signals as well as Ethernet over a single CAT 5-type cable. XTP transmitters and receivers are fully compatible with XTP CrossPoint matrix switchers as part of a fully integrated switching and distribution system for local and remote sources and displays. They support HDMI, DVI, analog RGB, HD component video, and standard definition video. Select XTP transmitters feature automatic multi-input switching to streamline integration of multiple remote sources into the XTP CrossPoint System.

**XTP T HDMI**
Long Distance XTP Transmitter for HDMI

**Features**
- Transmits video, audio, bidirectional RS-232 and IR, and Ethernet up to 330 feet (100 m) over a single CAT 5-type cable
- Supports 1080p/60 Deep Color and 1920x1200 signals
- Bidirectional RS-232 and IR insertion for AV device control
- HDMI loop-through with selectable audio control
- HDMI 1.3 compatible
- HDCP compliant
- EDID Minder®
- Key Minder®
- Ethernet extension
- Remote power capabilities
- Selectable analog stereo audio input embedding

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**XTP R HDMI**
Long Distance XTP Receiver for HDMI

**Features**
- Receives video, audio, bidirectional RS-232 and IR, and Ethernet up to 330 feet (100 m) over a single CAT 5-type cable
- Supports 1080p/60 Deep Color and 1920x1200 signals
- Bidirectional RS-232 and IR insertion for AV device control
- HDMI 1.3 compatible
- HDCP compliant
- EDID Minder®
- Key Minder®
- HDMI audio de-embedding with analog stereo and digital S/PDIF audio outputs
- Ethernet extension
- Remote power capabilities

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XTP Transmitters and Receivers

XTP SR HDMI
Long Distance XTP Scaling Receiver

Features
- Receives video, audio, bidirectional RS-232 and IR, and Ethernet up to 330 feet (100 m) over a single CAT 5-type cable
- Scales HDMI, DVI, RGB, HD component video, and standard definition video received from XTP devices
- Selectable output rates from 640x480 to 1920x1200, including HDTV 1080p/60
- HDCP compliant
- EDID Minder®
- Key Minder®
- Ethernet extension
- Remote power capabilities

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XTP T VGA
Long Distance Universal XTP Transmitter for VGA

Features
- Transmits digitized analog video, audio, bidirectional RS-232 and IR, and Ethernet up to 330 feet (100 m) over a single CAT 5-type cable
- Supports RGB, HD component video, S-video, and composite video signals
- SD Pro processing
- Universal 15-pin HD input loop-through
- Bidirectional RS-232 and IR insertion for AV device control
- EDID Minder®
- Ethernet extension
- Remote power capabilities

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XTP T USW 103
Long Distance Three Input XTP Switcher with Integrated XTP Transmitter

Features
- Transmits HDMI or digitized analog video, audio, bidirectional RS-232 and IR, and Ethernet up to 330 feet (100 m) over a single CAT 5-type cable
- Auto-input switching
- Bidirectional RS-232 and IR insertion for AV device control
- HDCP compliant
- EDID Minder®
- Ethernet extension
- Remote power capabilities

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XTP Transmitters and Receivers

**XTP T UWP 202**
**Long Distance Two Input XTP Transmitter - Decora® Wallplate**

**Features**
- Transmits HDMI or digitized analog video, audio, and Ethernet up to 330 feet (100 m) over a single CAT 5-type cable
- HDMI and VGA inputs
- Auto-input switching
- HDMI 1.3 compatible
- HDCP compliant
- EDID Minder®
- Key Minder®
- Ethernet extension
- Remote power capabilities
- RS-232 control
- Selectable analog stereo audio input embedding

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<td>XTP T UWP 202</td>
<td>Two Input Decora XTP Transmitter-White</td>
<td>60-1216-13</td>
</tr>
</tbody>
</table>

**XTP T UWP 304**
**Long Distance Four Input XTP Transmitter - Decora® Wallplate**

**Features**
- Transmits HDMI or digitized multi-format analog video, audio, and Ethernet up to 330 feet (100 m) over a single CAT 5-type cable
- HDMI, VGA, and standard definition inputs
- SD Pro processing
- Auto-input switching
- HDMI 1.3 compatible
- HDCP compliant
- EDID Minder®
- Key Minder®
- Ethernet extension
- Remote power capabilities
- RS-232 control
- Selectable analog stereo audio input embedding

<table>
<thead>
<tr>
<th>Model</th>
<th>Version Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>XTP T UWP 304</td>
<td>Four Input Decora XTP Transmitter-Black</td>
<td>60-1222-12</td>
</tr>
<tr>
<td>XTP T UWP 304</td>
<td>Four Input Decora XTP Transmitter-White</td>
<td>60-1222-13</td>
</tr>
</tbody>
</table>
The XTP CrossPoint System includes convenient, user-friendly control software for configuring, operating, and monitoring the matrix switcher and remote XTP transmitters and receivers. Within a single window, the software provides a complete view of the XTP CrossPoint System, allowing a user to manage input and output ties, monitor real-time signal and HDCP status for local and remote endpoints, and verify EDID communication as well as the audio format for any signal path. The software also makes it easy to control remote XTP devices and manage power to them, and includes tools for configuring EDID communication, creating I/O presets, and backing up or restoring system settings.
The XTP CrossPoint System software makes it easy to manage EDID communication between displays and sources. It allows a user to examine the EDID automatically captured from displays connected to the XTP CrossPoint or XTP receivers, to determine a display’s native or optimal resolution, refresh rate, and color space, as well as audio format compatibility. The user can then assign this EDID to any local or remote input device connected to the XTP CrossPoint System. Alternatively, several pre-stored EDID settings are available based on various resolutions, refresh rates, and audio formats. All EDID management options are accessible within a single window of the XTP CrossPoint System software.
ETHERNET EXTENSION

The XTP CrossPoint System can extend Ethernet over the same CAT 5 cable used for transmitting AV, control signals, and power. This capability easily provides LAN access for remote endpoints via the XTP CrossPoint matrix switcher, without the need for dedicated network drops, additional Ethernet switches, or additional IP addresses. A house LAN and a separate AV control LAN can be connected into the XTP CrossPoint, enabling Internet access for source devices, and control of remote displays. A shared LAN can also be used to provide both Internet access and AV system control at remote endpoints, and also provides the flexibility to install touchpanels and other control devices anywhere in the system.
**XTP CROSSPOINT SYSTEM CONTROL VIA BIDIRECTIONAL RS-232 INSERTION**

The entire XTP CrossPoint System, including the matrix switcher, transmitters and receivers, and remote devices, can be operated from a single point of control. RS-232 signals delivered via Ethernet from a control system can be inserted into the XTP CrossPoint matrix switcher, which are then transmitted to remote endpoints. Using the same CAT 5-type cable for AV, control, Ethernet, and power streamlines and simplifies system installation.

**BIDIRECTIONAL RS-232 AND IR INSERTION**

The XTP CrossPoint System provides easy interfacing of control signals for devices at remote endpoints through bidirectional RS-232 and IR insertion ports on the matrix switcher I/O boards and transmitters and receivers. A control processor or other device can then directly insert RS-232 or IR commands into the matrix switcher. These commands are then sent out to the endpoints over the shared CAT 5-type cable, so that no additional cabling is required for system control.
REMOTE DEVICE POWERING

Remote XTP transmitters and receivers can receive DC power from an XTP CrossPoint matrix switcher over the shared CAT 5 cable. This simplifies installation of remote XTP devices, especially the wall-mount models, since external AC power is not necessary. The matrix switcher is capable of delivering power through about 50 percent of its I/O ports, and automatically monitors and manages power consumed by XTP devices. The control software provides a convenient GUI to view and configure remote power distribution. Additional powering for endpoints can be provided by an optional power inserter, which injects supplemental voltage into a CAT 5 line.

REMOTE POWER OF TRANSMITTERS

REMOTE POWER OF RECEIVERS
XTP CROSSPOINT SYSTEM

The XTP CrossPoint provides a completely integrated solution for multiple digital and analog formats. XTP CrossPoint matrix switchers support local connectivity as well as extended transmission capability for sending high resolution video, audio, RS-232, Ethernet, and power up to 330 feet (100 m) over a single CAT 5-type cable.

- Supports a wide range of video formats in a fully digital signal routing architecture with conversion of analog signals
- Two card cage matrix switchers available to support I/O sizes from 4x4 up to 16x16 or 32x32
- Supports transmission of video, audio, bidirectional RS-232 and IR, and Ethernet up to 330 feet (100 m) over a single CAT 5-type cable
- SpeedSwitch™ Technology provides exceptional switching speed for HDCP-encrypted content
- HDCP compliant and HDMI 1.3 compatible
- Wide variety of input and output boards and transmitters and receivers
- Insert RS-232 and IR control signals from a control system for remote device control
- Extend Ethernet to remote endpoints for convenient LAN access and AV system control
- Remotely power transmitters and receivers

Application Diagram
# Specifications

## VIDEO INPUT — XTP CP 4I, XTP CP 4I DMA

<table>
<thead>
<tr>
<th>Number/signal type</th>
<th>4 sets of proprietary twisted pair AV signals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connectors</td>
<td>4 female RJ-45 per board</td>
</tr>
<tr>
<td>NOTE:</td>
<td>Input comes from an Extron XTP Series twisted pair transmitter.</td>
</tr>
</tbody>
</table>

## VIDEO OUTPUT — XTP CP 40

<table>
<thead>
<tr>
<th>Number/signal type</th>
<th>4 sets of proprietary twisted pair AV signals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connectors</td>
<td>4 female RJ-45 per board</td>
</tr>
<tr>
<td>NOTE:</td>
<td>Output connects to an Extron XTP Series twisted pair receiver.</td>
</tr>
</tbody>
</table>

## VIDEO — XTP CP 4I VGA

<table>
<thead>
<tr>
<th>Gain</th>
<th>Unity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth</td>
<td>300 MHz (-3 dB), fully loaded</td>
</tr>
<tr>
<td>CROSSTALK</td>
<td>-88 dB @ 1 MHz, -55 dB @ 10 MHz, -45 dB @ 30 MHz, -37 dB @ 100 MHz</td>
</tr>
<tr>
<td>Switching speed</td>
<td>200 ns (max.)</td>
</tr>
</tbody>
</table>

## VIDEO INPUT — XTP CP 4I VGA

<table>
<thead>
<tr>
<th>Number/signal type</th>
<th>4 analog VGA-DIGA RGBHV, RGBs, RGBa, RGBsB, HDTV, component video, S-video, composite video</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connectors</td>
<td>4 female 15-pin HD</td>
</tr>
<tr>
<td>Nominal level</td>
<td>1 Vp-p for Y of component video and S-video, and for composite video</td>
</tr>
<tr>
<td>Minimum/maximum levels</td>
<td>Analog: 0.5 V to 2.0 Vp-p with no offset</td>
</tr>
<tr>
<td>Impedance</td>
<td>75 ohms</td>
</tr>
<tr>
<td>Return loss</td>
<td>&lt;30 dB @ 5 MHz</td>
</tr>
<tr>
<td>DC offset (max. allowable)</td>
<td>1.5 V</td>
</tr>
</tbody>
</table>

## VIDEO PROCESSING — XTP CP 4I VGA

<table>
<thead>
<tr>
<th>Decoder</th>
<th>8 bit digital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital sampling</td>
<td>30 bit, 10 bits per color; 162 Hz standard</td>
</tr>
<tr>
<td>Colors</td>
<td>1 billion</td>
</tr>
</tbody>
</table>

## SYNC — XTP CP 4I VGA

<table>
<thead>
<tr>
<th>Input type</th>
<th>RGBHV, RGBs, RGBa, RGBsB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input level</td>
<td>0.5 V to 5.0 Vp-p, 4.0 Vp-p normal</td>
</tr>
<tr>
<td>Input impedance</td>
<td>510 ohms</td>
</tr>
<tr>
<td>Horizontal frequency</td>
<td>15 kHz to 150 kHz</td>
</tr>
<tr>
<td>Vertical frequency</td>
<td>30 Hz to 150 Hz</td>
</tr>
<tr>
<td>Max. propagation delay</td>
<td>30 ns</td>
</tr>
<tr>
<td>Max. rise/fall time</td>
<td>4 ns</td>
</tr>
<tr>
<td>Polarity</td>
<td>Positive or negative</td>
</tr>
</tbody>
</table>

## VIDEO — XTP CP 4I DVI PRO, XTP CP 4O DVI PRO

| NOTE: *Appropriate DVI-D to HDMI cables or adapters are required for HDMI signal input/output. |
| Gain               | Unity                                        |
| Resolution range   | Up to 1080p (HDTV) or 1920x1200 (the highest resolution of the single link DVI standard) @ 60 Hz |
| Signal type        | Single-link HDMI (or DVI-D)* |
| Digital video      | RGB digital video (DVI and HDMI standards) or Y, Cr, Cb digital component video (HDMI), actively buffered (supports all single-link DVI (if using an optional adapter) and HDMI standards from 640x480 @ 60 Hz to 1920x1200 @ 60 Hz) |
| Consumer Electronics Control (CEC) | Not supported |
| EDID and DDC       | Supports Extended Display Identification Data (EDID) and Display Data Channel (DDC) data using DVI and HDMI standards. EDID and DDC signals are actively buffered. |
| HDCP               | Compliant with High-bandwidth Digital Content Protection (HDCP) using DVI and HDMI 1.3 standards |
| HPD                | Supports hot plug detection (HPD) of display as a pass-through signal. |
| Maximum data rate  | 6.75 Gbps (2.25 Gbps per color)              |
| Maximum pixel clock | 165 MHz                                      |
| Standards          | DVI 1.0, HDMI 1.3, HDCP 1.1                  |
| Switching speed    | 200 ns, max.                                |

## VIDEO INPUT — XTP CP 4I DVI PRO

| Number/signal type | 4 digital RGB single-link DVI-D (or HDMI*) |
| Connectors         | 4 female DVI-1 (digital only)              |
| Re-clocking        | Automatic                                  |
| Peripheral device power | 5 VDC, 250 mA per output                   |

## VIDEO — XTP CP 4I HDMI, XTP CP 4I HDMI DMA, XTP CP 4O HDMI

| NOTE: *Appropriate HDMI to DVI-D cables or adapters are required for DVI signal input/output. |
| Gain               | Unity                                        |
| Resolution range   | Up to 1080p (HDTV) or 1920x1200 (the highest resolution of the single link DVI standard) @ 60 Hz |
| Signal type        | Single-link HDMI (or DVI-D*) |
| Digital video      | RGB digital video (DVI and HDMI standards) or Y, Cr, Cb digital component video (HDMI), actively buffered (supports all single-link DVI (if using an optional adapter) and HDMI standards from 640x480 @ 60 Hz to 1920x1200 @ 60 Hz) |
| Consumer Electronics Control (CEC) | Not supported |
| EDID and DDC       | Supports Extended Display Identification Data (EDID) and Display Data Channel (DDC) data using DVI and HDMI standards. EDID and DDC signals are actively buffered. |
| HDCP               | Compliant with High-bandwidth Digital Content Protection (HDCP) using DVI and HDMI 1.3 standards |
| HPD                | Supports hot plug detection (HPD) of display as a pass-through signal. |
| Maximum data rate  | 6.75 Gbps (2.25 Gbps per color)              |
| Maximum pixel clock | 165 MHz                                      |
| Standards          | DVI 1.0, HDMI 1.3, HDCP 1.1                  |
| Switching speed    | 200 ns, max.                                |

## VIDEO OUTPUT — XTP CP 4O HDMI

| Number/signal type | 4 digital RGB single-link HDMI (or DVI-D*) |
| Connectors         | 4 female HDMI type A                       |
| Re-clocking        | Automatic                                  |

## EDID and DDC

Supports Extended Display Identification Data (EDID) and Display Data Channel (DDC) data using DVI and HDMI standards. EDID and DDC signals are actively buffered.

## HDCP

Compliant with High-bandwidth Digital Content Protection (HDCP) using DVI and HDMI 1.3 standards

## HPD

Supports hot plug detection (HPD) of display as a pass-through signal.

## Maximum data rate

6.75 Gbps (2.25 Gbps per color)

## Maximum pixel clock

165 MHz

## Standards

DVI 1.0, HDMI 1.3, HDCP 1.1

## Switching speed

200 ns, max.
### Specifications

#### Peripheral device power
5 VDC, 250 mA per output

#### AUDIO INPUT — XTP CP 4I DMA, XTP CP 4I HDMI DMA

<table>
<thead>
<tr>
<th>Source formats</th>
<th>PCM, Dolby Digital 2/0, Dolby Digital 2/0 Surround, Dolby Digital 5.1, Dolby Digital EX, DTS Digital Surround 5.1, DTS-ES Matrix 6.1, DTS-ES Discrete 6.1</th>
</tr>
</thead>
</table>

#### AUDIO — XTP CP 4I VGA, XTP CP 4O SA

<table>
<thead>
<tr>
<th>Gain</th>
<th>Unbalanced output: -6 dB, balanced output 0 dB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency response</td>
<td>20 Hz to 20 kHz, ±0.05 dB</td>
</tr>
<tr>
<td>THD + Noise</td>
<td>0.003% @ 1 kHz nominal level</td>
</tr>
<tr>
<td>S/N</td>
<td>&gt;-90 dB @ maximum output (21 dBu, unweighted)</td>
</tr>
<tr>
<td>Cross talk</td>
<td>&lt; -80 dB @ 1 kHz, fully loaded</td>
</tr>
<tr>
<td>Stereo channel separation</td>
<td>&gt; 80 dB @ 1 kHz</td>
</tr>
<tr>
<td>CMRR</td>
<td>&gt; 75 dB @ 20 Hz to 20 kHz</td>
</tr>
</tbody>
</table>

#### AUDIO INPUT — XTP CP 4I VGA

| Number/signal type     | 4 stereo, balanced/unbalanced                   |
| Connectors             | (4) 3.5 mm captive screw connector, 5 pole      |
| Impedance              | >10k ohms unbalanced/unbalanced, DC coupled    |
| Nominal level          | 0 dB (0.775 Vrms)                               |
| Maximum level          | >19.5 dB, balanced or unbalanced at 1% THD+N  |
| Input gain adjustment  | -18 dB to +18 dB, adjustable per input, default = 0 dB |
| NOTE:                 | Attenuation = volume number minus 64. The default is 0 dB = volume number 64. |

#### AUDIO OUTPUT — XTP CP 4O 4A SA

| Number/signal type     | 4 stereo, balanced/unbalanced                   |
| Connectors             | (4) 3.5 mm captive screw connector, 5 pole      |
| Impedance              | 50 ohms unbalanced, 100 ohms balanced          |
| Gain error             | ±0.1 dB channel to channel                     |
| Maximum level          | >21 dBu, balanced or unbalanced at 0.1% THD+N  |
| Maximum level (600 ohm)| >15 dBm, balanced or unbalanced at 0.1% THD+N  |
| Volume control range   | -98 dB to 0 dB (volume numbers 0 through 64) in a 35 dB increment from step 0 to step 1, then in 1 dB increments from steps 1 to 64, default = 64 (0 dB) |
| NOTE:                 | Attenuation = volume number minus 64. The default is 0 dB = volume number 64. |

#### AUDIO — XTP CP 4I DVI Pro, XTP CP 4o DVI Pro, XTP CP 4I HDMI, XTP CP 4o HDMI

| Gain                  | Unbalanced output: -6 dB, balanced output 0 dB |
| Frequency response    | 20 Hz to 20 kHz, ±0.05 dB                       |
| THD + Noise           | 0.01% @ 1 kHz nominal level                    |
| S/N                   | >-105 dB at maximum output (21 dBu, unweighted) |
| Cross talk            | < -89 dB @ 1 kHz, fully loaded                  |
| Stereo channel separation | > 105 dB @ 1 kHz                          |
| CMRR                  | > 83 dB @ 20 Hz to 20 kHz                      |

#### AUDIO INPUT — XTP CP 4I DVI Pro, XTP CP 4I HDMI

| Connectors             | (4) 3.5 mm captive screw connector, 5 pole      |
| Impedance              | >10k ohms unbalanced/unbalanced, DC coupled    |
| Nominal level          | >4 dB (1.228 Vrms)                              |
| Maximum level          | >21 dBu, balanced or unbalanced at 0.1% THD+N  |
| Input gain adjustment  | -18 dB to +18 dB, adjustable per input, default = 0 dB |

#### AUDIO OUTPUT — XTP CP 4o DVI Pro, XTP CP 4o HDMI

| Number/signal type     | 4 stereo, balanced/unbalanced                   |
| Connectors             | (4) 3.5 mm captive screw connector, 5 pole      |
| Impedance              | 50 ohms unbalanced, 100 ohms balanced          |
| Gain error             | ±0.1 dB channel to channel                     |
| Maximum level (Hi-Z)   | >21 dBu, balanced or unbalanced at 1% THD+N    |
| Maximum level (600 ohm)| >20 dBm, balanced or unbalanced at 1% THD+N    |
| Volume control range   | -75.8 dB to 0 dB (volume numbers 0 through 64) in a 35 dB increment from step 0 to step 1, then in 1 dB increments from steps 1 to 64, default = 64 (0 dB) |
| NOTE:                 | Attenuation = volume number minus 64. The default is 0 dB = volume number 64. |

#### CONTROL/REMOTE — SWITCHER HOST PORTS

| Serial host port       | 1 bidirectional RS-232 or RS-422, rear panel female 9-pin D connector |
| Baud rate and protocol | 9600 (default) to 115200 baud, 8 data bits, 1 stop bit, no parity, no flow control |

#### Serial control pin configurations

- **RS-232**: T= 2, R= 3, RX= 5, GND= 6
- **RS-422**: T= 2, R= 3, RX= 5, GND= 7, RX+= 8, TX+ = 6

| USB control port       | 1 front panel female mini USB B               |
| USB standards          | USB 2.0, low speed                           |
| Ethernet control port  | 1 female RJ-45                               |

#### Ethernet data rate

- **(for network communication)**
  - 10/100Base-T, half/full duplex with autodetect

#### Ethernet protocol

- ARP, ICMP (ping), IP, TCP, UDP, HTTP, SMTP, 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

#### Web server

- Up to 200 simultaneous sessions
- 7.0 MB nonvolatile user memory

#### Program control

- Extron control/configuration program for Windows®
- Extron Simple Instruction Set™ (SIS™)
- Microsoft® Internet Explorer® v. 6 or higher, Telnet

#### CONTROL/REMOTE

| External device (pass-through, unidirectional or bidirectional) | 1 female AJ-45 connector |
| Ethernet pass-through port | 1 female AJ-45 connector |
| Ethernet data rate (for network communication) | 10/100Base-T, half/full duplex with autodetect |

#### GENERAL

<table>
<thead>
<tr>
<th>Power</th>
<th>Internal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>100-240 VAC, 50-60 Hz</td>
</tr>
<tr>
<td>Reconnective power supply</td>
<td>optional</td>
</tr>
<tr>
<td>XP CrossPoint 1600</td>
<td>12.25&quot; H x 17.0&quot; W x 15.0&quot; D (SU high, full rack wide)</td>
</tr>
<tr>
<td>XP CrossPoint 3200</td>
<td>22.2 cm H x 43.2 cm W x 38.1 cm D</td>
</tr>
<tr>
<td>Cooling</td>
<td>Fan, left to right (as viewed from front panel)</td>
</tr>
</tbody>
</table>

#### Mounting

- **Yes**

#### Enclosure type

- **Metal**

#### Enclosure dimensions

- **XP CrossPoint 1600**: 8.75" H x 17.0" W x 15.0" D (SU high, full rack wide)
- **XP CrossPoint 3200**: 22.2 cm H x 43.2 cm W x 38.1 cm D

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

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