

Compatible with Extron DTP-Enabled Products and XTP Matrix Switchers

The DTP2 CrossPoint 82 works in conjunction with all Extron DTP endpoints and DTP-enabled switching products to extend video, audio, and control signals. The ability to extend these signals and provide remote power to select DTP and DTP2 endpoints with just one, shielded CATx cable greatly simplifies system designs and installation. DTP2 products build upon the extensive DTP platform to reach new heights in professional AV integration. They incorporate advanced features and functions to let you create the sophisticated, yet simple to use systems that customers demand. All DTP2 products accommodate the full 18 Gbps data rate of HDMI 2.0 and support video signals up to 4K/60 with 4:4:4 color sampling. Analog audio inputs on all DTP2 products support audio embedding, and audio de-embedding is supported on analog audio outputs of all DTP2 products. The DTP2 CrossPoint 82 can also be integrated into XTP Systems® when working in tandem with XTP II CrossPoint matrix switchers, offering greater coverage for larger facilities already using facility-wide AV distribution.



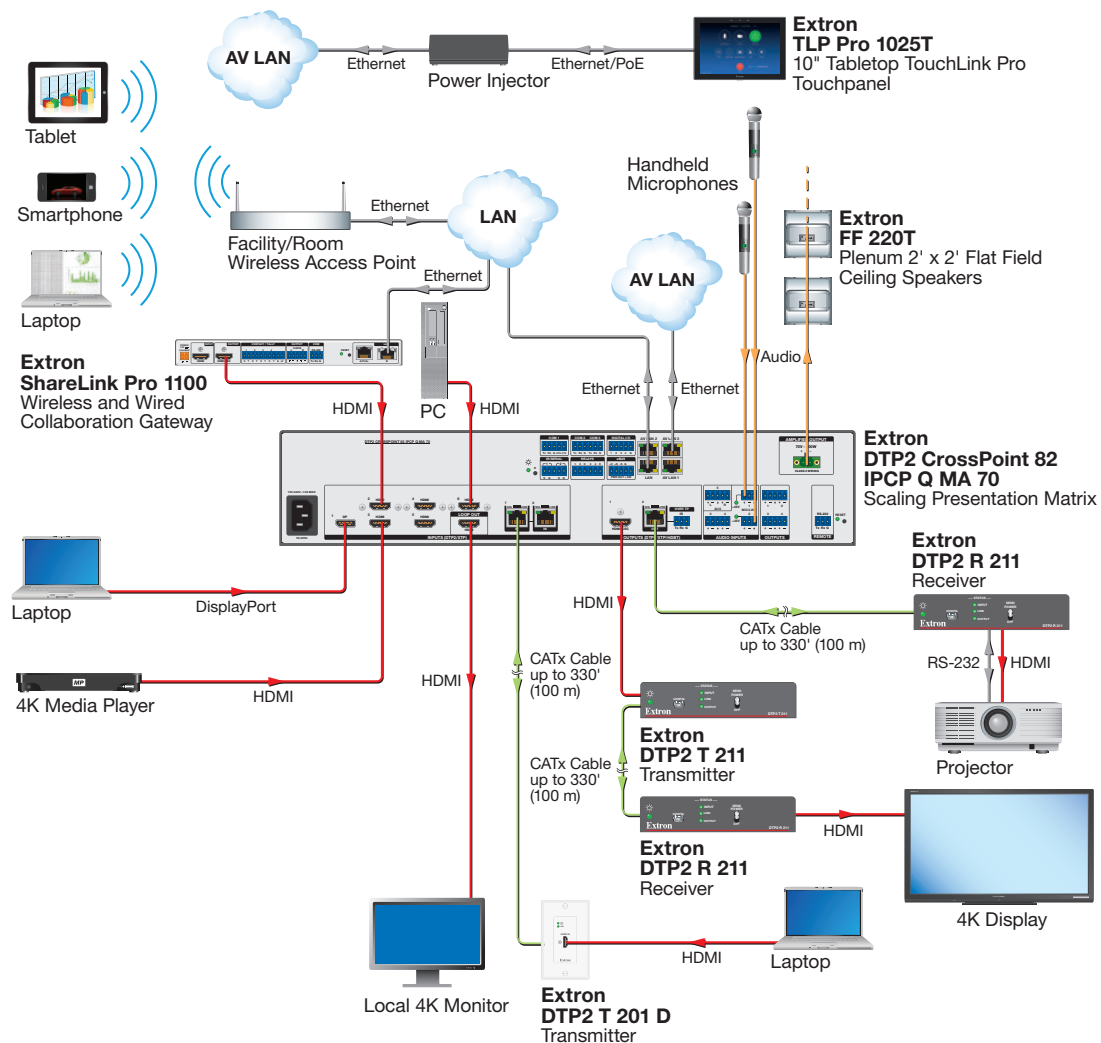
APPLICATION

Training Room

Many training room applications require an AV system that supports a wide variety of resources, including 4K sources, wireless communication, and a projection system as well as a flat panel display. The DTP2 CrossPoint 82 provides highly reliable matrix switching and distribution to accommodate the various sources and displays.

The integrated DTP2 inputs and output on the DTP2 CrossPoint 82 are ideal for extending source signals from the lectern and to the projection system. Video content at 4K/60 4:4:4 resolution is sent to the wall-mounted display using the HDMI output and a DTP2 transmitter and receiver pair. This same content is sent to the projector connected to the matrix switcher's DTP2 output via a DTP2 receiver. While the same content is usually sent to both training room destinations, the independent HDMI and DTP2 outputs provide the flexibility to view separate source content on each display. The DTP2 output can also be configured for viewing content on an HDBaseT-enabled display, eliminating the need for a receiver and streamlining the design.

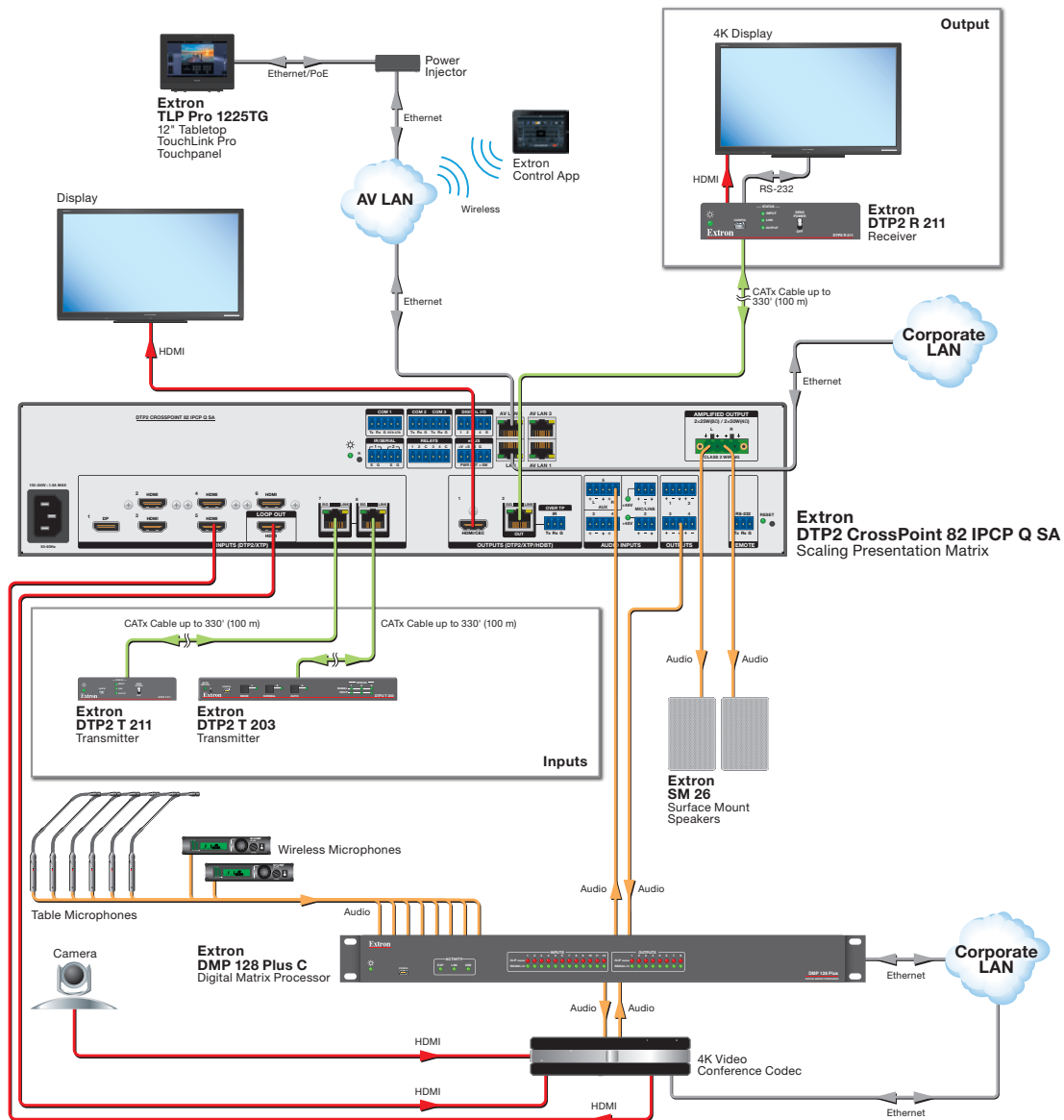
Serving as the central component for full audio system integration, the DTP2 CrossPoint 82 IPCP Q MA 70 features powerful DSP to support the distributed audio system. The internal DSP provides audio signal switching and processing for each of the source inputs and room microphones. The DTP2 CrossPoint 82 IPCP Q MA 70 includes an integrated 100-watt mono amplifier that feeds the 70-volt speaker system, providing ample sound reinforcement. As an additional integration convenience, source selection, transport control for a 4K media player and a ShareLink Pro 1100 wireless system, and audio system control are easily accessible with the TLP Pro 1025T TouchLink Pro Touchpanel that is connected to the matrix switcher's built-in control processor. This allows AV network control to be dedicated to an AV LAN for enhanced security and convenient management.



Videoconference

This room provides excellent audio and video performance for videoconferencing and local meetings. Installed video equipment such as displays, switchers, transmitters, and the VC codec are capable of 4K video resolution. Meeting participants sitting at the table can share content from their devices connected over HDMI or DisplayPort, and the DTP2 CrossPoint 82 scales lower resolution content to 4K/60 4:4:4 to feed the main display. When the room is in video conference mode, the matrix switcher enables video from the far side to be shown on either or both displays. Alternatively, one display can be switched to show local content. The DMP 128 Plus C ProDSP™ audio processor provides up to twelve channels of high-performance acoustic echo cancellation, as well as sophisticated microphone automixing and ducking. The DMP 128 processor feeds audio to the 100-watt Class D stereo amplifier built into the DTP2 CrossPoint 82 to drive the SM 26 two-way speakers, delivering a premium audio experience.

The DTP2 CrossPoint 82 IPCP Q SA has an integrated IP Link® Pro xi control processor connecting the AV system components over an isolated network, which is secured from outside interference or intrusion. Also, the built-in three-port AV LAN switch enables AV devices to be isolated from the corporate network, allowing them to receive firmware updates and be remotely monitored, managed, and controlled. End users can conveniently control system functions using the TLP Pro 1225TG 12" Tabletop TouchLink® Pro Touchpanel or using the Extron Control App installed on a mobile device.



SPECIFICATIONS

TRUE 4K SPECIFICATION

Max 4K Capabilities		
Resolution and Refresh Rate	Chroma Sampling	Max Bit Depth per Color
4096 x 2160 at 60 Hz ² 3840 x 2160 at 60 Hz 4096 x 2160 at 30 Hz 3840 x 2160 at 30 Hz	4:4:4	8 bit
4096 x 2160 at 60 Hz 3840 x 2160 at 60 Hz	4:2:0 ⁴	10 bit ³

Frame rate ¹	24, 25, 30, 50, 60, 120, 144, or 240 fps
Chroma sampling ¹	4:4:4 and 4:2:2; 4:2:0 (at input only)
Color bit depth ¹	8 or 10 bits per color
Signal type	DVI 1.0, HDMI 1.4 and 2.0, DisplayPort 1.2, HDCP 1.4 and 2.3
Max. video data rate ¹	
HDMI	18 Gbps (6 Gbps per color)
DisplayPort	21.6 Gbps (5.4 Gbps per lane)
NOTE:	• ¹ Subject to the maximum data rate limit. Use our calculator at www.extron.com/8Kdatarate to determine video parameters supported by this data rate.
	• ² 4096 x 2160/50-60 at 4:4:4 is available only for HDMI and DisplayPort connections.
	• ³ DTP2 and XTP are 8 bits per color for all 4096 x 2160 formats.
	• ⁴ 4:2:0 sub-sampling is supported at input only.
NOTE:	DTP2 ports are backwards-compatible with DTP endpoints for resolutions up to 4K @ 30 Hz, 4:4:4, or 4K @ 60 Hz, 4:2:0.

VIDEO INPUT

Number/signal type	1 DisplayPort 5 HDMI/DVI 1 HDMI/DVI loop-out, configurable (non-scaled) 2 DTP2/XTP-configurable
Connectors	1 female DisplayPort 5 female HDMI type A 1 female HDMI type A loop-out 2 female RJ-45
Horizontal frequency	15 kHz to 270 kHz for resolutions up to 18 Gbps
Vertical frequency	24 Hz to 240 Hz for resolutions up to 18 Gbps
Resolution range	640x480 @ 60 Hz through 4096x2160 @ 60 Hz with 4:4:4 chroma sampling Includes 480i, 480p, 576i, 576p, 720p, 1080i, 1080p, 2K, and 4K.

VIDEO PROCESSING

Digital sampling	8 or 10 bits per color; 600 MHz pixel clock maximum
Colors	1.07 billion (10 bit 4:4:4 processing)

VIDEO OUTPUT

Number/signal type	1 HDMI/DVI (non-scaled) 1 DTP2/XTP/HDBT, configurable (scaled)
Connectors	1 female HDMI type A 1 female RJ-45
Peripheral device power	225 mA per output (HDMI and loop outputs only)
Scaled resolution	640x480 ³ , 800x600 ³ , 1024x768 ³ , 1280x768 ³ , 1280x800 ³ , 1280x1024 ³ , 1360x768 ³ , 1366x768 ³ , 1440x900 ³ , 1400x1050 ³ , 1600x900 ³ , 1680x1050 ³ , 1600x1200 ³ , 1920x1200 ³ , 2048x1200 ³ , 2048x1536 ³ , 2560x1080 ³ , 2560x1440 ³ , 2560x1600 ³ , 3840x2160 ^{1,2,3,4,5,6,7,8} , 4096x2160 ^{1,2,3,4,5} , and Custom 1-8 480p ^{7,8} , 576p ⁶ , 720p ^{3,4,5,6,7,8} , 1080i ^{6,7,8} , 1080p ^{1,2,3,4,5,6,7,8} , 2K ^{1,2,3,4,5,6,7,8} ¹ 23.98 Hz, ² 24 Hz, ³ 25 Hz, ⁴ 29.97 Hz, ⁵ 30 Hz, ⁶ 50 Hz, ⁷ 59.94 Hz, ⁸ 60 Hz [*] Available to a DTP2 Rx

AUDIO

Gain	Unbalanced output: -6 dB; balanced output: 0 dB
Frequency response	20 Hz to 20 kHz, ±0.5 dB
THD + Noise	<0.1%, 20 Hz to 20 kHz at nominal level
S/N	>90 dB at maximum balanced output (unweighted)
Supported formats	
Analog de-embedding	LPCM up to 2.0/24-bit/96 kHz
HDMI pass-through	LPCM up to 7.1/24-bit/192 kHz, Dolby Atmos, Dolby TrueHD, and Dolby legacy formats DTS:X, DTS-HD Master Audio, DTS 96/24, and DTS legacy formats

AUDIO INPUT

Number/signal type	2 stereo line level, balanced or unbalanced 2 mono mic/line level, balanced or unbalanced, (with available phantom power) 6 stereo, de-embedded from HDMI/DisplayPort (PCM only) 2 DTP2/XTP (de-embedded HDMI—PCM only, or remote unbalanced analog*) *Available only in DTP mode
Connectors	(2) 3.5 mm, 5 pole captive screw for line (2) 3.5 mm, 3 pole captive screw for mic/line 5 female HDMI type A 1 female DisplayPort 2 RJ-45 female
Input gain adjustment	Line inputs: -18 dB to +24 dB in 0.1 dB steps, adjustable per input LPCM-2Ch inputs: -18 dB to +24 dB in 0.1 dB steps, adjustable per input Mic/line inputs: -18 dB to +60 dB in 0.1 dB steps, adjustable per input
DC phantom power	+48 VDC ±10% (can be switched on or off per mic/line input)

AUDIO OUTPUT — LINE OUT

Number/signal type	2 stereo or 4 mono, balanced/unbalanced 2 HDMI, embedded (Loop Out and HDMI Out 1 do not support breakaway or audio DSP.) 1 DTP2/XTP/HDPT (embedded digital, and remote balanced/unbalanced analog*) *Available only in DTP mode
Connectors	(2) 3.5 mm, 5 pole captive screw 2 female HDMI type A 1 female RJ-45
Output volume range	0 to -100 dB in 0.1 dB steps (Volume control not available on loop out or HDMI output 1)

AUDIO OUTPUT — POWER AMPLIFIER — IPCP MODELS ONLY

Number/signal type	SA models: 1 stereo (default) or 2 mono (2 channels total) MA 70 models: 1 mono, 70 V line
Connectors	SA models: (1) 5 mm, 4 pole, screw lock captive screw MA 70 models: (1) 5 mm, 2 pole, screw lock captive screw NOTE: The 5 mm screw lock captive screw connector accepts wires of 22 AWG to 12 AWG.
Load impedance	SA models: 4 ohms minimum MA 70 models: 50 ohms minimum
Amplifier type	Class D
Output power	SA models: 25 watts per channel, 8 ohms, 1 kHz, 0.1% THD, or 50 watts per channel, 4 ohms, 1 kHz, 0.1% THD MA 70 models: 100 watts (rms) @ 70 V, 1 kHz, 0.1% THD
Protection	Clip limiting, thermal, short circuit, DC output
Frequency response	20 Hz to 20 kHz, -3 dB to +1 dB @ 1 W
THD + Noise	<0.1% @ 1 kHz, 3 dB below clipping
S/N	>90 dB, 20 Hz to 20 kHz, unweighted

SPECIFICATIONS

COMMUNICATIONS	
Serial control port	1 bidirectional RS-232, 3.5 mm, 3 pole captive screw connector (rear panel)
USB control port	1 female mini USB B (front panel)
Ethernet	
Connector	1 female RJ-45*
Ethernet data rate	*IPCP models use IPCP Ethernet ports. 10/100/1000Base-T, half/full duplex with autotdetect
Ethernet protocol	ARP, ICMP (ping), IP, TCP, DHCP, HTTP, Telnet
Program control	Extron Product Configuration Software (PCS) program for Windows® Extron Simple Instruction Set (SIS™) Microsoft® Internet Explorer®
COMMUNICATIONS	
IPCP Pro Control Processor with AV LAN — IPCP models only	
Control processor	
IPCP Q models	IPCP Pro 355MQ xi
Memory	
SDRAM	
IPCP Q models	2 GB
Flash	
IPCP Q models	8 GB
Software and control options	
Configuration software	Global Configurator® Plus and Professional for Windows®
Programming software	Global Scripser®
Control applications	GlobalViewer®, eBus®, TouchLink® for Web, Touchlink for iPad®, or TouchLink Pro touchpanels
Resource management software	GlobalViewer® Enterprise
Utilities	Toolbelt, embedded web page
Hardware user interface	
Hardware	TouchLink® Pro touchpanels, NBP button panels, or eBUS® button panels
Ethernet control	
Network interface controllers (NICs)	2: 1 LAN, 1 AV LAN
AV LAN network switch	1 unmanaged 3 port switch
Connectors	
LAN	1 female RJ-45
AV LAN	3 female RJ-45
Ethernet data rate	10/100/1000Base-T, half/full duplex with autotdetect
Protocols	DHCP, DNS, HTTP, HTTPS, ICMP, IEEE 802.1X, NTP, SFTP, SMTP, SNMP, SSH, TCP/IP, UPD/IP
Serial	
Quantity/type	1 bidirectional RS-232, RS-422, RS-485 (port 1) 2 bidirectional RS-232 (ports 2 and 3)
Digital I/O	
Quantity/type	4 digital input/output (configurable)
Digital inputs	
Input voltage range	0 to 24 VDC, clamped at +30 VDC
Digital outputs	250 mA sink from 24 VDC max.
IR/serial	
Quantity/type	2 programmable: unidirectional RS-232 (±5 V), or TTL level (0 to 5 V) infrared (carrier and non-carrier) up to 300 kHz
Relay	
Quantity/type	4 normally open relays
Relay control contact rating	24 VDC, 1 A

eBUS control		
eBUS control ports	(1) 3.5 mm captive screw connector, 5 pole (uses 4 poles)	
Recommended cable type	Extron STP20-2/1000 or STP20-2P/1000 cable	
eBUS power output	6 watts	
COMMUNICATIONS		
external device (RS-232/IR over DTP2/XTP/HDBT)		
Serial control pass-through ports	DTP2 Tx/XTP matrix to DTP2 CrossPoint 82: RS-232 can be transmitted to and from DTP2 Tx/XTP matrix via Ethernet insertion. DTP2 CrossPoint 82 to DTP2/HDBT Rx/XTP matrix: RS-232 can be transmitted to and from DTP2 Rx/HDBT Rx/XTP matrix via Ethernet insertion.	
Baud rates	Up to 115200 baud	
Protocol	6 to 8 data bits 1 or 2 stop bits Even or odd parity, no parity Flow control = XON, XOFF, none	
IR control pass-through port	DTP2 CrossPoint 82 to TP Rx: (1) 3.5 mm, 3 pole captive screw connector TTL level (0 to 5 V) modulated infrared control from 30 kHz up to 60 kHz	
IR control pin configuration	1 = Tx, 2 = Rx, 3 = Gnd	
GENERAL		
Power supply	Internal Input: 100-240 VAC, 50-60 Hz	
Power consumption		
Full power		
DTP2 CrossPoint 82	94 watts	
DTP2 CrossPoint 82 IPCP SA	127 watts	
DTP2 CrossPoint 82 IPCP MA 70	126 watts	
Temperature/humidity	Storage: -40 to +158°F (-40 to +70°C) / 10% to 90%, noncondensing Operating: +32 to +122°F (0 to +50°C) / 10% to 90%, noncondensing	
Cooling		
DTP2 CrossPoint 82	2 fans, air flows from right to left (when viewed from the front)	
DTP2 CrossPoint 82 IPCP models	1 fan, air flows from right to left (when viewed from the front)	
Mounting		
Rack mount	Yes, with included, preinstalled brackets	
Enclosure dimensions		
DTP2 CrossPoint 82	1.75" H x 17.5" W x 10.5" D (1U high, full rack wide) (44 mm H x 444 mm W x 267 mm D)	
DTP2 CrossPoint 82 IPCP models	3.50" H x 17.5" W x 10.5" D (2U high, full rack wide) (89 mm H x 444 mm W x 267 mm D)	
Product warranty	3 years parts and labor	
Everlast power supply warranty	7 years parts and labor	
NOTE: All nominal levels are at ±10%.		
Model	Version Description	Part number
DTP2 CrossPoint 82	Standard Model	60-1812-01
DTP2 CrossPoint 82 IPCP Q SA	Control Processor and Stereo Amp	60-1812-92
DTP2 CrossPoint 82 IPCP Q SA	Control Processor and Stereo Amp, LL UI Upgrade	60-1812-92A
DTP2 CrossPoint 82 IPC Q P MA 70	Control Processor and Mono Amp	60-1812-93
DTP2 CrossPoint 82 IPCP Q MA 70	Control Processor and Mono Amp, LL UI Upgrade	60-1812-93A

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

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