

TPS150

Twisted Pair A/V Switching and Transmission System



TPR150 Receiver

TPT150 Transmitter

DESCRIPTION

The Inline **TPS150** Twisted Pair A/V Switching and Transmission System is a complete solution for sending high resolution computer-video, line level audio, and RS-232 control signals to a projector, plasma display, presentation monitor, or other data display on twisted pair cable such as Extron Skew-Free™ A/V UTP. Featuring advanced cable compensation and skew control technology (patent pending), the TPS150 System maintains optimum image quality for cable runs of up to 500 feet (152 m) using a single cable.

The TPS150 system includes the following components:

- TPT150 A/V Switcher/Twisted Pair Transmitter
- TPR150 Twisted Pair Video Receiver with mounting brackets
- Video cables for connection to remote projector/plasma display: 6' (1.83 m) composite video, 6' (1.83 m) S-video, 6' (1.83 m) component video, and 6' (1.83 m) VGA

TPT150 A/V Switcher and Twisted Pair Transmitter

The TPT150 combines a four input A/V switcher and twisted pair transmitter in one box. Inputs one and two are for high resolution RGBHV and computer-video on female 15-pin HD connectors; inputs three and four are compatible with composite video, S-video, or component video signals on either female RCAs or a 4-pin mini DIN connector. Audio inputs are on female RCA connectors. Video output to the TPR150 receiver is on a female RJ-45 connector, while audio is output locally on captive screw connectors.

TPR150 Twisted Pair Receiver

The TPR150 twisted pair receiver accepts the selected video signal and any serial control signals from the TPT150 via a female RJ-45 connector. Output is on 15-pin HD connectors for computer-video signals, female RCA connectors for composite video and component video signals, a 4-pin mini DIN for S-video signals, and a 9-pin D-sub for serial control signals. Mounting brackets are included for mounting the TPR150 to a projector mounting pole (U-bolts are not included).

FEATURES

- **Four input A/V switcher** – Accepts and transmits RGBHV, component video, S-video, composite video, and stereo audio
- **Buffered loop-through** – Provides for local monitor output on a 15-pin HD female VGA connector, enabling a signal to be easily monitored or distributed without using a distribution amplifier.
- **Universal projector control** – The TPS150 provides universal projector control via serial commands entered by the installing technician. Commands are automatically sent when the input selection or Display Power buttons are pressed. The included ICS100 control software makes storing projector or display control codes easy.

- **Skew compensation control** – Individual RGB skew controls adjust for the timing delays commonly encountered when CAT 5, 5e, or 6 cable is used.
- **Sharpness control** – Provides video equalization with individual low and high frequency adjustments. The low frequency control boosts low frequencies to remove image smearing; the high frequency control adjusts the high frequency components, restoring image sharpness and detail.
- **Audio output volume adjustment and muting** – Each individual output has volume control adjustment via the front panel, RS-232 control, or contact closure. Audio output levels can be saved for each input and automatically recalled when that input is selected.
- **Control** – Switcher control is available through front panel buttons, contact closure, or RS-232/RS-422/RS-485. RS-232 control is provided with the Inline's ICS100 control software and/or a third party control system.
- **CTP150CM control panel (optional)** – Seven soft-touch buttons control input selection, volume up/down and display power on/off. The CTP150CM is available in a black or white finish and installs in CPM Series modular connector panels that accept a quad-size Mini Architectural Adapter Plate (MAAP).
- **Internal international power supply** – The 100-240 volt, autoswitchable, internal power supply provides worldwide power compatibility.



CTP150CM

MODEL	PART #
TPS150 Transmitter-Receiver Set	TPS150-1

OPTIONAL ACCESSORIES

CTP150CM control panel (black)CTP150CM-1 (page 431)
CTP150CM control panel (white)CTP150CM-2 (page 431)

SPECIFICATIONS

VIDEO	
Number/signal type	1 set of proprietary analog signals
Connectors	1 RJ-45 female jack
VIDEO INPUT	
Number/signal type	
TPT150	1 VGA-UXGA RGBHV, RGBS, RGsB with 1 RGB buffered local monitor loop-through 1 VGA-UXGA RGBHV, RGBS, RGsB 2 component video (Y, R-Y, B-Y), or S-video, or composite video
TPR150	1 set of proprietary analog signals from a TPT150
Connectors	
TPT150	2 female 15-pin HD (RGB input) 1 female 15-pin HD (RGB loop-through) 2 sets of [3 female RCA (component video), 1 female RCA (composite), 1 female 4-pin mini DIN (S-video)]
TPR150	1 RJ-45 female jack
Nominal level	1V p-p for Y of component video and S-video, and for composite video 0.7V p-p for RGB 0.3V p-p for R-Y and B-Y of component video, and for C of S-video
Minimum/maximum levels	Analog: 0.3V to 1.5V p-p with no offset at unity gain
Impedance	75 ohms
Return loss	<-44dB @ 5 MHz
Maximum DC offset	±0.5mV
VIDEO OUTPUT	
Number/signal type	
TPT150	1 set of proprietary analog signals
TPR150	1 RGBHV, RGBS, RGsB 1 component video(Y, R-Y, B-Y) 1 S-video 1 composite video



TPS 150 System (continued)...

Connectors	
TPT150	1 RJ-45 female jack
TPR150	1 female 15-pin HD (RGB)
	3 RCA female (component video)
	(1) 4-pin mini DIN (S-video)
	1 RCA female (composite video)
Nominal level	
	1V p-p for Y of component video and S-video, and for composite video
	0.7V p-p for RGB
	0.3V p-p for R-Y and B-Y of component video, and for C of S-video
Minimum/maximum levels	
	0.3V to 1.5V p-p
Impedance	75 ohms
Return loss	-44dB @ 5 MHz
DC offset	±0.5mV maximum with input at 0 offset

SYNC

Input type	RGBHV, RGBS, RGsB
Output type	RGBHV, RGBS, RGsB
Standards	NTSC 3.58, NTSC 4.43, PAL, SECAM
Input level	10 kohms
Output level	2.3V to 4.6V p-p, unterminated
Input impedance	510 ohms
Output impedance	75 ohms
Max input voltage	4.6V p-p
Max. propagation delay	760 ns
Max. rise/fall time	35 ns
Polarity	Positive or negative

AUDIO — TPT150 ONLY

Gain	-30dB to +9dB, adjustable
Frequency response	20 Hz to 20 kHz, ±2.4dB
THD + Noise	0.04% @ 1 kHz at nominal level
S/N	>96dB at rated maximum output
Crosstalk	<-93dB @ 20 kHz, fully loaded

AUDIO INPUT — TPT150 ONLY

Number/signal type	4 stereo, unbalanced
Connectors	4 pairs of RCA connectors
Impedance	>7.8 kohms unbalanced, DC coupled
Nominal level.....	2.2dBu (1Vrms)
Maximum level	+9.8dBu, (unbalanced) at 1%THD+N

AUDIO OUTPUT — TPT150 ONLY

Number/signal type	1 stereo, balanced/unbalanced
Connectors	(1) 3.5 mm captive screw connector, 5 pole
Impedance	51 ohms unbalanced
Gain error	±0.03dB channel to channel
Maximum level (Hi-Z)	>+10.2dBu, balanced or unbalanced at stated %THD+N
Maximum level (600 ohm)	>+4.2dBm, balanced or unbalanced at stated %THD+N

NOTE: 0dBu = 0.775 volts (RMS).

CONTROL/REMOTE — TRANSMITTER/RECEIVER

Serial control port	RS-232, RS-422, RS-485, 9-pin female D connector
Contact closure	(1) 3.5 mm captive screw connector, 8 pole
Extron remote key pad control	(1) 3.5 mm captive screw connector, 4 pole (shared with contact closure port) for a CTP150CM control panel
Program control	ICS100 (Inline Control Software)

CONTROL — PROJECTOR (TPR ONLY)

Projector control port.....	1 female 9-pin D
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GENERAL

Power	100VAC to 240VAC, 50/60 Hz, internal, autoswitchable
TPT150	15 watts
TPR150.....	10 watts
Rack mount	
TPT150	Yes, with included brackets, part #MTR102
TPR150.....	No, but projector pole mountable with included L brackets
Enclosure type	Metal
Enclosure dimensions	
TPT 150	1.7" H x 17.0" W x 11.5" D (1U high, full rack width) 4.3 cm H x 43.2 cm W x 29.2 cm D (Depth excludes connectors. Width excludes rack ears. Height excludes rubber feet.)
TPR150.....	1.7" H x 11.75" W x 6.0" D (1U high) 4.3 cm H x 29.8 cm W x 15.2 cm D (Depth excludes connectors. Width excludes rack ears. Height excludes rubber feet.)
Product weight	
TPT150	5.2 lbs (2.4 kg)
TPR150.....	2.2 lbs (1.0 kg)
Shipping weight	13 lbs (6 kg)
DIM weight	
USA/Canada	11 lbs (5 kg)
International	12 lbs (6 kg)
Listings/Compliances	ETL (UL1950), CE, FCC Class A
Warranty	3 years parts and labor

APPLICATION

