

# VERSATOOLS™ MTP SERIES

MINI TWISTED PAIR TRANSCEIVERS

- Ultra-compact 1U, one-eighth rack width metal enclosure or double space AAP
- Composite video, S-video and stereo audio transmitters and receivers
- Transmit A/V signals up to 1,000 feet using Extron Skew-Free™ A/V UTP or twisted pair cable (CAT 5, 5e or CAT 6)
- Gain and sharpness adjustments
- Quad standard compatible
- Versatile mounting options
- LED power indicator(s)
- External international power supply included



The Extron MTPs are economical, ultra-compact Mini Twisted Pair transceivers that permit transmission of composite video, S-video, and stereo audio (balanced/unbalanced) over Extron Skew-Free A/V UTP or any CAT 5, 5e, or 6 twisted pair cable.



## Extron® Electronics

[www.extron.com](http://www.extron.com)

## DESCRIPTION

Extron **MTP Transceivers** are part of the VersaTools™ family of economical, compact products designed for easy integration into new and existing A/V environments. MTPs can be used with low cost twisted pair cables for point-to-point cable runs of up to 1,000 feet and are ultra-compact so they can fit just about anywhere: in racks, under tables and desktops, next to a projector, or in any Extron product that has openings for double space Architectural Adapter Plates (AAPs). Twisted pair cable is a fraction of the size of coaxial cable, as well as being much lighter, more flexible, and less expensive. MTPs can be used in conjunction with Extron twisted pair matrix switchers to create a complete twisted pair A/V routing system.

All MTP receivers are powered products that provide active balanced transmissions for both video and audio. The sharpness adjustment provides variable high frequency video equalization to compensate for different cable lengths. The gain adjustment compensates for overall signal level loss occurring in lengthy cable runs.

MTPs operate with an external power supply connected to just the (transmitter receiver remote power) or just the receiver (transmitter remote power). This provides system design flexibility, since the transmitter or receiver module can be installed in a convenient location, even if local power is not available. There are also two LED (front and back) power indicators (one on AAP models) for easy troubleshooting.

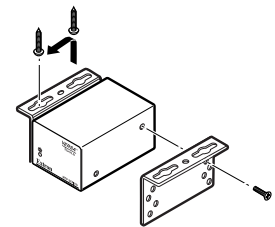
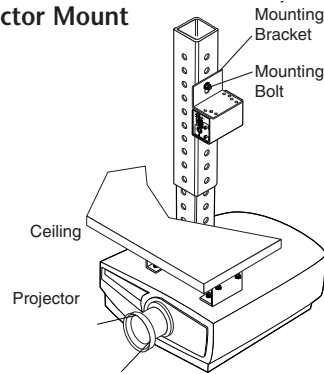
## FEATURES

- **Ultra-compact enclosures** – 1U, one-eighth rack width metal enclosures or double space AAP
- **Long distance transmission** – Enables cable runs up to 1,000 feet using Skew-Free™ A/V UTP or twisted pair cable (CAT 5, 5e, or 6)
- **Gain and sharpness controls** - Restore video detail, sharpness and contrast to optimal level
- **Active balanced transmission method** – Maintains correct impedance and provides restoration of signal level for both video and audio
- **Quad standard**– MTPs are capable of transmitting NTSC 3.58, NTSC 4.43, PAL, and SECAM video for worldwide compatibility.
- **Power indicators** – LEDs on front and rear (front only on AAP models) for easy troubleshooting
- **Remote power capability** – Apply power to transmitter only or receiver only
- **External international power supply included** – (part number 70-055-01)

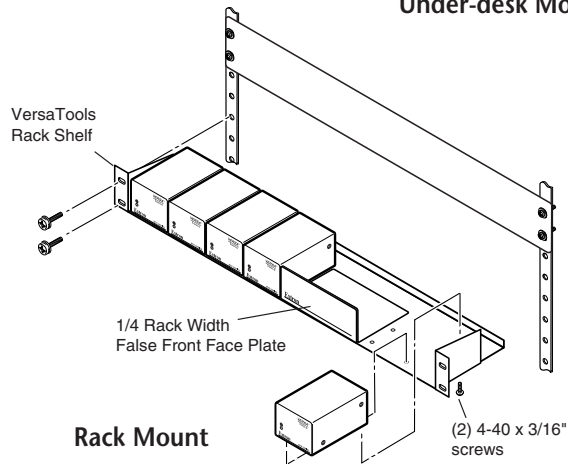
## FEATURES (CONT.)

- **Versatile mounting options** – Rack, under-desk, and projector-mountable; AAP models can be mounted in Extron products with double space AAP openings

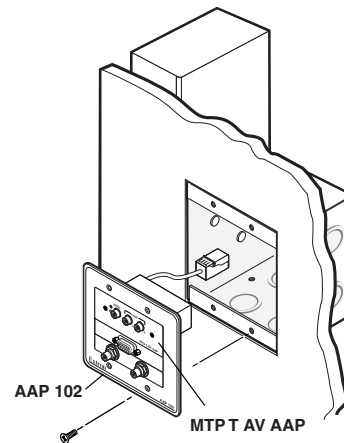
### Projector Mount



### Under-desk Mount



### Rack Mount



### AAP Mount

# COMPOSITE VIDEO MODELS



## MTP T CV Composite Video Mini Twisted Pair Transmitter

- Transmits composite video to an MTP receiver
- Input on female BNC connector

Part Number ..... 60-540-01



## MTP R CV Composite Video Mini Twisted Pair Receiver

- Receives composite video from an MTP transmitter
- Output on a female BNC connector
- Gain and sharpness adjustments

Part Number ..... 60-541-01



## MTP T AV Composite Video with Stereo Audio (Balanced) Mini Twisted Pair Transmitter

- Transmits composite video and stereo audio (balanced) to an MTP receiver
- Input on female BNC and captive screw connectors

Part Number ..... 60-540-21



## MTP R AV Composite Video with Stereo Audio (Balanced) Mini Twisted Pair Receiver

- Receives composite video and stereo audio (balanced) from an MTP transmitter
- Output on female BNC and captive screw connectors
- Gain and sharpness adjustments

Part Number ..... 60-541-21



## MTP T AV RCA Composite Video with Stereo Audio (Unbalanced) Mini Twisted Pair Transmitter

- Transmits composite video and stereo audio (unbalanced) to an MTP receiver
- Input on female BNC and female RCA connectors

Part Number ..... 60-540-31



## MTP R AV RCA Composite Video with Stereo Audio (Unbalanced) Mini Twisted Pair Receiver

- Receives composite video and stereo audio (unbalanced) from an MTP transmitter
- Output on female BNC and female RCA connectors
- Gain and sharpness adjustments

Part Number ..... 60-541-31



## MTP T AV AAP Composite Video with Stereo Audio (Unbalanced) Mini Twisted Pair Transmitter

- Transmits composite video and stereo audio (unbalanced) to an MTP receiver
- All inputs (video and audio) are on female RCA connectors.
- Fits in any double space AAP opening

Part Numbers ..... 70-361-01 (gray)  
70-361-02 (black)  
70-361-03 (white)

# S-VIDEO MODELS



## MTP T SV S-Video Mini Twisted Pair Transmitter

- Transmits S-video to an MTP receiver
- Input on a female 4-pin mini DIN connector

Part Number ..... 60-540-02



## MTP R SV S-Video Mini Twisted Pair Receiver

- Receives S-video from an MTP transmitter
- Output on a female 4-pin mini DIN connector
- Gain and sharpness adjustments

Part Number ..... 60-541-02



## MTP T SV A S-Video with Stereo Audio (Balanced) Mini Twisted Pair Transmitter

- Transmits S-video and stereo audio (balanced) to an MTP receiver
- Input on female 4-pin mini DIN and captive screw connectors

Part Number ..... 60-540-22



## MTP R SV A S-Video with Stereo Audio (Balanced) Mini Twisted Pair Receiver

- Receives S-video and stereo audio (balanced) from an MTP transmitter
- Output on female 4-pin mini DIN and captive screw connectors
- Gain and sharpness adjustments

Part Number ..... 60-541-22



## MTP T SV A RCA S-Video with Stereo Audio (Unbalanced) Mini Twisted Pair Transmitter

- Transmits S-video and stereo audio (unbalanced) to an MTP receiver
- Input on female 4-pin mini DIN and female RCA connectors

Part Number ..... 60-540-32



## MTP R SV A RCA S-Video with Stereo Audio (Unbalanced) Mini Twisted Pair Receiver

- Receives S-video and stereo audio (unbalanced) from an MTP transmitter
- Output on female 4-pin mini DIN and female RCA connectors
- Gain and sharpness adjustments

Part Number ..... 60-541-32



## MTP T SVA AAP S-Video with Stereo Audio (Unbalanced) Mini Twisted Pair Transmitter

- Transmits S-video and stereo audio (unbalanced) to an MTP receiver
- Input on female 4-pin mini DIN and female RCA connectors
- Fits in any double space AAP opening

Part Number ..... 70-362-01 (gray)  
70-362-02 (black)  
70-362-03 (white)

# SPECIFICATIONS

## VIDEO

Gain .....	Unity
Differential phase error .....	<1.0°, 3.58 MHz to 4.43 MHz
Differential gain error .....	<1.0%, 3.58 MHz to 4.43 MHz

## VIDEO INPUT

Number/signal type/Connectors	
MTP T CV/AV Series .....	1 composite video on a female BNC
MTP T SV Series .....	1 S-video on a female 4-pin mini DIN
MTP R CV/AV/SV Series .....	1 set of proprietary analog signals on a female RJ-45
Nominal level .....	1V p-p for Y of S-video and for composite video, 0.3V p-p for C of S-video
Minimum/maximum levels .....	0.3V to 1.5V p-p with no offset
Impedance .....	75 ohms
Return loss .....	<-35dB, DC @ 10 MHz
Maximum DC offset .....	5.0V

## VIDEO OUTPUT

Number/signal type/connectors .....	1 set of proprietary analog signals on a female RJ-45
Series MTP T AAP Series .....	1 female RJ-45 on a 3" (7.6 cm) pigtail
MTP R CV/AV Series .....	1 composite video on a female BNC
MTP R SV Series .....	1 S-video on a female 4-pin mini DIN
Nominal level .....	1V p-p for Y of S-video and for composite video, 0.3V p-p for C of S-video
Minimum/maximum levels .....	0.3V to 1.5V p-p
Impedance .....	75 ohms

## SYNC

Standards .....	NTSC 3.58, NTSC 4.43, PAL, SECAM
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## AUDIO — All models except: MTP T CV, MTP T SV, MTP R CV, MTP R SV

Number/signal type .....	1 set of analog proprietary signals
Connectors .....	1 shielded RJ-45 female
Gain	
RCA models .....	Unbal. output: 0dB (unity)
All other models .....	Unbal. output: 0dB (unity); bal. output: +6dB
Frequency response .....	20 Hz to 20 kHz, ±0.05dB
THD + Noise .....	0.03% @ 1 kHz, 0.3% @ 20 kHz at nominal level
S/N	
RCA models .....	>90 dB, at rated maximum output
All other models w/audio .....	>90 dB, bal. at rated maximum output
Crosstalk .....	<-80dB @ 1 kHz, fully loaded
Stereo channel separation .....	>75dB @ 1 kHz
Return loss (AAP models) .....	<-35dB @ 5 MHz
CMRR .....	>50dB @ 20 Hz to 20 kHz

## AUDIO INPUT — All models except: MTP T CV, MTP T SV, MTP R CV, MTP R SV

Number/signal type	
MTP T AV, MTP T SV A .....	1 stereo, bal./unbal.
MTP T AV/SV A RCA, MTP T AAP models .....	1 stereo, unbal.
MTP R Series .....	1 set of proprietary analog signals
Connectors	
MTP T AV, MTP T SV A .....	(1) 3.5 mm captive screw connector, 5 pole
MTP T AV/SV A RCA, MTP T AAP models .....	1 pair of RCA female
MTP R Series .....	1 female RJ-45
Impedance .....	>6.3 kohms unbal., >10 kohms bal., DC coupled
Nominal level .....	-10dBV (0.32Vrms)
Maximum level .....	>+2.4 dBu (bal. or unbal.) at 1%THD+N

## AUDIO OUTPUT — All models except: MTP T CV, MTP T SV, MTP R CV, MTP R SV

Number/signal type	
MTP T Series (all models) .....	1 set of proprietary analog signals
MTP R AV, MTP R SV A .....	1 stereo, bal./unbal.
MTP R AV/SV A RCA .....	1 stereo, unbal.
Connectors	
MTP T Series .....	1 female RJ-45
MTP T AAP Series .....	1 female RJ-45 on a 3" (7.6 cm) pigtail
MTP R AV, MTP R SV A .....	(1) 3.5 mm captive screw connector, 5 pole
MTP R AV/SV A RCA .....	1 pair of RCA female
Impedance	
MTP R AV, MTP R SV A .....	50 ohms unbal., 100 ohms bal.
MTP R AV/SV A RCA .....	50 ohms unbal.
Gain error .....	±0.1dB channel to channel
Maximum level (Hi-Z) .....	>+3.3dBu, bal. or unbal. at stated %THD+N
Maximum level (600 ohm) .....	>+2.0dBm, bal. or unbal. at stated %THD+N
NOTE: 0dBu = 0.775 volts (rms).	

## GENERAL

Power .....	5 watts, external, autoswitchable; 12VDC, 1.0 A power supply. Product requires 0.2 A.
NOTE: If the distance between them is not long, you can connect a power supply to only one device in a transmitter/receiver pair. If the distance between transmitter and receiver is long, connect a power supply to each device.	
Rack mount	
MTP T AAP Series .....	Yes, with optional rack panel, or furniture-/wall-mountable with optional AAP mounting plates
All other models .....	Yes, with optional rack shelf, or furniture-mountable with optional brackets
Enclosure type .....	Metal
Enclosure dimensions	
MTP T AAP Series	
Plate .....	1.4" H x 3.5" W x 0.1" D (3.6 cm H x 8.9 cm W x 0.3 cm D) (double space AAP plate)
Transmitter .....	1.2" H* x 2.75" W x 1.75" D (3.0 cm H* x 7.0 cm W x 4.4 cm D) (*Height excludes connectors and cables.)
All other models .....	1.7" H x 2.2" W x 3.0" D (1U high, one-eighth rack width) 4.2 cm H x 5.6 cm W x 7.6 cm D (Depth excludes connectors.)
Product weight/shipping weight .....	1.0 lbs (0.5 kg) / 3 lbs (1.4 kg)
Listings/Compliances .....	UL, CUL, CE, FCC Class A, VCCI, AS/NZS, ICES

## Model/Part Numbers

### Composite video MTP Models

MTP T CV .....	60-540-01	MTP R CV .....	60-541-01
MTP T AV .....	60-540-21	MTP R AV .....	60-541-21
MTP T AV RCA .....	60-540-31	MTP R AV RCA .....	60-541-31

### S-video MTP Models

MTP T SV .....	60-540-02	MTP R SV .....	60-541-02
MTP T SV A .....	60-540-22	MTP R SV A .....	60-541-22
MTP T SV A RCA .....	60-540-32	MTP R SV A RCA .....	60-541-32

### MTP AAP Models

MTP T AV AAP (gray) .....	70-361-01
MTP T AV AAP (black) .....	70-361-02
MTP T AV AAP (white) .....	70-361-03

MTP T SVA AAP (gray) .....	70-362-01
MTP T SVA AAP (black) .....	70-362-02
MTP T SVA AAP (white) .....	70-362-03

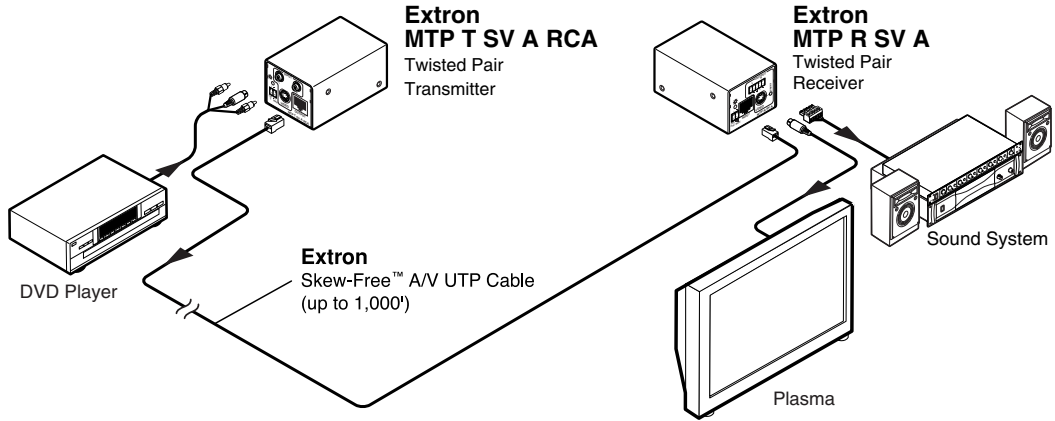


**Extron Electronics, USA**  
1230 South Lewis Street  
Anaheim, CA 92805  
800.633.9876 714.491.1500  
FAX 714.491.1517

**Extron Electronics, Europe**  
Beeldschermweg 6C  
3821 AH Amersfoort, The Netherlands  
+800.3987.6673 +31.33.453.4040  
FAX +31.33.453.4050

**Extron Electronics, Asia**  
135 Joo Seng Rd. #04-01  
PM Industrial Bldg.  
Singapore 368363  
+65.6383.4400 FAX +65.6383.4664

**Extron Electronics, Japan**  
Daisan DMJ Bldg 6F, 3-9-1 Kudan Minami  
Chiyoda-ku, Tokyo 102-0074  
Japan  
+81.3.3511.7655 FAX +81.3.3511.7656



## PANEL DRAWINGS

### MTP Transmitters

### MTP Receivers

