

MTP 15HD A Series

MINI TWISTED PAIR TRANSMITTERS AND RECEIVERS
FOR VGA AND AUDIO

- Sends high resolution video and mono audio signals over a single CAT 5-type cable
- Receiver models for 600 foot and 1,500 foot transmission
- Multiple form factors for a variety of installation environments
- Supports RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, and composite video
- Compatible with HDTV component video, bi-level or tri-level sync
- Models available for use with CAT 7 STP cable



The Extron MTP 15HD A Series are economical, compact Mini Twisted Pair transmitters and receivers for simultaneously sending high resolution computer-video and audio signals long distances over a single CAT 5-type cable. They are available in several versions and form factors to match the needs of various installation environments.



Extron® Electronics

www.extron.com

DESCRIPTION

The Extron MTP 15HD A Series is a versatile family of mini twisted pair transmitters and receivers for sending high resolution computer-video and audio signals long distances over a single twisted pair cable. The series has five transmitter models and seven receiver models. All models are compatible with resolutions up to 1920x1200 WUXGA and support cable runs of 600 feet (185 meters) or more with XGA signals, and 450 feet (135 meters) or more with UXGA signals.

Extended Distance Receivers

For A/V systems with a need to transmit signals even longer distances, two receiver models, the MTP 1500RL 15HD A and the MTP 1500RL 15HD A SEQ, receive high resolution video and audio signals 1,500 feet (450 meters) or more over a single CAT 5-type cable.

Buffered Loop-Through

All RL receiver models feature an additional female RJ-45 buffered output, enabling up to eight receivers to be connected in series, reducing the number of parallel cable runs required. Each receiver model also offers separate continuously variable level and peaking adjustments that precisely optimize image quality for various cable lengths.

Integrated Skew Equalization

SEQ receiver models feature an integrated skew equalizer to correct the color misalignment present in twisted pair A/V systems using Category 5, 5e, 6, or 7 cable. Skew is created when the red, green, and blue video signals arrive at the display at different times; see Figure 1. Using Extron's skew equalizer technology, the arrival of color signals is synchronized, improving image quality while maintaining full signal integrity; see Figure 2.

A Complete Twisted Pair Solution

These transmitters and receivers are part of the larger, comprehensive MTP Series of twisted pair products. They can be used for single point-to-point applications or in combination with other twisted pair products, including switchers, distribution amplifiers, and matrix switchers, to create more complex A/V systems with multiple inputs and outputs. The Extron MTP Series provides integrators and system designers with the most complete twisted pair product offering in the industry.

FEATURES

- Sends high resolution video and mono audio signals over a single CAT 5-type cable
- Receiver models for 600 foot (185 meters) and 1,500 foot (450 meters) transmission
- Multiple form factors for a variety of installation environments
- Supports RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, and composite video
- Compatible with HDTV component video, bi-level or tri-level sync
- Models available for use with CAT 7 STP cable
- Versatile mounting options
- External international power supply included

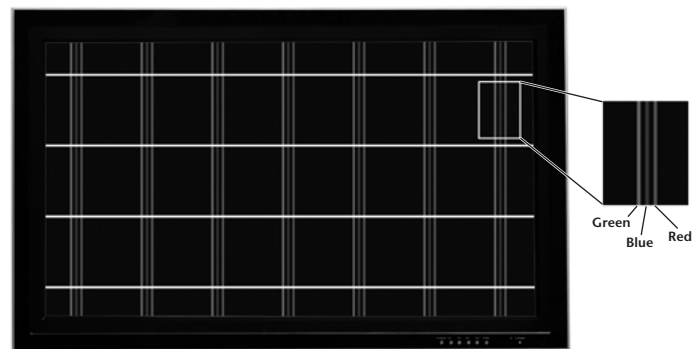


Figure 1
Green and Blue video signals are arriving before the Red signal, requiring skew delay equalization

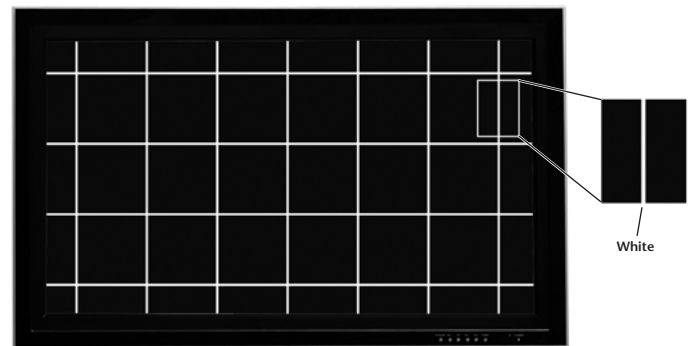


Figure 2
All video signals are now properly aligned as a result of using skew delay equalization

MTP 15HD A Models

Model	Form Factor	Pre-Peaking	Level & Peaking Controls	Buffered UTP Loop Output	Skew Delay Equalizer	Use with CAT 7 Only
Transmitters						
MTP T 15HD A	1/4 Rack	✓				
MTP C7 T 15HD A	1/4 Rack	✓				✓
MTP T 15 HD A WM	1-Gang	✓				
MTP T 15 HD A D	Decora	✓				
MTP T 15 HD A AAP	AAP	✓				
Receivers						
MTP RL 15HD A	1/4 Rack		✓	✓		
MTP C7 RL 15HD A	1/4 Rack		✓	✓		✓
MTP RL 15HD A SEQ	1/4 Rack		✓	✓	✓	
MTP C7 RL 15HD A SEQ	1/4 Rack		✓	✓	✓	✓
MTP 1500RL 15HD A	Low Profile		✓	✓		
MTP 1500RL 15HD A SEQ	Low Profile		✓	✓	✓	
MTP R 15HD RSA D	Decora		✓			

MTP 15HD A SERIES TRANSMITTERS

The Extron MTP T 15HD A Series transmitters send high resolution video and mono audio signals long distances to a compatible MTP receiver over a single CAT 5-type twisted pair cable.

COMMON FEATURES:

- Compatible with high resolution video up to 1920x1200, including HDTV
- Pre-peaking circuit for optimizing video signal on long cable runs
- Buffered local monitor output
- LED power indicator on front panel

MTP T 15HD A Mini Twisted Pair Transmitter for VGA and Audio

UNIQUE FEATURES

- Input: Female VGA connector for video and 3.5 mm stereo mini jack for audio
- Output: Female RJ-45 connector
- Rack-mountable, 1U, quarter-rack width, metal enclosure
- MTP C7 T 15HD A model is for use with CAT 7 cable only and requires C7 receiver

Model	Version Description	Part Number
MTP T 15HD A	Transmitter	60-669-01
MTP C7 T 15HD A	CAT 7 Transmitter	60-669-02



MTP T 15HD A WM Mini Twisted Pair Transmitter for VGA and Audio - Wallplate Version

UNIQUE FEATURES

- Input: Female VGA connector for video and 3.5 mm stereo mini jack for audio
- Output: Female RJ-45 connector on 3" (8 cm) pigtail
- Mounts in an Extron MR 100 one-gang mud ring or standard one-gang electrical box

Model	Version Description	Part Number
MTP T 15HD A WM	One-Gang Wallplate - Black	60-691-02
MTP T 15HD A WM	One-Gang Wallplate - White	60-691-03



MTP T 15HD A D Mini Twisted Pair Transmitter for VGA and Audio - Decora® Wallplate

UNIQUE FEATURES

- Input: Female VGA connector for video and 3.5 mm stereo mini jack for audio
- Output: Female RJ-45 connector on 3" (8 cm) pigtail
- Mounts in an included Decora®-style wallplate

Model	Version Description	Part Number
MTP T 15HD A D	Decora Wallplate - White	60-798-03



MTP T 15HD A AAP Mini Twisted Pair Transmitter for VGA and Audio - AAP Version

UNIQUE FEATURES

- Input: Female VGA connector for video and 3.5 mm stereo mini jack for audio
- Output: Female RJ-45 connector on 3" (8 cm) pigtail
- Mounts in Extron products that accept a double space AAP - Architectural Adapter Plate

Model	Version Description	Part Number
MTP T 15HD A AAP	AAP Module - Black	70-558-02
MTP T 15HD A AAP	AAP Module - White	70-558-03



MTP 15HD A SERIES RECEIVERS

The MTP 15HD A Series receivers accept proprietary signals from any MTP 15HD A Series transmitter. These receivers are compact so they can fit just about anywhere. Available in various architectural form factors for blending into the surrounding environment, while providing easy connector access.

COMMON FEATURES:

- Receives high resolution video and mono audio signals over a single CAT 5-type cable
- Compatible with high resolution video up to 1920x1200, including HDTV
- Separate continuously variable level and peaking controls
- Buffered RJ-45 loop-through for daisy-chaining up to eight receivers – RL models only

NOTE: Universal receivers are also available. See MTP U Series on www.extron.com

MTP RL 15HD A

Mini Twisted Pair Receiver for VGA and Audio

UNIQUE FEATURES

- Input: Female RJ-45 connector and female RJ-45 connector for buffered loop-through
- Output: Female VGA connector for video and captive screw connector for bal/unbal mono audio
- Supports cable runs of 600 feet or more with XGA signals and 450 feet or more with UXGA signals
- Rack-mountable, 1U, quarter rack width, metal enclosure
- MTP C7 RL 15HD A model is for use with CAT 7 cable only and requires C7 transmitter

Model	Version Description	Part Number
MTP RL 15HD A	Receiver	60-690-01
MTP C7 RL 15HD A	CAT 7 Receiver	60-690-03



MTP RL 15HD A SEQ

Mini Twisted Pair Receiver for VGA and Audio with Skew Equalization

UNIQUE FEATURES

- Input: Female RJ-45 connector and female RJ-45 connector for buffered loop-through
- Output: Female VGA connector for video and captive screw connector for bal/unbal mono audio
- Supports cable runs of 600 feet or more with XGA signals and 450 feet or more with UXGA signals
- Independent skew compensation adjustments for each color
- Rack-mountable, 1U, quarter rack width, metal enclosure
- MTP C7 RL 15HD A SEQ model is for use with CAT 7 cable only and requires C7 transmitter

Model	Version Description	Part Number
MTP RL 15HD A SEQ	Receiver w/ Skew EQ	60-690-02
MTP C7 RL 15HD A SEQ	CAT 7 Receiver w/ Skew EQ	60-690-04



MTP 1500RL 15HD A

Extended Distance Mini Twisted Pair Receiver for VGA and Audio

UNIQUE FEATURES

- Receives high resolution video and mono audio signals 1,500 feet or more
- Input: Female RJ-45 connector and female RJ-45 connector for buffered loop-through
- Output: Female VGA connector for video and captive screw connector for bal/unbal mono audio
- Low profile enclosure, discreetly mounts behind wall mounted display

Model	Version Description	Part Number
MTP 1500RL 15HD A	Receiver	60-959-01



MTP 1500RL 15HD A SEQ

Extended Distance Mini Twisted Pair Receiver for VGA and Audio with Skew Equalization

UNIQUE FEATURES

- Receives high resolution video and mono audio signals 1,500 feet or more
- Input: Female RJ-45 connector and female RJ-45 connector for buffered loop-through
- Output: Female VGA connector for video and captive screw connector for bal/unbal mono audio
- Independent skew compensation adjustments for each color
- Low profile enclosure, discreetly mounts behind wall mounted display

Model	Version Description	Part Number
MTP 1500RL 15HD A SEQ	Receiver w/ Skew EQ	60-959-02



MTP R 15HD RSA D

Mini Twisted Pair Receiver for VGA, Audio, and RS-232 - Decora® Wallplate

UNIQUE FEATURES

- Input: Female RJ-45 connector
- Output: Female VGA connector for video and captive screw connectors for RS-232 and audio
- Supports cable runs of 600 feet or more with XGA signals and 450 feet or more with UXGA signals
- Automatic detection and routing of audio and RS-232 signals to the appropriate output
- Mounts in an included Decora®-style wallplate

Model	Version Description	Part Number
MTP R 15HD RSA D	Receiver Decora	60-929-01



SPECIFICATIONS

VIDEO	
Gain	Unity
Signal type.....	proprietary analog signals
Connectors	
All models	1 female RJ-45
VIDEO INPUT AND LOOP THROUGH — TRANSMITTER	
Number/signal type	
MTP T 15HD A AAP, MTP T 15HD A D, MTP T 15HD A WM.....	1 analog RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, or composite video
All other models	1 analog RGBHV, RGBS, RGsB, RsGsBs, component video (with bi-level or tri-level sync), S-video, or composite video 1 buffered RGBHV, RGBS, RGsB, RsGsBs local monitor loop through (includes ID bits)
Connectors	
MTP T 15HD A AAP, MTP T 15HD A D, MTP T 15HD A WM.....	1 female 15-pin HD
All other models	2 female 15-pin HD
Nominal level	1 Vp-p for Y of component video and S-video, and for composite video 0.7 Vp-p for RGB and for R-Y and B-Y of component video 0.3 Vp-p for C of S-video
Minimum/maximum levels	0.3 V to 1.45 Vp-p
Impedance	75 ohms
Horizontal frequency	15 kHz to 130 kHz
Vertical frequency	30 Hz to 150 Hz
DC offset (max. allowable).....	250 mV
VIDEO OUTPUT — RECEIVERS	
Number/signal type	
D and WM models	1 analog RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, or composite video
All other models.....	1 set of proprietary analog signals 1 analog RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, or composite video
Connectors	
D and WM models	1 female 15-pin HD
All other models	1 female RJ-45 1 female 15-pin HD
Nominal level	1 Vp-p for Y of component video and S-video, and for composite video 0.7 Vp-p for RGB and for R-Y and B-Y of component video 0.3 Vp-p for C of S-video
Minimum/maximum levels	0.3 V to 1.45 Vp-p
Impedance	75 ohms
DC offset	
MTP C7 RL 15HD Series, MTP 15HD A Series	<±35 mV with input at 0 offset
All other receivers.....	<±20 mV with input at 0 offset
SYNC	
Input type (transmitters)	RGBHV, RGBS, RGsB, RsGsBs
Output type (receivers).....	RGBHV, RGBS, RGsB, RsGsBs
Standards	NTSC 3.58, NTSC 4.43, PAL, SECAM
Input level (transmitters)	3.5 V to 5.5 Vp-p, unterminated
Output level (receivers).....	TTL: 4.0 V to 5.0 V p-p, unterminated for RGBHV, RGBS
AUDIO	
Number/signal type.....	1 set of proprietary analog signals from an MTP transmitter
Connector	1 female RJ-45
Gain	Unbalanced output: 0 dB; balanced output: +6 dB
Frequency response	20 Hz to 20 kHz, ±1 dB
THD + Noise	0.15% @ 1 kHz, 0.3% @ 20 kHz at nominal level
S/N	>70 dB at maximum output (unweighted)
Stereo channel separation	
MTP T 15HD A AAP, MTP T 15HD A D, MTP T 15HD A WM.....	>60 dB @ 1 kHz
CMRR	>43 dB @ 20 Hz to 20 kHz

AUDIO INPUT — MTP T 15HD A SERIES TRANSMIT	
Number/signal type	1 stereo, unbalanced
Connectors	(1) 3.5 mm mini stereo jack
Impedance	>10k ohms, unbalanced
Nominal level	+4 dBu (1.23 Vrms), -10 dBV (316 mVrms)
Maximum level	
MTP C7 T 15HD A	+12 dBu, (unbalanced) at 1%THD+N
All other models	+18 dBu, (unbalanced) at 1%THD+N
NOTE: 0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV ≈ 2 dBu	
AUDIO OUTPUT	
Number/signal type	
MTP 1500RL 15HD A, MTP 1500RL 15HD A SEQ, MTP R 15HD A Series, MTP C7 RL 15HD A, MTP C7 RL 15HD A SEQ.....	2 mono, balanced/unbalanced
MTP R 15HD RSA D.....	1 mono, balanced/unbalanced
MTP T 15HD A AAP, MTP T 15HD A D, MTP T 15HD A WM local stereo output..	1 stereo, balanced/unbalanced
Connector	
MTP 1500RL 15HD A, MTP 1500RL 15HD A SEQ, MTP T/R 15HD A Series, MTP C7 RL 15HD A, MTP C7 RL 15HD A SEQ.....	(1) 3.5 mm captive screw connector, 5 pole (uses 3 poles)
MTP R 15HD RSA D.....	(1) 3.5 mm captive screw connector, 5 pole (uses 3 poles)
Impedance	50 ohms balanced, 100 ohms balanced
Gain error	±1 dB channel to channel
Nominal level	+4 dBu (1.23 Vrms), -10 dBV (316 mVrms)
Maximum level	
MTP T 15HD A Series (Hi-Z)	>+23 dBu, balanced or unbalanced at 1% THD+N
MTP T 15HD A Series (600 ohms)	>+17 dBm, balanced or unbalanced at 1% THD+N
All other models	>+18 dBm, unbalanced at 1% THD+N
CONTROL/REMOTE — external device (pass-through, unidirectional or bidirectional), MTP R 15HD RSA D only	
Serial control port input/output.....	1 set of proprietary signals on a female RJ-45 jack
Serial control port output/input.....	RS-232 via 3 poles of a 3.5 mm captive screw connector, 5 pole
Baud rate and protocol.....	9600 baud, 8 data bits, 1 stop bit, no parity
GENERAL	
External power supply	100 VAC to 240 VAC, 50/60 Hz, external; to 12 VDC, 2 A, regulated
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
Product weight	
MTP 4T 15HD RS	6.0 lbs (2.7 kg)
MTP 1500RL 15HD Series.....	2.5 lbs (1.1 kg)
MTP R 15HD RSA D, MTP T/R 15HD RS, MTP R 15HD RS SEQ, MTP T/R C7 15HD Series, MTP 15HD A Series	0.4 lbs (0.2 kg)
Shipping weight	
MTP 4T 15HD RS	10 lbs (5 kg)
MTP 1500RL 15HD Series.....	5 lbs (3 kg)
MTP R 15HD RSA D, MTP T/R 15HD RS, MTP R 15HD RS SEQ, MTP T/R C7 15HD Series, MTP 15HD A Series	2 lbs (1 kg)
Vibration.....	ISTA 1A in carton (International Safe Transit Association)
Regulatory compliances	
Safety	CE, C-tick, CUL, UL
EMI/EMF	CE, C-tick, FCC Class A, ICES, VCCI
MTBF	30,000 hours
Warranty.....	3 years parts and labor
NOTE: All nominal levels are at ±10%.	
NOTE: Specifications are subject to change without notice.	
* For complete product specification see Extron.com	

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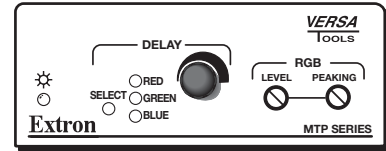
PANEL DRAWINGS



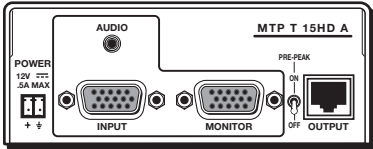
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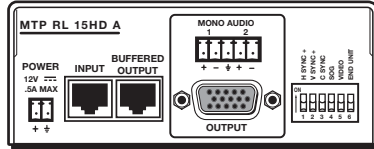
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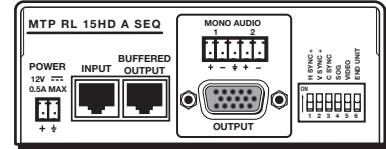
MTP RL 15HD A SEQ - Front



MTP T 15HD A - Back



MTP RL 15HD A - Back



MTP RL 15HD A SEQ - Back



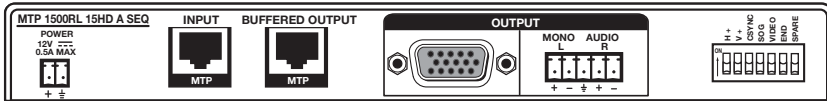
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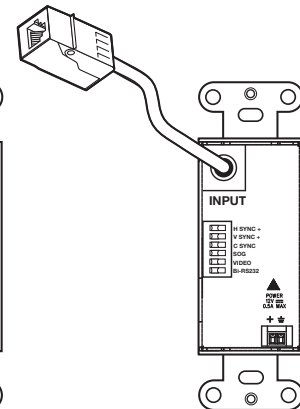
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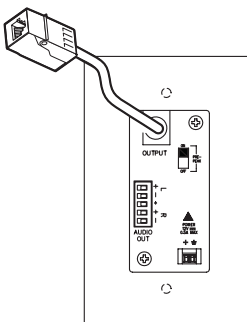


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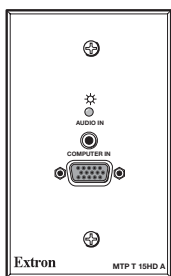


MTP R 15HD RSA D Front

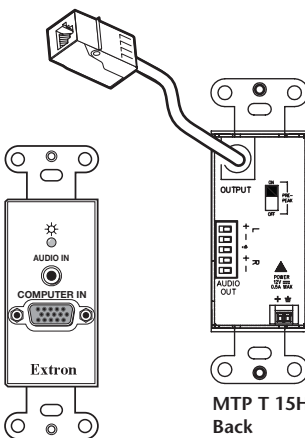
MTP R 15HD RSA D Back



MTP T 15HD A WM Back



MTP T 15HD A WM Front

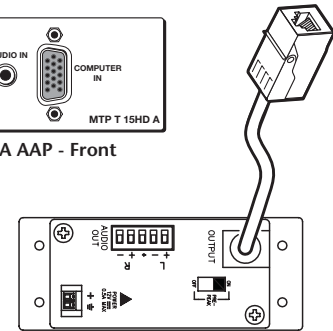


MTP T 15HD A D Front

MTP T 15HD A D Back



MTP T 15HD A AAP - Front



MTP T 15HD A AAP - Back



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