

# MPS 602

## MEDIA PRESENTATION SWITCHER WITH DTP EXTENSION

Simplified AV Switching with Powerful  
Integration Capabilities

- ▶ Integrates HDMI, RGB, and audio sources into presentation systems
- ▶ Selectable HDMI or DTP™ twisted pair output
- ▶ Integrated DTP input and output are compatible with all DTP 230 Series and DTP 330 Series products
- ▶ Mic/line input with 48 volt phantom power and ducking
- ▶ HDMI audio embedding and de-embedding
- ▶ Optional integrated stereo or mono Class D power amplifiers



**Extron Electronics**  
INTERFACING, SWITCHING AND CONTROL

# Introduction

The Extron **MPS 602** is a simple-to-use, six input media presentation switcher for digital and analog sources. It offers digital video switching with three HDMI inputs and one DTP™ twisted pair input, and analog video switching with two RGB inputs that are digitized for distribution to the digital outputs. For increased flexibility, the MPS 602 includes a DTP twisted pair output and an HDMI output that are switch-selectable. The DTP input and output work in conjunction with DTP transmitters and receivers to extend HDMI, audio, and bidirectional control signals up to 330 feet (100 meters), and each DTP link requires just a single shielded CATx cable. The MPS 602 also includes several audio switching and processing features, available power amplification, plus flexible control options for complete AV switching and distribution.

## Integrated Digital Twisted Pair Extension

The DTP twisted pair input on the MPS 602 can receive signals from a remote DTP 230 or DTP 330 transmitter in areas such as a conference table, lectern, or wall for connecting a guest laptop. The DTP twisted pair output can be used to transmit signals from an MPS 602 in a rack to a DTP 230 or DTP 330 receiver behind a flat-panel display on a wall, above a ceiling-mounted projector, or any other remote location. DTP 230 and DTP 330 transmitters and receivers are available in compact, low-profile enclosures, plus decorator-style wallplate and floorbox versions to suit the installation requirements of a specific application.

The DTP twisted pair input and output include additional, convenient, integrator-friendly features designed to help simplify installation. Bidirectional RS-232 and IR signals can be inserted from a control system and transmitted over the single shielded CATx cable together with the video and audio, enabling control of a source or display. Additionally, the MPS 602 can send power to select DTP

transmitters and receivers over the same shielded CATx cable, streamlining system design and installation.

## Reliable Switching for Digital and Analog Formats

The MPS 602 features a unique independent switching capability for digital and analog RGB video sources. The MPS 602 digitizes analog RGB input signals to ensure that a reliable, high quality digital video signal is sent to the HDMI and DTP outputs. The RGB inputs can be switched independently to the local RGB output.

To enhance and simplify integration of sources and displays, and to help ensure optimal system performance and dependability, the MPS 602 features EDID Minder®. EDID Minder is an Extron-exclusive technology that manages EDID communication between the display device and input sources to ensure that the correct video formats are displayed reliably.

## Audio Integration Capabilities with Available Power Amplification

The MPS 602 includes six-input analog audio switching, a mic/line input with 48 volt phantom power, HDMI audio embedding and de-embedding, and several audio processing features for mixing and ducking. The mic ducking feature automatically reduces program audio when it detects a microphone signal, replacing the need for a separate audio ducking processor. To streamline audio setup, the MPS 602 features front panel mic and program audio output volume controls which allow for independent adjustment of mic volume, program audio volume, and muting.

The MPS 602 is available in three models, two of which feature integrated power amplifiers. The MPS 602 is a non-amplified model with a variable preamp output. The MPS 602 SA delivers stereo power amplification with 50 watts rms per channel into 4 ohms and 25 watts rms per channel into 8 ohms, while the MPS 602 MA provides mono 70 volt amplification with 100 watts rms output. Both of the amplified models feature an Extron exclusive Class D amplifier design with patented CDRS™ - Class D Ripple Suppression technology that provides a smooth, clean audio waveform as well as an improvement in signal fidelity over conventional Class D amplifier designs.



# Features

## COMPATIBLE WITH ALL EXTRON DTP SYSTEM PRODUCTS

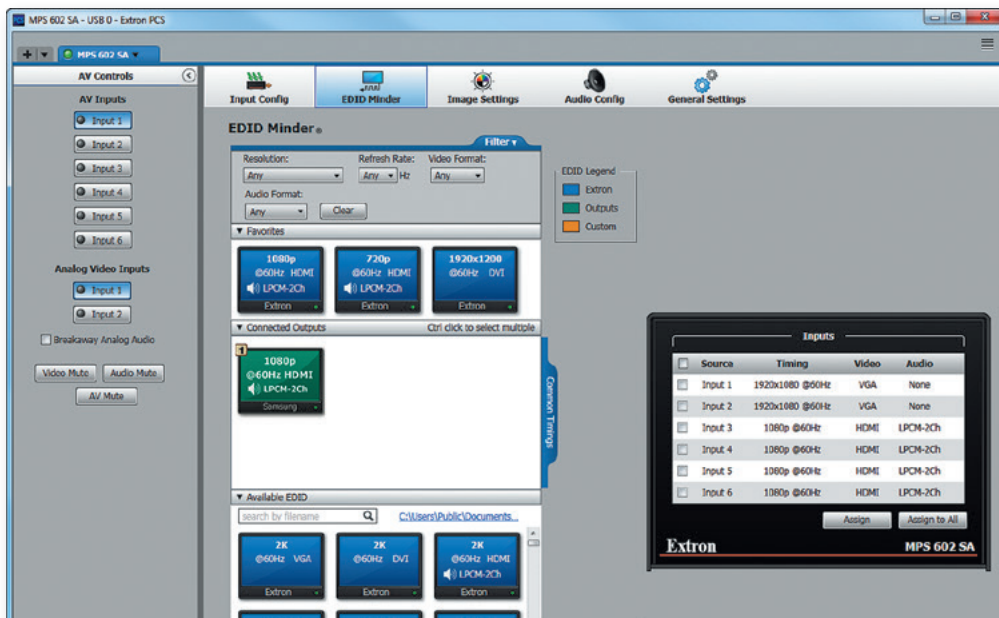
The MPS 602 works in conjunction with all Extron DTP 230 and DTP 330 transmitters and receivers to extend video, audio, and control signals in AV switching applications. When the MPS 602 is paired with a DTP 330 transmitter or receiver, HDMI, DisplayPort, DVI, 3G-SDI, or VGA, plus control and analog audio signals can be extended up to 330 feet (100 meters). With a DTP 230 endpoint, signals can be extended up to 230 feet (70 meters). The ability to extend these signals and provide remote power to select DTP endpoints with just one shielded CATx cable greatly streamlines system designs and installation.

Designed for rack mount and architectural applications, the DTP transmitters and receivers provide convenient connection points at remote source and display locations. Decorator-style models are available for placement in walls, lecterns, floor boxes, or behind flat-panel displays. Compact, low-profile versions can be discreetly installed beneath tables, in lecterns, above ceiling-mounted projectors, or behind flat-panel displays.



## INTUITIVE SETUP AND OPERATION

The MPS 602 can be easily configured by using the Product Configuration Software via the front panel USB port. The user-friendly GUI of the configuration software allows for expedited setup. The intuitive user-interface makes it easy to independently apply EDID settings to each input, allowing the user to select from EDID captured from connected output devices, factory default EDID, or custom EDID uploaded to the unit. Users can also view details about the current input and output, such as signal format, resolution, and HDCP status, and conveniently switch between the inputs. In addition, audio settings are available for input gain, volume, mic talk over, and more.



# Overview

## HDCP compliant

Worry-free display of protected content from digital video sources.

## Independent RGB analog input switching

An RGB input can be independently switched to the local RGB output.

## Analog and digital input switching

HDMI, DTP, or RGB analog inputs can be selected for independent switching to the HDMI or DTP output.

## Volume and muting controls

Allow for adjustment of the microphone level, as well as the program and amplified audio level.



MPS 602

## HDMI and RGB inputs

Ensure compatibility with digital and analog sources.

## Input and output for DTP twisted pair extension

Support digital signal transmission up to 330 feet (100 meters) over a shielded CATx cable.

## Selectable HDMI or DTP output

The input signal can be routed to either the HDMI output or the DTP output.

## Mic/line input with 48 V phantom power

One mic/line input is available for mixing microphones or line level sources into the audio output.

## RS-232 control

The MPS 602 can be controlled and monitored using serial commands.



MPS 602 SA

## Optional integrated power amplifier

Two models are available with efficient Class D amplifiers: a stereo power amplifier with 50 watts rms output per channel into 4 ohms, and a mono 70 volt power amplifier with 100 watts rms output.

# Features

## One DTP input, three HDMI inputs, and two RGB inputs

The MPS 602 allows for switching between HDMI and analog video sources.

## Selectable HDMI or DTP output

The input signal can be routed to either the HDMI output or the DTP output.

## Independent RGB input switching

An RGB input can be independently switched to the local RGB output.

## Compatible with all DTP-enabled products

The MPS 602 supports DTP twisted pair signal transmission of HDMI, DisplayPort, DVI, 3G-SDI, or VGA plus analog audio, control, and remote power up to 330 feet (100 meters) over a shielded CATx cable.

## Compatible with CATx shielded twisted pair cable

## Extron XTP DTP 24 shielded twisted pair cable is strongly recommended for optimal performance

## Bidirectional RS-232 and IR pass-through for AV device control

Bidirectional RS-232 control and IR signals can be transmitted alongside video and audio over the DTP connections, simplifying integration with a control system for managing AV devices.

## Remote powering of select DTP transmitters and receivers

## Digital conversion of analog input signals

The MPS 602 digitizes analog input signals, ensuring that a reliable, high quality digital video signal is sent to the output.

## HDCP compliant

The MPS 602 fully supports HDCP-encrypted sources, with selectable authorization for unencrypted content.

## Supported HDMI specification features include data rates up to 6.75 Gbps, Deep Color up to 12-bit, 3D, and HD lossless audio formats

## EDID Minder

Automatically manages EDID communication between connected devices. EDID Minder ensures that all sources power up properly and reliably output content for display.

## HDMI audio embedding

Analog input audio signals can be embedded onto the HDMI output signal.

## HDMI audio de-embedding

Embedded HDMI two-channel PCM audio can be extracted to the analog outputs.

## Mic/line input with 48 volt phantom power

A mic or line level audio source can be mixed with program audio. Selectable 48 volt phantom power allows the use of condenser microphones.

## Mic ducking

Automatically reduces program audio when a microphone signal is detected, eliminating the need for a separate audio ducking processor.

## Audio input gain and attenuation

Gain or attenuation can be adjusted for each two-channel audio input to eliminate noticeable differences when switching between sources.

## Audio breakaway

Provides the capability to break an analog audio signal away from its corresponding video signal and route to the audio outputs, allowing the analog audio channels to be operated as a separate switcher.

## Output volume control

The MPS 602 provides volume control and muting for the program and amplified audio outputs, as well as a separate control for mic volume and muting.

## Auto-switching between inputs

Auto-switching allows for simple, unmanaged installation in locations such as in a lectern or under a conference table. When multiple inputs are active, the switching priority is configurable.

## Front panel security lockout

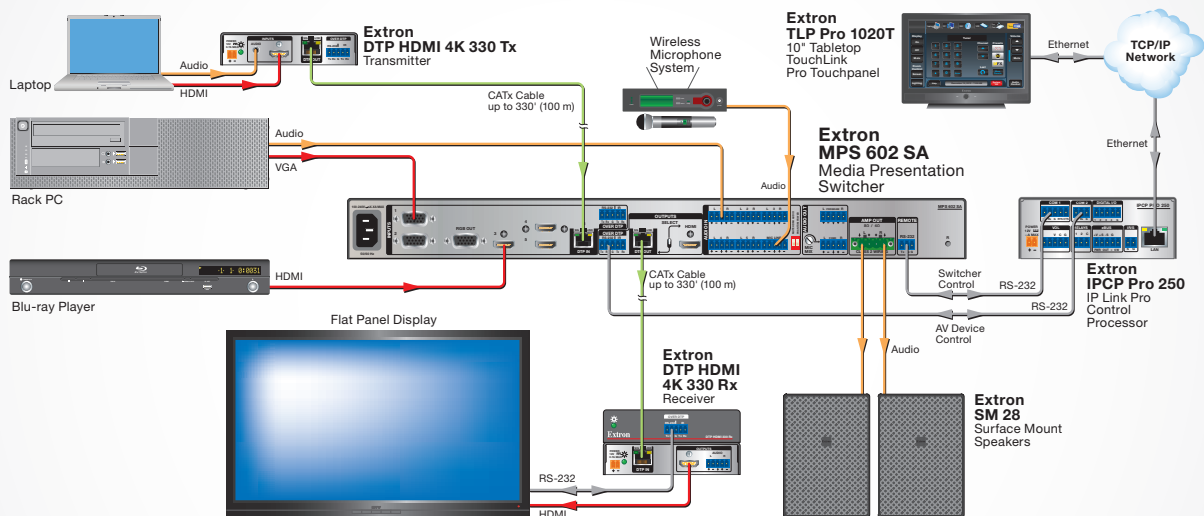
## Available power amplification

The MPS 602 SA includes a stereo power amplifier with 50 watts rms per channel into 4 ohms and 25 watts rms per channel into 8 ohms. The MPS 602 MA offers a mono 70 volt amplifier with 100 watts rms output.

## USB and RS-232 control

The MPS 602 provides multiple control and monitoring options in addition to the front panel.

## Rack-mountable 1U, full rack width metal enclosure



# Specifications

VIDEO — VGA	
Bandwidth	170 MHz (-3 dB)
VIDEO — HDMI AND DTP	
Maximum data rate	6.75 Gbps (2.25 Gbps per color)
Maximum pixel clock	165 MHz
Resolution	1920x1200 @ 60 Hz or 1080p @ 60 Hz, and 2K
Formats	RGB and YCbCr digital video
VIDEO INPUT	
Number/signal type	
VGA inputs	2 VGA-QXGA, RGBHV, RGBS
HDMI inputs	3 HDMI (or single link DVI-D, with appropriate DVI-HDMI adapters)
DTP input	1 DTP 330 input
Connectors	
VGA inputs	2 female 15-pin HD
HDMI inputs	3 female HDMI, type A
DTP input	1 RJ-45 female
VIDEO OUTPUT	
Number/signal type	
Local VGA output	1 VGA-QXGA, RGBHV, RGBS
HDMI outputs	1 HDMI (or single link DVI-D)
DTP output	1 DTP 330 output
DTP signal	
Transmission distance	up to 330' (100 m) using shielded twisted pair (STP) or XTP DTP 24 cable
Cable requirements	Solid conductor, 24 AWG or better
Cable recommendations	400 MHz bandwidth, STP (shielded twisted pair)
<b>NOTE:</b> Extron XTP DTP 24 shielded twisted pair cable is strongly recommended for optimal performance.	
AUDIO — INDIVIDUAL AUDIO GROUPS (VGA, HDMI)	
Gain	Unbalanced output: 0 dB; balanced output: +6 dB
Frequency response	20 Hz to 20 kHz, ±0.5 dB
AUDIO INPUT — (VGA, AND HDMI VIDEO)	
Number/signal type	
VGA inputs	2 stereo, unbalanced/balanced
HDMI inputs	3 stereo, unbalanced/unbalanced, or 3 embedded digital audio from HDMI
DTP input	1 stereo, unbalanced analog 1 embedded digital audio from DTP
Embedded digital audio source formats	2-ch PCM
AUDIO OUTPUT	
Number/signal type	2 stereo, balanced/unbalanced (fixed and variable outputs) 1 DTP analog audio and 1 embedded digital audio on DTP signal 1 embedded digital audio on HDMI
Connectors	(2) 3.5 mm captive screw connectors, 5-pole 1 RJ-45 1 female HDMI type A

AUDIO OUTPUT — POWER AMPLIFIER		
Number/signal type		
MPS 602 SA	1 stereo (default) or 2 mono, 2 channels total	
MPS 602 MA	1 mono, 70V line	
Output power		
MPS 602 SA	25 watts rms per channel, 8 ohms, 1 kHz, 0.1% THD 50 watts rms per channel, 4 ohms, 1 kHz, 0.1% THD	
MPS 602 MA	100 watts rms 70V, 1 kHz, 0.1% THD	
Amplifier type	Class D	
MIC/LINE INPUT		
Number/signal type	1 mono balanced/unbalanced	
Connector	(1) 3.5 mm captive screw connector	
Input gain adjustment	-18 dB to +60 dB, 1 dB steps, adjustable per input	
Microphone volume range	-66 dB to +12 dB	
Microphone DC power	+48 VDC +10% phantom power, can be turned on or off	
<b>NOTE:</b> Mic/line audio is not embedded on DTP analog audio output or digital embedded audio.		
COMMUNICATIONS — SWITCHER		
Serial control port	1 RS-232, 3.5 mm captive screw connector, 3-pole, rear panel	
USB control ports	1 front panel female mini USB B	
COMMUNICATIONS		
External device (pass-through, unidirectional or bidirectional)		
Quantity/type	(2) RS-232 and IR via (2) 3.5 mm 5-pole captive screw connectors	
Serial control pass-through ports	(2) bidirectional RS-232	
IR pass-through control ports	2 bidirectional TTL level (0 to 5 V) modulated infrared control from 30 kHz up to 60 kHz	
IR control pin configuration	3 = Gnd, 4 = IR Tx, 5 = IR Rx	
GENERAL		
Power supply	Internal Input: 100-240 VAC, 50-60 Hz	
Remote power capability	Supports up to two endpoints (one DTP Tx, one DTP Rx)	
Mounting		
Rack mount	Yes, with included brackets	
Enclosure type	Metal	
Enclosure dimensions	1.75" H x 17.4" W x 8.5" D (1U high, full rack wide) 4.4 cm H x 43.2 cm W x 21.6 cm D (Depth excludes connectors and knobs. Width excludes rack ears.)	
Regulatory compliance		
Safety	CE, c-UL, UL	
EMI/EMC	CE, C-tick, ICES, FCC Class A, VCCI, ICES	
Environmental	Complies with the appropriate requirements of RoHS, WEEE	
<b>Model</b>	<b>Version Description</b>	<b>Part number</b>
MPS 602	Variable Preamp Output - No Amplifier	60-1313-51
MPS 602 SA	2 x 50 Watt Stereo Power Amplifier	60-1314-51
MPS 602 MA	100 Watt 70 Volt Mono Power Amplifier	60-1315-51

For complete specifications, please go to [www.extron.com](http://www.extron.com)  
Specifications are subject to change without notice.

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