



MPS 602

MPS 602 SA



Video – VGA

Gain	Unity
Bandwidth	350 MHz (-3 dB)
Crosstalk	-50 dB @ 10 MHz, -30 dB @ 100 MHz
Switching speed	<5 ms (max.)

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, 12 bit color, and 2K
Formats	RGB and YCbCr digital video
Standards	DVI 1.0, HDMI, HDCP 1.1, CEA-861E

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 230 input
Connectors	
VGA inputs	2 female 15 pin HD
HDMI inputs	3 female HDMI, type A
DTP input	1 RJ-45 female
Nominal level	
VGA inputs	0.7 Vp-p for RGB
Minimum/maximum levels	
VGA inputs	Analog 0.3 V to 1.5 Vp-p with no offset
Impedance	75 ohms
Horizontal frequency	15 kHz to 145 kHz
Vertical frequency	30 Hz to 170 Hz
Return loss	<-40 dB @ 5 MHz



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 230 output
DTP signal	
Transmission distance	up to 230' (70 m) using CAT 5e/6/6a/7 cable or XTP DTP 24 TP cable
Cable requirements	Solid conductor, 24 AWG or better
Cable recommendations	400 MHz bandwidth, STP (shielded twisted pair)

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

Connectors

Local VGA output	1 female 15-pin HD
HDMI outputs	1 female HDMI type A
DTP output	1 RJ-45 jack

Outputs are selectable from either the HDMI output or DTP output. The switcher does not output to both connectors simultaneously. Analog RGB inputs are digitized for output from either the HDMI or DTP output.

Nominal level

VGA outputs	0.7 Vp-p for RGB
Minimum/maximum levels	
VGA outputs	Analog, 0.3 V to 1.5 Vp-p
Impedance	75 ohms
Return loss (VGA output)	<-40 dB @ 5 MHz
DC offset (max. allowable, VGA output)	±5 mV with input at 0 offset



Sync – VGA Inputs Only

Input type	RGBHV, RGBS
Local VGA output	RGBHV, RGBS
Input level	1.9 V to 5.0 Vp-p
Output level	TTL: 5.0 Vp-p (unterminated) for RGBHV, RGBS
Input impedance	510 ohms
Output impedance	75 ohms
Max. input voltage	5.0 Vp-p
Max. propagation delay	30 ns
Max. rise/fall time	4.2 ns
Polarity	Positive or negative (follows input)

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
THD + Noise	



MPS 602	0.01% @ 1 kHz at nominal level
MPS 602 SA/MA	0.1% @ 1 kHz 3 dB below clipping
S/N	
MPS 602	>90 dB at maximum output (unweighted)
MPS 602 SA/MA	>90 dB 20 Hz to 20 kHz, unweighted
Crosstalk	<-72 dB @ 1 kHz or below, <-45 dB @ 20 kHz
Stereo channel separation	>80 dB @ 20 Hz to 20 kHz
CMRR	>75 dB @ 20 Hz to 20 kHz

Audio input – (VGA, and HDMI video)

Number/signal type

VGA inputs	2 stereo, unbalanced/balanced
HDMI inputs	3 stereo, unbalanced
DTP input	1 stereo, unbalanced/balanced analog, 1 embedded digital audio from DTP
Embedded digital audio source formats	2-ch PCM
Connectors	
VGA inputs	(2) 3.5 mm, 5-pole captive screw connectors
HDMI inputs	(3) 3.5 mm 5-pole captive screw connectors (3) female HDMI type A
DTP input	1 female RJ-45 connector
Input impedance	>10k ohms unbalanced, 20 k ohms balanced
Nominal level	+4 dBu, -10 dBV configurable
Maximum level	+21 dBu, balanced, +15 dBu unbalanced
CMRR	>60 dB typical @ 1 kHz
Input gain adjustment	-18 dB to +24 dB, adjustable per input <i>0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV ≈ 2 dBu</i>

Audio output

Number/signal type	(2) stereo, balanced/unbalanced (fixed and variable outputs) (1) DTP 230 analog audio and 1 embedded digital audio on DTP signal
Connector	(1) embedded digital audio on HDMI (2) 3.5 mm captive screw connector, 5-pole (1) RJ-45 (1) female HDMI type A
Impedance	50 ohms unbalanced, 100 ohms balanced
Gain error	±0.5 dB channel to channel
Nominal level when the main volume is set to default	-2 dBu (632 mVrms) balanced output
Maximum level (Hi-Z)	>16.5 dBu balanced, >8.2 dBV unbalanced at 1% THD+N
Talk-over (ducking) response time (typical)	
Attack time	Instant
Release delay	5 seconds
Release time	1 second
Ducking level	0 dB to 30 dB, adjustable; default = +6 dB



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

Connector

MPS 602 SA	(1) 5 mm screw lock captive screw connector, 4-pole
MPS 602 MA	(1) 5 mm screw lock captive screw connector, 2-pole

Load impedance

MPS 602 SA	4 ohms minimum
MPS 602 MA	50 ohms minimum

Output power

MPS 602 SA	25 watts per channel, 8 ohms, 1 kHz, 0.1% THD 50 watts per channel, 4 ohms, 1 kHz, 0.1% THD
MPS 602 MA	100 watts per channel, 4 ohms, 1 kHz, 0.1% THD

THD + Noise 0.1% @ 1 kHz, 3 dB below clipping

Amplifier type Class D

Mic/line input

Number/signal type 1 mono balanced/unbalanced

Connector (1) 3.5 mm captive screw connector

Impedance 10k ohms unbalanced, 20k ohms balanced

Nominal level -60 dBV (1 mV), +4 dBu, -10 dBV, adjustable

Equivalent input noise <-117 dBV (1.4 uVrms) when gain is set to 40 dB

Maximum level +12 dBV (2 Vrms) when gain is set to 0 dB

CMRR >60 dB typical @ 1 kHz

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 phantom power, can be turned on or off

Mic/Line audio is not embedded on DTP analog audio output or digital embedded audio.

Control/remote – switcher

Serial control port 1 RS-232, 3.5 mm captive screw connector, 3-pole, rear panel

Baud rate and protocol 9600 baud, 8 data bits, 1 stop bit, no parity

Serial control pin configuration 2 = Tx, 3 = Rx, 5 = GND

USB control ports 1 front panel female mini USB B

USB standards USB 2.0, high speed

Program control Extron Simple Instruction Set (SIS™)

Control/remote – external device (pass-through, unidirectional or bidirectional)

Protocol is mirrored between the connected DTP 230 endpoints and the "Over DTP" input and output ports. Signals from a control device pass into each "Over DTP" port, are embedded with the DTP signal, and sent to individual DTP 230 Tx or Rx endpoints for control of remote sink or source devices.

The "Over DTP" ports are pass-through connections to DTP endpoints. There is no RS-232 or IR insertion from the MPS 602 control ports to the "Over DTP" ports.

Quantity/type (2) RS-232 and IR via (2) 3.5 mm 5-pole captive screw connectors

Serial control pass-through ports RS-232 and IR via (2) 3.5mm 5-pole captive screw connectors



Input/DTP Tx	(1) RS-232 (1) 3.5 mm 5-pole captive screw connector (shared with IR port)
Output/DTP Rx	(1) RS-232 (1) 3.5 mm 5-pole captive screw connector (shared with IR port)
Baud rates	300 to 38400 baud
Protocol	8 or 7 data bits 1 or 2 stop bits no parity (default), even or odd parity
Serial control pin configuration	1 = Tx, 2 = Rx, 3 = GND
IR pass-through control ports	(2) bidirectional TTL level (0 to 5 V) modulated infrared control from 30 kHz up to 60 kHz
Input/DTP Tx	(1) RS-232 (1) 3.5 mm 5-pole captive screw connector (shared with RS-232 port)
Output/DTP Rx	(1) RS-232 (1) 3.5 mm 5-pole captive screw connector (shared with RS-232 connector)
IR control pin configuration	3 = GND, 4 = IR Tx, 5 = IR Rx

General

Power supply	Internal Input: 100-240 VAC, 50-60 Hz
Power consumption	
MPS 602	Full Load, 22 W
MPS 602 SA	Full load, amp at 1/8 power: 44 W
MPS 602 MA	Full load, amp at 1/8 power: 44 W
Remote power capability	Supports up to two endpoints (one DTP Tx, one DTP Rx)
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	Convection, no vents
Power consumption	22 watts
Thermal dissipation	
MPS 602	Full load, 69 BTU/hr
MPS 602 SA	Full load, amp at 1/8 power: 102 BTU/hr
MPS 602 MA	Full load, amp at 1/8 power: 102 BTU/hr
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.)
Product weight	7.0 lbs (3.2 kg)
Shipping weight	10 lbs (5 kg)
Vibration	ISTA 1A in carton (International Safe Transit Association)
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
Warranty	3 years parts and labor