

Specifications

MGP 641 xi and MGP 641 xi SDI

TRUE 4K specifications

HDMI

Max. 4K Capabilities		
Resolution and Refresh Rate	Chroma Sampling	Max. Bit Depth per Color
4096 x 2160 at 60 Hz ²	4:4:4	8 bit
3840 x 2160 at 60 Hz		
4096 x 2160 at 30 Hz		10 bit
3840 x 2160 at 30 Hz		
4096 x 2160 at 60 Hz	4:2:0	8 bit
3840 x 2160 at 60 Hz		

SDI

Max. 4K Capabilities		
Resolution and Refresh Rate	Chroma Sampling	Max. Bit Depth per Color
4096 x 2160 at 60 Hz	4:2:2	10 bit
3840 x 2160 at 60 Hz		

Frame rate	24, 25, 30, 50, or 60 fps
Chroma sampling ¹	4:4:4, 4:2:2, and 4:2:0
Color bit depth ¹	8 or 10 bits per color
Signal type	DVI 1.0, HDMI 2.0, HDCP 1.4 and 2.3, 6G-SDI, 12G-SDI
Max. video data rate ¹ ,	
HDMI	18 Gbps (6 Gbps per color)
SDI	11.88 Gbps per SDI connection

NOTES:

- ¹Subject to the maximum data rate limit. Use our calculator at www.extron.com/8KdataRate to determine video parameters supported by this data rate.
- ²4096 x 2160/50-60 at 4:4:4 is available only for HDMI connections.

Video input

Number/signal type	4 HDMI/DVI 1 HDMI/DVI (Live Background) 4 12G/6G/3G/HD/SD SDI (SDI model only)
Connectors	4 female HDMI type A 1 female HDMI type A (Live Background) 4 female BNC (SDI model only)
Horizontal frequency	15 kHz to 270 kHz
Vertical frequency	24 Hz to 240 Hz
Resolution range	640x480 to 4096x2160, 480i, 576i, 480p, 576p, 720p, 1080i, 1080p, 2K, 3840x2160 (up to 60 Hz), 4096x2160 (up to 60 Hz)
Standards	DVI 1.0, HDMI 2.0, HDCP 1.4 and 2.3, SMPTE 259M-C, SMPTE 292M, SMPTE 424M, SMPTE 2081, SMPTE 2082

Video processing

Maximum video data rate	17.82 Gbps (5.94 Gbps per color)
Digital sampling.....	30 bit, 10 bits per color, 600 MHz pixel clock maximum
Colors.....	1 billion (10 bit processing with full 4:4:4 sampling)

Logos

Number of Logos	32
Resolution range	Up to 4096x2160
Image file formats	BMP, JPG, PNG, TIFF (TIFF files using JPEG compression are not supported.)
Logo effects	Transparency, RGB key, level key

Video output

Number/signal type.....	1 HDMI/DVI 1 DTP3/XTP/HDBT configurable
Connectors	1 female HDMI type A 1 female RJ-45
Power for active cables.....	250 mA for the HDMI output
Vertical frequencies	23.98 Hz, 24 Hz, 25 Hz, 29.97 Hz, 30 Hz, 50 Hz, 59.94 Hz, 60 Hz, 75 Hz
Scaled resolution	640x480, 800x600, 1024x768, 1280x768, 1280x800, 1280x1024, 1360x768, 1366x768, 1440x900, 1600x900, 1400x1050, 1680x1050, 1600x1200, 1920x1200, 2048x1200, 2048x1536, 2560x1080, 2560x1440, 2560x1600, and 480p, 576p, 720p, 1080i, 1080p, 2048x1080, 3840x2160, 4096x2160
Standards	DVI 1.0, HDMI 2.0, HDCP 1.4 and 2.3

Audio

Frequency response	20 Hz to 20 kHz, ± 0.5 dB
THD + noise	<0.1% @ 1 kHz, 20 kHz bandwidth at nominal level
S/N	>90 dB, at maximum output (unweighted)
Crosstalk	≤ -80 dB @ 1 kHz fully loaded
Stereo channel separation	>80 dB @ 1 kHz
Supported formats	
Analog de-embedding	LPCM-2ch
HDMI pass-through	LPCM up to 7.2/24-bit/192 kHz, Dolby TrueHD, Dolby Digital Plus, Dolby Digital EX, Dolby Digital 5.1, Dolby Digital 2/0, Dolby Atmos 7.2, DTS-HD, DTS ES Discrete 6.1, DTS ES Matrix 6.1, DTS Digital Surround 5.1, DTS 2-channel
SDI audio	SDI embedded audio, up to 8 channels

Audio input

Number/signal type.....	5 HDMI embedded audio (including HDMI background input) 4 SDI embedded audio (SDI model only)
Connectors	5 female HDMI 4 female BNC, SDI (SDI model only)

Audio output

Number/signal type	1 balanced or unbalanced stereo (stereo or dual mono channels) 1 HDMI, embedded 1 DTP3/XTP/HDBT (embedded digital and remote balanced/unbalanced analog**) **Available only in DTP mode
Connectors.....	(1) 3.5 mm captive screw, 5-pole 1 female HDMI 1 female RJ-45
Impedance.....	50 ohms unbalanced, 100 ohms balanced
Gain error	± 0.5 dB channel to channel
Maximum level (Hi-Z)	>+21 dBU balanced, >+15 dBU unbalanced

Interconnection between MGP and DTP/HDBaseT receiver

Termination standard	TIA/EIA T568B
Signal transmission distance	
4096x2160 @ 60 Hz	Up to 330' (100 m) using shielded twisted pair (STP) cable or XTP DTP 22 STP cable
Cable requirements	Solid conductor, 22 AWG or better
Cable recommendation	500 MHz bandwidth, STP

NOTE: Extron XTP DTP 22 shielded twisted pair cable is strongly recommended for optimal performance.

Control/remote

Serial control port.....	1 RS-232 on captive screw connector on back panel
Baud rate and protocol	9600, 8-bit, 1 stop bit, no parity (default)
Serial control pin configuration	1 = Tx, 2 = Rx, 3 = GND
Ethernet control port	1 female RJ-45 connector
Ethernet data rate	10/100/1000Base-T, half and full duplex with auto detect
Ethernet protocols	ARP, ICMP (ping), TCP/IP, DHCP, HTTP, HTTPS, Telnet, SSH, SMTP, SFTP, IEEE 802.1X
Memory	4 GB flash
USB control port	1 USB, female USB-C on front panel
USB version.....	USB 2.0
USB protocols	Ethernet over USB (RNDIS), ECM, IPv4, USB Suspend
Program control	Extron Simple Instruction Set™ (SIS™) Extron internal web pages Extron Videowall Configuration Software (VCS) for Windows® Extron Toolbelt software

Control/remote — external device (RS-232/IR over TP)

NOTE: RS-232 can be transmitted to and from DTP/XTP/HDBT Tx via Ethernet insertion only.

Baud rates	9600 to 115200
Protocol	6-8 data bits 1 or 2 stop bits Odd, even, or no parity XON, XOFF, or no flow control

USB service ports

Number/signal type	2 USB devices (only one touchpanel supported)
Connectors	2 female USB 3.2 type A
USB standards	USB 3.0, USB 2.0, USB 1.1, USB 1.0 compatible
USB data rates	Low speed (1.5 Mbps), full speed (12 Mbps), high speed (480 Mbps), SuperSpeed (5 Gbps)

General

Power supply	Internal Input: 100-240 VAC, 50-60 Hz
Power consumption	
MGP 641 xi	141 watts
MGP 641 xi SDI	144 watts
Temperature/humidity	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing Operating: +32 to +113 °F (0 to +45 °C) / 10% to 90%, noncondensing
Cooling	Fans, right to left (as viewed from the front panel)
Thermal dissipation	
MGP 641 xi	423 BTU/hr
MGP 641 xi SDI	432 BTU/hr
Mounting	Rack mountable

Enclosure type Metal
Enclosure dimensions (per unit)..... 1.75" H x 17.5" W x 12.0" D (1U high, full rack wide)
(44 mm H x 445 mm W x 305 mm D)
(Depth excludes connectors and knobs. Width excludes rack ears.)
Product weight 6.9 lbs (3.1 kg)
Regulatory compliance..... CE, c-UL, UL, C-tick, FCC Class A, ICES, KC, VCCI, RoHs, and WEEE
Product warranty 3 years parts and labor
Everlast power supply warranty..... 7 years parts and labor

NOTE: All nominal levels are at $\pm 10\%$.

NOTE: Specifications are subject to change without notice.

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