

Specifications

IN1806

TRUE 4K specification

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		
3840 x 2160 at 30 Hz	4:2:0 ⁴	10 bit ³
4096 x 2160 at 60 Hz		
3840 x 2160 at 60 Hz		

Frame rate ¹	24, 25, 30, 50, 60, 120, 144, or 240 fps
Chroma sampling ¹	4:4:4 and 4:2:2, 4:2:0 at input only
Color bit depth ¹	8 or 10 bits per color
Signal type	DVI 1.0, HDMI v1.4 and 2.0, DisplayPort 1.2, HDCP 1.4 and 2.3
Max. video data rate ¹	
HDMI	18 Gbps (6 Gbps per color)
DisplayPort	21.6 Gbps (5.4 Gbps per lane)

NOTES:

- ¹Subject to the maximum data rate limit. Use our calculator at www.extron.com/4KdataRate to determine video parameters supported by this data rate.
- ²4096 x 2160/50-60 at 4:4:4 is only available for HDMI and DisplayPort connections.
- ³DTP2 and XTP are 8 bits per color for all 4096 x 2160 formats.
- ⁴4:2:0 chroma sub-sampling is supported at input only.

NOTE: DTP2 ports are backwards-compatible with DTP endpoints for resolutions up to 4K @ 30 Hz, 4:4:4, or 4K @ 60 Hz, 4:2:0.

Video input

Number/signal type	1 DisplayPort 5 HDMI/DVI 1 HDMI/DVI loop-out, configurable (non-scaled, with CEC)
Connectors	1 female DisplayPort 5 female HDMI type A 1 female HDMI type A loop-out
Horizontal frequency	15 kHz to 270 kHz for resolutions up to 18 Gbps
Vertical frequency	24 Hz to 240 Hz for resolutions up to 18 Gbps
Resolution range	640x480 @ 60 Hz through 4096x2160 @ 60 Hz with 4:4:4 chroma sampling Includes 480i, 480p, 576i, 576p, 720p, 1080i, 1080p, 2K, and 4K.
Standards	DVI 1.0, HDMI 2.0, DisplayPort 1.2, HDCP 1.4 and 2.3

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Video processing

Digital sampling.....	8 or 10 bits per color; 600 MHz pixel clock maximum
Colors.....	1.07 billion (10 bit 4:4:4 processing)

Video output

Number/signal type.....	1 HDMI/DVI (with CEC) 1 DTP2/XTP/HDBT, configurable (with CEC)
Connectors.....	1 female HDMI type A 1 female RJ-45
Power for active cable.....	1.1 W max. for the HDMI and loop out ports
Peripheral device power.....	250 mA per output (HDMI outputs only)
Scaled resolution	640x480 ⁸ , 800x600 ⁸ , 1024x768 ⁸ , 1280x768 ⁸ , 1280x800 ⁸ , 1280x1024 ⁸ , 1360x768 ⁸ , 1366x768 ⁸ , 1440x900 ⁸ , 1400x1050 ⁸ , 1600x900 ⁸ , 1680x1050 ⁸ , 1600x1200 ⁸ , 1920x1200 ⁸ , 2048x1200 ⁸ , 2048x1536 ⁸ , 2560x1080 ⁸ , 2560x1440 ⁸ , 2560x1600 ⁸ , 3840x2160 ^{1,2,3,4,5,6*,7*,8*} , 4096x2160 ^{1,2,3,4,5,6**,7**,8**} , and Custom 1-8 480p ^{7,8} , 576p ⁶ , 720p ^{3,4,5,6,7,8} , 1080i ^{6,7,8} , 1080p ^{1,2,3,4,5,6,7,8} , 2K ^{1,2,3,4,5,6,7,8}
Standards	¹ 23.98 Hz, ² 24 Hz, ³ 25 Hz, ⁴ 29.97 Hz, ⁵ 30 Hz, ⁶ 50 Hz, ⁷ 59.94 Hz, ⁸ 60 Hz *Available on the HDMI output or to a DTP2 Rx **Available on the HDMI output only DVI 1.0, HDMI 1.4 and 2.0, HDCP 1.4 and 2.3

Audio

Gain.....	Unbalanced output: -6 dB; balanced output: 0 dB
Frequency response	20 Hz to 20 kHz, ±0.5 dB
THD + Noise	<0.1%, 20 Hz to 20 kHz at nominal level
S/N.....	>90 dB at maximum balanced output (unweighted)
Crosstalk	≤-80 dB @ 1 kHz, fully loaded
Stereo channel separation.....	>80 dB @ 1 kHz
Supported formats	
Analog de-embedding.....	LPCM up to 2.0/24-bit/96 kHz
HDMI pass-through.....	LPCM up to 7.1/24-bit/192 kHz, Dolby Atmos, Dolby TrueHD, and Dolby legacy formats; DTS:X, DTS-HD Master Audio, DTS 96/24, and DTS legacy formats

Audio input

Number/signal type.....	2 stereo line level, balanced or unbalanced 2 mono mic/line level, balanced or unbalanced, (with available phantom power) 6 stereo, de-embedded from HDMI/DisplayPort (PCM only)
Connectors.....	(2) 3.5 mm, 5 pole captive screw for line (2) 3.5 mm, 3 pole captive screw for mic/line 5 female HDMI type A 1 female DisplayPort
Impedance.....	>10K ohms unbalanced, >20K ohms balanced
Nominal level.....	Line inputs: +4 dBu (1.23 Vrms), -10 dBV (316 mVrms), adjustable Mic/line inputs: -60 dBV, +4 dBu, -10 dBV, adjustable
Maximum level	Line inputs: +21 dBu balanced, +15 dBu unbalanced Mic/line inputs: -60 dBV, +4 dBu, -10 dBV, adjustable
CMRR.....	70 dB @ 1 kHz
Input gain adjustment.....	Line inputs: -18 dB to +24 dB in 0.1 dB steps, adjustable per input LPCM-2Ch inputs: -18 dB to +24 dB in 0.1 dB steps, adjustable per input Mic/line inputs: -18 dB to +60 dB in 0.1 dB steps, adjustable per input
DC phantom power	+48 VDC ±10% (can be switched on or off per mic/line input)

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Audio output — Line out

Number/signal type.....	2 stereo or 4 mono, balanced/unbalanced 1 HDMI, embedded 1 DTP2/XTP/HDBT (embedded digital, and remote balanced/unbalanced analog*) *Available only in DTP mode
Connectors.....	(2) 3.5 mm, 5 pole captive screw 1 female HDMI type A 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
Output volume range	0 to -100 dB in 0.1 dB steps (Volume control not available on loop output)

NOTE: System gain for the analog DTP2 receiver output is rated at -12 dB (unbalanced) and -6 dB (balanced).

Communications

Serial control port.....	1 bidirectional RS-232, 3.5 mm, 3 pole captive screw connector (rear panel)
Baud rate and protocol	9600, 8 data bits, 1 stop bit, no parity (default)
Serial control pin configuration	1 = Tx, 2 = Rx, 3 = Gnd
USB control port.....	1 female mini USB B (front panel)
USB standards	USB 2.0, high speed
Ethernet	
Connector	1 female RJ-45
Ethernet data rate.....	10/100/1000Base-T, half/full duplex with autodetect
Ethernet protocol.....	ARP, DHCP, DNS, HTTP (redirect), HTTPS, IEEE 802.1X, ICMP, NTP, SFTP, SMTP, SNMP, SSH, TCP/IP, Telnet, UDP/IP
Ethernet default settings	Link speed and duplex level = autodetected IP address = 192.168.254.254 Subnet mask = 255.255.255.0 Gateway = 0.0.0.0 DHCP = off
Storage	512 MB user memory
Program control.....	Extron Product Configuration Software (PCS) program for Windows® Extron Simple Instruction Set (SIS™) Microsoft® Internet Explorer®

Communications — external device (RS-232/IR over DTP2/XTP/HDBT)

Serial control pass-through port.....	IN1806 to DTP2 Rx/HDBT Rx/XTP matrix: RS-232 can be transmitted to and from DTP2 Rx/HDBT Rx/XTP matrix via Ethernet insertion.
Baud rates.....	Up to 115200 baud
Protocol.....	6 to 8 data bits 1 or 2 stop bits Even or odd parity, no parity Flow control = XON, XOFF, none
IR control pass-through port	IN1806 to TP Rx: (1) 3.5 mm, 3 pole captive screw connector TTL level (0 to 5 V) modulated infrared control from 30 kHz up to 60 kHz
IR control pin configuration	1 = Tx, 2 = Rx, 3 = Gnd

General

Power supply	Internal Input: 100-240 VAC, 50-60 Hz
Power consumption	
Full power.....	58.8 watts
Power save mode	30.1 watts (42.1 watts for Psav2)

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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	2 fans, air flows from right to left (when viewed from the front)
Thermal dissipation	
Full power.....	174 BTU/hr
Power save mode	103 BTU/hr (129 BTU/hr for Psav2)
Mounting	
Rack mount.....	Yes, with included, preinstalled brackets
Enclosure type	Metal
Enclosure dimensions	1.75" H x 17.5" W x 10.5" (1U high, full rack wide) (44 mm H x 444 mm W x 267 mm D)
Product weight	5.3 lbs (2.4 kg)
Regulatory compliance.....	CE, c-UL, UL, PSE, 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.

NOTE: Shipping weights and dimensions are available at www.extron.com.

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