

## 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 <sup>2</sup>	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 <sup>4</sup>	10 bit <sup>3</sup>
4096 x 2160 at 60 Hz		
3840 x 2160 at 60 Hz		

Frame rate <sup>1</sup> .....	24, 25, 30, 50, 60, 120, 144, or 240 fps
Chroma sampling <sup>1</sup> .....	4:4:4 and 4:2:2, 4:2:0 at input only
Color bit depth <sup>1</sup> .....	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 <sup>1</sup>	
HDMI .....	18 Gbps (6 Gbps per color)
DisplayPort .....	21.6 Gbps (5.4 Gbps per lane)

#### NOTES:

- <sup>1</sup>Subject to the maximum data rate limit. Use our calculator at [www.extron.com/4KdataRate](http://www.extron.com/4KdataRate) to determine video parameters supported by this data rate.
- <sup>2</sup>4096 x 2160/50-60 at 4:4:4 is only available for HDMI and DisplayPort connections.
- <sup>3</sup>DTP2 and XTP are 8 bits per color for all 4096 x 2160 formats.
- <sup>4</sup>4:2:0 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 (HDCP compliant) 5 HDMI/DVI (HDCP compliant) 1 HDMI/DVI loop-out, configurable (HDCP compliant)
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 (HDCP compliant) 1 DTP2/XTP/HDBT, configurable (HDCP compliant)
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 <sup>8</sup> , 800x600 <sup>8</sup> , 1024x768 <sup>8</sup> , 1280x768 <sup>8</sup> , 1280x800 <sup>8</sup> , 1280x1024 <sup>8</sup> , 1360x768 <sup>8</sup> , 1366x768 <sup>8</sup> , 1440x900 <sup>8</sup> , 1400x1050 <sup>8</sup> , 1600x900 <sup>8</sup> , 1680x1050 <sup>8</sup> , 1600x1200 <sup>8</sup> , 1920x1200 <sup>8</sup> , 2048x1200 <sup>8</sup> , 2048x1536 <sup>8</sup> , 2560x1080 <sup>8</sup> , 2560x1440 <sup>8</sup> , 2560x1600 <sup>8</sup> , 3840x2160 <sup>1,2,3,4,5,6*,7*,8*</sup> , 4096x2160 <sup>1,2,3,4,5,6**,7**,8**</sup> , and Custom 1-8 480p <sup>7,8</sup> , 576p <sup>6</sup> , 720p <sup>3,4,5,6,7,8</sup> , 1080i <sup>6,7,8</sup> , 1080p <sup>1,2,3,4,5,6,7,8</sup> , 2K <sup>1,2,3,4,5,6,7,8</sup>
Standards .....	1 <sup>23</sup> .98 Hz, 2 <sup>24</sup> Hz, 3 <sup>25</sup> Hz, 4 <sup>29.97</sup> Hz, 5 <sup>30</sup> Hz, 6 <sup>50</sup> Hz, 7 <sup>59.94</sup> Hz, 8 <sup>60</sup> Hz *Available on the HDMI output or to a DTP2 Rx **Available on the HDMI output only
Standards .....	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-2Ch
HDMI pass-through.....	LPCM up to 7.1/24-bit/192 kHz, Dolby TrueHD, Dolby Digital Plus, Dolby Digital EX, Dolby Digital 5.1, Dolby Digital 2/0 Surround, Dolby Digital 2/0, Dolby Atmos 7.2, DTS-HD Master Audio, DTS-HD, DTS ES Discrete 6.1, DTS ES Matrix 6.1, DTS Digital Surround 5.1, DTS 2-channel

### 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, ICMP (ping), IP, TCP, DHCP, HTTP, Telnet
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)
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

## Specifications • IN1806 (Continued)

Cooling .....	2 fans, air flows from right to left (when viewed from the front)
Fan noise .....	42 dB(A) (ISO3746:2010 variable speed fan measured at max. speed)
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) (4.4 cm H x 44.4 cm W x 26.7 cm 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](http://www.extron.com).

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