

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 | | |

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|------------------------------------|---|
| Frame rate ¹ | 24, 25, 30, 50, or 60 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 2.2 |
| 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/4Kdata rate 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

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|----------------------------|--|
| 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 135 kHz |
| Vertical frequency | 24 Hz to 75 Hz |
| 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 2.2 |

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Video processing

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|-----------------------|---|
| 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

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|------------------------------|--|
| 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 |
| 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} 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 |
| Standards..... | DVI 1.0, HDMI 1.4 and 2.0, HDCP 1.4 and 2.2 |

Audio

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|--------------------------------|--|
| 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

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|----------------------------|---|
| 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..... | >80 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

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|---------------------------|--|
| 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

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| 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)

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|---------------------------------------|---|
| 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

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|----------------------------|--|
| Power supply | Internal Input: 100-240 VAC, 50-60 Hz |
| Power consumption | |
| Full power..... | 53 watts |
| Power save mode | 33 watts |
| 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)

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|-------------------------------------|---|
| 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..... | 156 BTU/hr |
| Power save mode | 108 BTU/hr |
| 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.

4648-D3