

Specifications

DTP T/R DP 4K 230

TRUE 4K specification

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

Frame rate¹ 24, 25, 30 fps
 Chroma sampling¹ 4:4:4 or 4:2:2
 Color bit depth¹ 8 bits per color
 Signal type DisplayPort, HDCP
 Max. video data rate 10.8 Gbps (2.7 Gbps per lane)

NOTE: ¹Subject to the maximum data rate limit. Use our calculator (www.extron.com/8KdataRate) to determine video parameters supported by this data rate.

NOTE: This product consists of a transmitter (DTP T DP 4K 230) and a receiver (DTP R DP 4K 230), sold separately, with a twisted pair cable linking the transmitter and receiver.

Video

Maximum data rate Up to 10.8 Gbps (2.7 Gbps per lane)
 Maximum pixel clock
 Transmitter 300 MHz
 Receiver 268 MHz
 Resolution range Up to 2560x1600* @ 60 Hz or
 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz
 (* reduced blanking)
 Color bit depth 8, 10, or 12 bits — subject to the maximum data rate limit
 Formats RGB and YCbCr digital video
 Standard DisplayPort 1.1a, HDCP 1.4, 2.3

NOTE: Only Single Stream Transport (SST) is supported.

Video input — transmitter

Number/signal type 1 DisplayPort
 Connector 1 female DisplayPort

Specifications • DTP T/R DP 4K 230 (Continued)

Interconnection between transmitter and receiver

Signal type.....	DTP 230
Connector.....	1 female RJ-45 per unit
Termination standard.....	TIA/EIA T568B
Signal transmission distance	
1080p @ 60 Hz	Up to 230' (70 m) using shielded twisted pair (STP) cable or XTP DTP 24 STP cable
2560x1600 @ 60 Hz.....	Up to 130' (40 m) using shielded twisted pair (STP) cable or XTP DTP 24 STP cable
4K/UHD @ 30 Hz	Up to 130' (40 m) using shielded twisted pair (STP) cable or XTP DTP 24 STP cable
Cable requirements.....	Solid conductor, 24 AWG or better
Cable recommendations	400 MHz bandwidth, STP (shielded twisted pair)

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

NOTE: Input and output mode signaling:
DTP: HDMI with embedded audio, analog audio, RS-232 and IR, and remote power
HDBaseT: HDMI with embedded audio plus RS-232 and IR

Video output — receiver

Number/signal type.....	1 DisplayPort
Connectors.....	1 female DisplayPort

Audio

Gain.....	Unbalanced output: 0 dB; balanced output +6 dB
Frequency response	20 Hz to 20 kHz, ± 0.5 dB
THD + Noise.....	0.03% @ 20 Hz to 20 kHz at maximum output
S/N.....	>90 dB, at maximum input (unweighted)
Stereo channel separation.....	>80 dB
Digital sampling.....	48 kHz
Bit depth.....	16 bit

Audio input

Signal type	
Analog audio (over DTP)	Stereo (2 channel), balanced/unbalanced

NOTE: Analog audio is not embedded onto the DisplayPort signal. Embedded digital audio is not de-embedded from the DisplayPort signal.

Digital audio.....	Embedded digital audio on DTP signal
Embedded digital audio	
source formats	2-ch PCM, PCM, Dolby Digital 2/0 Surround, Dolby Digital 2/0, DTS Digital Surround 5.1, DTS-ES Matrix 6.1, DTS-ES Discrete 6.1
Connector.....	(1) 3.5 mm stereo jack, 2 channel; tip (L), ring (R), sleeve (ground)
Impedance.....	>10k ohms, DC coupled
Nominal level.....	-10 dBV (316 mVrms)
Maximum level	+7 dBV (unbalanced)

NOTE: 0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV $\approx$ 2 dBu

Audio output

Signal type

Analog audio (over DTP) Stereo (2 channel), balanced/unbalanced

NOTE: Analog audio is not embedded onto the DisplayPort signal. Embedded digital audio is not de-embedded from the DisplayPort signal.

Digital audio..... Embedded digital audio on DTP signal

Embedded digital audio source formats 2-ch PCM, PCM, Dolby Digital 2/0 Surround, Dolby Digital 2/0, DTS Digital Surround 5.1, DTSES Matrix 6.1, DTS-ES Discrete 6.1

Impedance..... 50 ohms unbalanced, 100 ohms balanced

Gain error..... ± 0.2 dB channel to channel

Maximum level (600 ohm) $> +14$ dBu, balanced

Connectors

Digital audio..... Female DisplayPort

Analog audio (1) 3.5 mm captive screw connector, 5 pole

Communication — external device (pass-through, unidirectional or bidirectional)

Serial control port input/output

Transmitter RS-232 via (1) 3.5 mm, 5 pole captive screw connector for RS-232 control (± 5 V) (connector is shared with IR control port)

Receiver 1 set of proprietary signals on a female RJ-45 jack

Serial control port output/input

Transmitter 1 set of proprietary signals on a female RJ-45 jack

Receiver RS-232 via a 3.5 mm, 3 pole captive screw connector

Baud rate and protocol 300 to 115200 baud, 8 or 7 data bits, 1 or 2 stop bits, non-parity (default), even or odd parity

Serial control pin configuration 1 = Tx, 2 = Rx, 3 = Gnd

IR control port..... (1) 3.5 mm, captive screw connector, 5 pole (connector is shared with RS-232 control port)

TTL level (0 to 5 V) modulated infrared control from 30 kHz up to 60 kHz

IR control pin configuration 3 = Gnd, 4 = IR Tx, 5 = IR Rx

Specifications • DTP T/R DP 4K 230 (Continued)

General

Power supply External
Input: 100-240 VAC, 50-60 Hz
Output: 12 VDC, 1.5 A, 18 watts

Power consumption

Transmitter

Device 3.4 watts
Device and power supply... 4.5 watts
Remote power budget..... 12 watts

Receiver

Device 5.2 watts
Device and power supply... 6.6 watts
Remote power budget..... 12 watts

NOTE: Each transmitter or receiver can be powered either locally by an external power supply or remotely by receiver or transmitter on the other end of the twisted pair cable.

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

Thermal dissipation

Transmitter

Device 11.5 BTU/hr
Device and power supply... 15.4 BTU/hr

Receiver

Device 16.5 BTU/hr
Device and power supply... 21.4 BTU/hr

Mounting

Rack mount..... Yes, with optional 1U high rack shelf

Furniture mount..... Yes, with optional under-desk mounting kit

Enclosure type Metal

Enclosure dimensions

Transmitter 1.0" H x 4.3" W x 6.0" D (quarter rack wide)
(2.5 cm H x 10.9 cm W x 15.2 cm D)
(Depth excludes connectors.)

Receiver 1.0" H x 4.3" W x 6.0" D (quarter rack wide)
(2.5 cm H x 10.9 cm W x 15.2 cm D)
(Depth excludes connectors.)

Product weight

Transmitter 0.5 lbs (0.3 kg)

Receiver 1.0 lb (0.5 kg)

Regulatory compliance..... CE, c-UL, UL, CE**, C-tick, FCC Class A**, ICES, VCCI

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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