

Specifications

DTP2 R 212 and DTP2 R 212 SA Switching Receivers

TRUE 4K specification

Max. 4K Capabilities		
Resolution and Refresh Rate	Chroma Sampling	Max. Bit Depth per Color
4096 x 2160 at 60 Hz*	4:4:4	8 bit
3840 x 2160 at 60 Hz		
4096 x 2160 at 30 Hz		
3840 x 2160 at 30 Hz		
4096 x 2160 at 60 Hz	4:2:0	12 bit
3840 x 2160 at 60 Hz		

NOTE: *The DTP2 R 212 can pass 4096x2160 @ 60 Hz, 4:4:4, 8 bit from the local input to the local output only.

Frame rate¹

HDMI input 24, 25, 30, 50, 60, 120, 144, or 240 fps

DTP2 input 24, 25, 30, 50, 60, or 120 fps

Chroma sampling¹ 4:4:4, 4:2:2, or 4:2:0

Color bit depth¹ 8, 10, 12 bits per color

Signal type HDMI 2.0b, HDCP 2.3

Max. video data rate 18 Gbps (6 Gbps per color)

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

Video

NOTE: Extron strongly recommends compatibility testing while designing, and before installing any 3D system. There are several unique 3D formats in use by devices and display manufacturers. The level of 3D product support is governed by pixel clock, signal format, and communication between source and sink devices. Please contact an Extron Applications Engineer for more information.

Maximum data rate 18 Gbps (6 Gbps per color)

Maximum pixel clock 600 MHz

Resolution range 2560x1600 @ 60 Hz or 1080p @ 60 Hz, 12-bit color
 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz
 4K (4096x2160) @ 60 Hz*, UHD (3840x2160) @ 60 Hz

NOTE: *The DTP2 R 212 can pass 4096x2160 @ 60 Hz from the local input to the local output only.

Color bit depth 8, 10, or 12 bits — subject to the maximum data rate limit

Formats RGB and YCbCr digital video

Standards DVI 1.0; HDMI 1.4, 2.0b; HDCP 1.4, 2.3; CEA-861-E

Specifications • DTP2 R 212 and DTP2 R 212 SA (Continued)

Video input

Number/signal type.....	1 DTP2 1 HDMI (or single link DVI-D, with appropriate DVI-HDMI adapters)
Connectors	1 female RJ-45 1 female HDMI, type A
Horizontal frequency	15 kHz to 100 kHz
Vertical frequency.....	HDMI input: 24 Hz to 240 Hz (for resolutions up to 18 Gbps) DTP2 input: 24 Hz to 120 Hz (for resolutions up to 18 Gbps)

Interconnection between transmitter and receiver

Connectors	1 female RJ-45 per unit
Termination standard	TIA/EIA T568B
Signal transmission distance....	Up to 330' (100 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.

Video output

Number/signal type.....	1 HDMI output
Connectors	1 female HDMI, type A

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 output (15 dBu), balanced (unweighted)
Stereo channel separation.....	>80 dB @ 1 kHz to 20 kHz
Bass	+12 dB to -24 dB @ 100 Hz
Treble.....	+12 dB to -24 dB @ 8 Hz

Audio input

Number/signal type	
HDMI input	1 embedded digital audio from HDMI
DTP/DTP2 input	1 stereo, unbalanced analog 1 embedded digital audio from DTP
Embedded digital audio source formats	2-ch PCM
Connectors	1 female HDMI type A 1 female RJ-45 connector for audio over DTP
Impedance.....	>10 k ohms unbalanced, >20 k ohms balanced
Nominal level.....	Over DTP input: +4 dBu, -10 dBu, adjustable
Maximum level	+15 dBu at rated THD+N when input gain is set to 0 dB
CMRR.....	>80 dB @ 1 KHz

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

Audio output — analog (DTP2 R 212)

Number/signal type.....	1 stereo, balanced/unbalanced (fixed and variable outputs) 1 analog audio and 1 embedded digital audio on HDMI
Connectors.....	(1) 3.5 mm captive screw connector, 5-pole 1 female HDMI type A
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 1 dB steps
Nominal level when the main volume is set to default.....	-2 dBu (632 mVrms) balanced output

NOTE: 0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV ≈ 2 dBu

Audio output — power amplifier (DTP2 R 212 SA)

Number/signal type.....	1 stereo or 2 mono (2 channels total)
Connector.....	(1) 5 mm captive screw connector, 4-pole
Load impedance.....	4 ohms, minimum
Amplifier type.....	Class D
Output power.....	7.6 watts rms per channel, 8 ohms, 1 kHz, 1% THD 12.9 watts rms per channel, 4 ohms, 1 kHz, 1% THD
Frequency response.....	20 Hz to 20 kHz, +1/-3 dB @ 8 ohms
THD + Noise.....	<0.1% -3 dB below clipping @ 1 kHz, 8 ohm load
S/N.....	90 dB, 20 Hz to 20 kHz, unweighted
Damping factor.....	>100 @ 8 ohms

Communications/remote — switcher

Serial control port.....	1 RS-232, 3.5 mm captive screw connector, 3-pole, rear panel
Pin configuration.....	Pin 1 = Tx, pin 2 = Rx, pin 3 = Gnd
Baud rate and protocol.....	9600 baud, 8 data bits, 1 stop bit, no parity
USB control port.....	1 female mini-USB, type B, front panel
USB standards.....	USB 2.0, high speed
Ethernet data rate.....	10/100Base-T, half/full duplex, with autodetect
Ethernet protocol.....	ARP, ICMP (ping), IP, TCP, DHCP, HTTP, Telnet, SMTP
Program control.....	Extron PCS® Extron Simple Instruction Set (SIS™) Microsoft® Edge®, Telnet

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

Serial control pass-through port.....	1 RS-232 via 3.5 mm, 5-pole captive screw connector (shared with IR port)
Baud rates.....	300 to 115k baud
Protocol.....	8 or 7 data bits 1 or 2 stop bits No parity (default), even or odd parity
Serial control pin configuration.....	1 = Tx, 2 = Rx, 3 = Gnd
IR control pass-through ports.....	1 bi-directional TTL level (0 to 5 V) modulated infrared control from 30 kHz up to 60 kHz
Output/DTP Rx.....	1 RS-232, (1) 3.5 mm 5-pole captive screw connector (shared with RS-232 port)
IR control pin configuration.....	3 = Gnd, 4 = IR Tx, 5 = IR Rx

Specifications • DTP2 R 212 and DTP2 R 212 SA (Continued)

General

Power supply

DTP2 R 212	External Input: 100-240 VAC, 50-60 Hz Output: 12 VDC, 2 A, 24 watts
DTP2 R 212 SA.....	External Input: 100-240 VAC, 50-60 Hz Output: 12 VDC, 4.2 A, 50 watts

Power consumption

DTP2 R 212	
Device	11.50 watts
Device and power supply...	13.34 watts
Remote power budget.....	18 watts
DTP2 R 212 SA	
Device	17.91 watts
Device and power supply...	20.09 watts
Remote power budget.....	18 watts

Remote power capability

DTP2 R 212	Can transmit or receive power via DTP2
DTP2 R 212 SA.....	Can only transmit power via DTP2

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 Fan (air flows side to side) vents on sides

Thermal dissipation

DTP2 R 212	
Device	39.30 BTU/hr
Device and power supply...	44.60 BTU/hr
DTP2 R 212 SA	
Device	47.40 BTU/hr
Device and power supply...	54.83 BTU/hr

Mounting

Rack mount.....	Yes, with optional rack shelf kit Back-of-the-rack mountable with optional back-of-the-rack mounting kit
Furniture mount	Yes, with optional under-desk mounting kit

Enclosure type Metal

Enclosure dimensions 1.00" H x 13.1" W x 6.0" D (1" high, 3/4 rack wide)
(2.54 cm H x 33.3 cm W x 15.2 cm D)
(Depth excludes connectors)

Product weight

DTP2 R 212	1.51 lbs (0.685 kg)
DTP2 R 212 SA.....	1.77 lbs (0.803 kg)

Regulatory compliance..... CE, c-UL, UL, C-Tick, FCC Class A, ICES, RoHs, WEEE, VCCI
UL rated for use in plenum airspaces: meets UL 2043 for heat and smoke release,
excluding the power supply. Meets UL 60065 for safety.

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.