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

Frame rate[1]
- HDMI input ..... 24, 25, 30, 50, 60, 120, 144, or 240 fps
- DTP2 input ..... 24, 25, 30, 50, 60, or 120 fps

Chroma sampling[1] ..... 4:4:4, 4:2:2, or 4:2:0
Color bit depth[1] ..... 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: [1]Subject 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
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

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
Horizonal 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≈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

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 ±10%.

NOTE: Specifications are subject to change without notice.

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

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