Specifications

XTP FT HD 4K

TRUE 4K Specification

Max. 4K Capabilities		
Resolution and Refresh Rate	**Chroma Sampling**	**Max. Bit Depth per Color**
4096 x 2160 at 24 Hz	4:4:4	8 bit
3840 x 2160 at 30 Hz		
3840 x 2160 at 60 Hz	4:2:0	

Frame rate[1] ..... 24, 25, 30, 50, or 60 fps
Chroma sampling[1] ..... 4:4:4, 4:2:2, or 4:2:0
Color bit depth[1] ..... 8 bits per color
Signal type ..... DisplayPort 1.1, DVI 1.0, HDMI 1.4a, HDCP 1.4
Max. video data rate ..... 8.91 Gbps (2.97 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.

NOTE: The XTP FT HD 4K transmitter can be used with XTP receivers, with a fiber optic cable linking the transmitter and receiver, or with other Extron XTP products.

NOTE: These transmitters are class 1 laser products. They meet the safety regulations of IEC 60825-1.

Video

Gain ..... Unity
Resolution range ..... Up to 2560x1600 @ 60 Hz* or
4K (4096x2160) @ 24 Hz, UHD (3840x2160) @ 30 Hz,
UHD @ 60 Hz with 4:2:0 chroma subsampling
* reduced blanking
Signal type ..... Single-link HDMI (or DVI-D or DisplayPort)
Color bit depth ..... 8, 10, or 12 bits — subject to the maximum data rate limit
Maximum data rate ..... 8.91 Gbps (2.97 Gbps per color)
Maximum pixel clock ..... 300 MHz
Formats ..... RGB and YCbCr digital video
Standards ..... DisplayPort 1.1, DVI 1.0, HDMI 1.4a, HDCP 1.4

Video input and loop-through

Number/signal type ..... 1 single link HDMI (or DVI-D or DisplayPort) input
1 single link HDMI (or DVI-D) loop-through
Connectors ..... 2 female HDMI type A: 1 input, 1 loop-through

Optical fiber interconnection between transmitter and receiver

Number/signal type ..... 1 set of proprietary signals

Connectors ..... 1 LC fiber connector

Operating distance

NOTE: Operating distance is approximate. These are typical maximum distances that may vary depending on factors such as fiber type, fiber bandwidth, connector splicing, losses, modal or chromatic dispersion, environmental factors, and kinks.

Singlemode ..... 10 km (6.21 miles) with singlemode cable

Multimode ..... 400 m (1312') with 50 µm OM3 2000 MHz bandwidth laser optimized multimode cable
500 m (1640') with 50 µm OM4 4700 MHz bandwidth laser optimized multimode cable

NOTE: Multimode units are compatible with OM1 and OM2 multimode cables, but at reduced operating distances.

Nominal peak wavelength

Singlemode ..... 1490 nm, 1550 nm, 1310 nm

Multimode ..... 850 nm, 980 nm, 780 nm

Data rate ..... 8.5 Gbps

Transmission power

Singlemode ..... -6 dBm, typical

Multimode ..... -5 dBm, typical

Maximum receiver sensitivity

Singlemode ..... -15 dBm, typical

Multimode ..... -13 dBm, typical

Optical loss budget

Singlemode ..... 9 dB, maximum

Multimode ..... 8 dB, maximum

Audio

Gain ..... Unbalanced output: 0 dB; balanced output: +6 dB

Frequency response ..... 20 Hz to 20 kHz, ±0.5 dB

THD + Noise ..... <0.1%, 20 Hz - 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

Sampling rates ..... 32 kHz, 44.1 kHz, 48 kHz, 96 kHz, 192 kHz

Bit depths ..... 16, 20, 24 bit

Audio input

Number/signal type ..... 1 analog stereo, balanced/unbalanced or
1 digital audio, de-embedded from HDMI

Connectors ..... (1) 3.5 mm captive screw connector, 5 pole
1 female HDMI type A (shared with video input)

Source formats ..... LPCM up to 7.1/24-bit/192 kHz, Dolby Atmos™, Dolby TrueHD, Dolby Digital Plus™, Dolby Digital EX, Dolby Digital 5.1, Dolby Digital 2/0 Surround, Dolby Digital 2/0, DTS-HD Master Audio™, DTS-HD, DTS-ES Discrete 6.1, DTS-ES Matrix 6.1, DTS Digital Surround 5.1, DTS 2 Channel, analog stereo

Impedance ..... 10k ohms, unbalanced, 20k ohms balanced

Nominal level ..... +4 dBu (1.23 mVrms) balanced or -10 dBV (316 mVrms) unbalanced

Maximum level ..... +21 dBu balanced, +15 dBu unbalanced

Input gain adjustment ..... -18 dB to +24 dB, 1 dB steps, adjustable

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

Communications — transmitter

USB control ports	1 front panel female mini USB B
USB standards	USB 2.0, low speed
Program control	Extron control/configuration program for Windows® Extron Simple Instruction Set (SIS™)

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

Serial control pass-through port	RS-232 (±5 V) via a (1) 3.5 mm, 5 pole captive screw connector (uses 3 poles) (connector is shared with the IR control port)
Baud rates	Up to 115200 baud
Protocol	Data bits = 5 - 8 Stop bits = 1 or 2 Parity = odd, even, none Flow control = XON, XOFF, none
Serial control pin configuration	1 = Tx, 2 = Rx, 3 = GND
IR control port	(1) 3.5 mm, captive screw connector, 5 pole (uses 3 poles) (connector is shared with the RS-232 control port) TTL level (0 to 5 V) modulated infrared control from 30 kHz up to 56 kHz
IR control pin configuration	3 = GND, 4 = IR Tx, 5 = IR Rx
Ethernet pass-through port	1 female RJ-45 connector
Ethernet data rate	10/100Base-T, full duplex with autodetect

General

Power supply	External Input: 100-240 VAC, 50-60 Hz Output: 12 VDC, 1.5 A, 18 watts
Power consumption	
Device	8.1 watts
Device and power supply	10 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
Cooling	Convection, vents
Thermal dissipation	
Device	26.2 BTU/hr
Device and power supply	32.8 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	1.0" H x 8.75" W x 6.0" D (half rack wide) (2.5 cm H x 22.2 cm W x 15.2 cm D) (Depth excludes connectors.)
Product weight	1.6 lbs (0.7 kg)
Regulatory compliance	CE, c-UL, UL, IEC 60825-1, C-tick, FCC Class A, ICES, VCCI Complies with the appropriate requirements of RoHS and WEEE
Warranty	3 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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