

Extron

Specifications

NAV D 121

TRUE 4K specification

Max. 4K Capabilities		
Resolution and Refresh Rate	Chroma Sampling	Max. Bit Depth per Color
4096 x 2160 at 60 Hz ¹	4:4:4	8 bit
3840 x 2160 at 60 Hz		
4096 x 2160 at 30 Hz		10 bit
3840 x 2160 at 30 Hz		
4096 x 2160 at 60 Hz	4:2:0	
3840 x 2160 at 60 Hz		

Frame rate² 24, 25, 30, 50, or 60 fps
 Chroma sampling² 4:4:4, 4:2:2, or 4:2:0
 Color bit depth² 8 or 10 bits per color
 Signal Type DVI v 1.0, HDMI v1.4 and v2.0, HDCP v1.4 and v2.3
 Max. video data rate 18 Gbps (6 Gbps per color)

NOTE: ¹4096 x 2160 @ 50-60 Hz is available only for HDMI connectors.

NOTE: ²Subject to the maximum data rate limit. Use our calculator at www.extron.com/8Kdata rate to determine video parameters supported by this data rate.

Video input stream

Number/signal type 1 PURE3® digital video over IP
 Connector 1 RJ-45 connector

Video processing

Digital sampling 8 or 10 bits per color; 600 MHz pixel clock maximum
 Compression PURE3
 Latency <1 frame (encode/decode)

NOTE: Indicates minimum end-to-end latency. Network and video processing dependencies may apply.

Video output

NOTE: Appropriate DVI-D to HDMI or DisplayPort to HDMI cables or adapters are required for DVI or DisplayPort signal output.

Number/signal type 1 digital HDMI video
 Connectors 1 female HDMI type A
 Resolution range Up to 4K (4096x2160 at 60 Hz) and UHD (3840x2160 at 60 Hz)
 Standards DVI v1.0, HDMI v1.4 and v2.0, HDCP v1.4/v2.3
 Formats RGB and YCbCr digital video

Audio

Sampling rate 48 kHz
 Bit depth 24 bit

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Audio input stream

Number/signal type	1 audio over IP LPCM
Connector	1 RJ-45 connector

Audio output

Number/signal type	1 digital stereo, de-embedded from HDMI
Connectors	1 female HDMI (shared with video output)
Supported formats	LPCM (2 channel)

Network interconnection (NAV)

Connector type	1 RJ-45 female
Ethernet standards	1GbE (802.3ab), 10/100/1000 Base-T, half/full duplex with autodetect.
Termination	Auto-MDIX, TIA/EIA T568B
Power over Ethernet (PoE)	Complies with IEEE 802.3at Type 2 (PoE+), class 4
Protocols	
Streaming	SRTP (AES-128) on video and audio
Transport	Multicast UDP
All supported	DHCP, HTTPS, IGMPv2/v3, IPv4, IPv6, PTPv2, QoS, SSH, TCP, UDP
Security	AES-256, 802.1X, Active Directory authentication
Signal transmission distance	330' (100 m) using CAT 5e/6/6a/7 cables

Communications - external devices

Serial

Quantity/type	1 bidirectional RS-232
Connector	(1) 3.5 mm captive screw connector, 5 pole (shared with IR port)
Baud rate and protocol	300 to 115200 baud (9600 baud = default) 8 (default) or 7 data bits 1 (default) or 2 stop bits no parity (default), even or odd parity
Pin configuration	Tx, Rx, and Gnd

IR control

Quantity/type	1 TTL level (0 to 5 V) infrared (carrier and non-carrier) up to 300 kHz
Connector	(1) 3.5 mm captive screw connector, 5 pole (shared with RS-232)
Pin configuration	S = signal and G = Gnd
IR output carrier frequency	30 kHz to 300 kHz

Digital I/O

Connector	(1) 3.5 mm captive screw connector, 3 pole
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Digital inputs

Input voltage range	0 to 24 VDC, clamped at +30 VDC
Input impedance	>10k ohm
Programmable pullup	1k ohm to +5 VDC
Threshold low to high	2.8 VDC
Threshold high to low	2.0 VDC

Digital outputs	250 mA sink from 24 VDC max
Pin configuration	1, 2 = Digital I/Os 1 and 2; 3 = Gnd

USB configuration port

Quantity/type	1 front panel USB Type C
Standard	Ethernet over USB

Specifications • NAV D 121 (Continued)

General

Power supply External
Input: 100-240 VAC, 50-60 Hz
Output: 12 VDC, 2.0 A, 24 watts

NOTE: Each 1G endpoint can be powered either locally by an external power supply or remotely using optional PoE+.

Power consumption
Device 13.3 watts
Device and power supply 15.0 watts
PoE..... Complies with IEEE 802.3at type 2 (PoE+), class 4
Ambient temperature/humidity..... Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing
Operating: +32 to +104 °F (0 to +40 °C) / 10% to 85%, noncondensing
Cooling..... Fan, air flows from top to rear
Thermal dissipation – 12 VDC Power Supply
Device 44.5 BTU/hr
Device and power supply 50.3 BTU/hr
Device with PoE 51.5 BTU/hr
Mounting
Rack mount Yes, with optional rack shelf
Furniture mount Yes, with optional under desk mounting kit
Enclosure type Metal
Enclosure 1.00" H x 4.3" W x 6.00" D (quarter rack wide)
(25 mm H x 109 mm W x 152 mm D)
(depth excludes connectors)
Product weight 0.8 lbs (0.38 kg)
Regulatory compliance CE, c-UL UL,C-tick, FCC Class A, ICES, VCCI,
Complies with the appropriate requirements of RoHS, WEEE
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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