

Specifications

NAV E 101

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		
3840 x 2160 at 30 Hz		
4096 x 2160 at 60 Hz	4:2:0	10 bit
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/8KdataRate to determine video parameters supported by this data rate.

Video input and loop through

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

Number/signal type 1 digital HDMI video (input)*
1 digital HDMI video (loop through)
Connectors 2 female HDMI type A: 1 for input, 1 for loop through
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

Video processing

Digital sampling 8 or 10 bits per color; 600 MHz pixel clock maximum
Compression PURE3®
Bit rate 250 Mbps to 900 Mbps
Latency <1 frame (encode/decode)**

NOTE: **Indicates minimum latency. Network and video processing dependencies apply.

Video output stream

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

Specifications • NAV E 101 (Continued)

Audio

Gain.....	Analog to analog: -6.5 dBu balanced, -12.5 dBu unbalanced HDMI to analog: -5.3 dBu balanced, -11.3 unbalanced
Frequency response	20 Hz to 20 kHz, ± 0.5 dB
THD + Noise.....	<0.1% @ 20 Hz to 20 kHz at nominal level
S/N.....	Analog to digital: >90 dB, at full scale output, unweighted Digital to analog: >90 dB, at maximum balanced output, unweighted Analog to analog: >90 dB, at maximum balanced output, unweighted
Crosstalk	≤ -80 dB @ 1 kHz, fully loaded
Stereo channel separation.....	>80 dB @ 1 kHz
Sampling rates.....	32, 44.1, 48 kHz
Bit depths	16, 20, 24 bit

Audio input

Number/signal type.....	1 analog stereo, unbalanced or balanced 1 digital stereo, de-embedded from HDMI
Connectors.....	(1) 3.5 mm captive screw connector, 5 pole 1 female HDMI type A (shared with video input)
Supported formats.....	LPCM (2 channel), analog stereo audio
Impedance.....	$\geq 10k$ ohms unbalanced, $\geq 20k$ ohms balanced
Nominal level.....	+4 dBu, -10 dBV configurable
Maximum level.....	+21 dBu balanced, +15 dBu unbalanced
Gain adjustment range.....	Adjustable, -18 dB to +10 dB

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

Audio output stream

Number/signal type.....	1 audio over IP LPCM 1 audio over IP AES67*
Connector.....	1 RJ-45 connector

NOTE: *AES67 specifications are compatible with the Extron DSPs.

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, audio, and USB
Transport.....	Multicast UDP
All supported.....	DHCP, HTTPS, IGMPv2/v3, IPv4, 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

Specifications • NAV E 101 (Continued)

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
Contact closure	
Quantity/type.....	1 contact closure input
Connector	(1) 3.5 mm captive screw connector, 2 pole (shared with tally)
Input voltage range.....	0 to 5 VDC, clamped at +5.1 VDC
Pin configuration.....	C = contact input (+5 VDC) (Ground is supplied by HDMI connector on an Extron Show-Me cable)
Tally port	
Quantity/type.....	1 tally output
Connector	(1) 3.5 mm captive screw connector, 2 pole (shared with contact closure)
Pin configuration.....	T = tally output (GND) (+5 VDC is supplied by HDMI connector on an Extron Show-Me® cable)
USB configuration port	
Quantity/type.....	1 front panel USB mini-B
Standard	Ethernet over USB

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	18.9 watts
Device and power supply	21.2 watts
PoE	Complies with IEEE 802.3at Type 2 (PoE+), class 4
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	
Device	63.7 BTU/hr
Device and power supply	71.6 BTU/hr
Device with PoE	67.9 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 8.75" W x 6.00" D* (half rack wide) (25 mm H x 222 mm W x 152 mm D*) (Depth excludes connectors)
Product weight	1.5 lbs (0.68 kg)
Regulatory compliance.....	CE, c-UL UL,C-tick, FCC Class A, ICES, KC, 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%.

Specifications • NAV E 101 (Continued)

NOTE: Specifications are subject to change without notice.

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

5679-D8