

Specifications

IN1808 Series

TRUE 4K specification

Max. 4K Capabilities		
Resolution and Refresh Rate	Chroma Sampling	Max. Bit Depth per Color
4096 x 2160 at 60 Hz ²	4:4:4	8 bit
3840 x 2160 at 60 Hz		
4096 x 2160 at 30 Hz		10 bit ³
3840 x 2160 at 30 Hz		
4096 x 2160 at 60 Hz	4:2:0 ⁴	
3840 x 2160 at 60 Hz		

Frame rate ¹	24, 25, 30, 50, or 60 fps
Chroma sampling ¹	4:4:4 and 4:2:2, 4:2:0 at input only
Color bit depth ¹	8 or 10 bits per color
Signal type	DVI 1.0, HDMI 1.4 and 2.0, DisplayPort 1.2, HDCP 1.4 and 2.2
Max. video data rate ¹	
HDMI	18 Gbps (6 Gbps per color)
DisplayPort	21.6 Gbps (5.4 Gbps per lane)

NOTES:

- ¹Subject to the maximum data rate limit. Use our calculator at www.extron.com/4KdataRate to determine video parameters supported by this data rate.
- ²4096 x 2160/50-60 at 4:4:4 is only available for HDMI and DisplayPort connections.
- ³DTP2 and XTP are 8 bits per color for all 4096 x 2160 formats.
- ⁴4:2:0 chroma sub-sampling is supported at input only.

NOTE: DTP2 ports are backwards-compatible with DTP endpoints for resolutions up to 4K @ 30 Hz, 4:4:4, or 4K @ 60 Hz, 4:2:0.

Video input

Number/signal type	1 DisplayPort (HDCP compliant) 5 HDMI/DVI (HDCP compliant) 1 HDMI/DVI loop-out, configurable (HDCP compliant) 2 DTP2/XTP-configurable, HDCP compliant
Connectors	1 female DisplayPort 5 female HDMI type A 1 female HDMI type A loop-out 2 female RJ-45
Horizontal frequency	15 kHz to 135 kHz
Vertical frequency	24 Hz to 75 Hz
Resolution range	640x480 @ 60 Hz through 4096x2160 @ 60 Hz with 4:4:4 chroma sampling Includes 480i, 480p, 576i, 576p, 720p, 1080i, 1080p, 2K, and 4K.
Standards	DVI 1.0, HDMI 2.0, DisplayPort 1.2, HDCP 1.4 and 2.2

Specifications • IN1808 Series (Continued)

Video processing

Digital sampling.....	8 or 10 bits per color; 600 MHz pixel clock maximum
Colors.....	1.07 billion (10 bit 4:4:4 processing)

Video output

Number/signal type.....	1 HDMI/DVI (HDCP compliant) 1 DTP2/XTP/HDBT, configurable (HDCP compliant)
Connectors.....	1 female HDMI type A 1 female RJ-45
Peripheral device power.....	250 mA per output (HDMI outputs only)
Scaled resolution	640x480 ⁸ , 800x600 ⁸ , 1024x768 ⁸ , 1280x768 ⁸ , 1280x800 ⁸ , 1280x1024 ⁸ , 1360x768 ⁸ , 1366x768 ⁸ , 1440x900 ⁸ , 1400x1050 ⁸ , 1600x900 ⁸ , 1680x1050 ⁸ , 1600x1200 ⁸ , 1920x1200 ⁸ , 2048x1200 ⁸ , 2048x1536 ⁸ , 2560x1080 ⁸ , 2560x1440 ⁸ , 2560x1600 ⁸ , 3840x2160 ^{1,2,3,4,5,6,7,8*} , 4096x2160 ^{1,2,3,4,5,6,7,8**} , and Custom 1-8 480p ^{7,8} , 576p ⁶ , 720p ^{3,4,5,6,7,8} , 1080i ^{6,7,8} , 1080p ^{1,2,3,4,5,6,7,8} , 2K ^{1,2,3,4,5,6,7,8} 1 ^{23.98} Hz, 2 ²⁴ Hz, 3 ²⁵ Hz, 4 ^{29.97} Hz, 5 ³⁰ Hz, 6 ⁵⁰ Hz, 7 ^{59.94} Hz, 8 ⁶⁰ Hz *Available on the HDMI output or to a DTP2 Rx **Available on the HDMI output only
Standards	DVI 1.0, HDMI 1.4 and 2.0, HDCP 1.4 and 2.2

Audio

Gain.....	Unbalanced output: -6 dB; balanced output: 0 dB
Frequency response	20 Hz to 20 kHz, ±0.5 dB
THD + Noise	<0.1%, 20 Hz to 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
Supported formats	
Analog de-embedding.....	LPCM-2Ch
HDMI pass-through.....	LPCM up to 7.1/24-bit/192 kHz, Dolby TrueHD, Dolby Digital Plus, Dolby Digital EX, Dolby Digital 5.1, Dolby Digital 2/0 Surround, Dolby Digital 2/0, Dolby Atmos 7.2, DTS-HD Master Audio, DTS-HD, DTS ES Discrete 6.1, DTS ES Matrix 6.1, DTS Digital Surround 5.1, DTS 2-channel

Audio input

Number/signal type.....	2 stereo line level, balanced or unbalanced 2 mono mic/line level, balanced or unbalanced, (with available phantom power) 6 stereo, de-embedded from HDMI/DisplayPort (PCM only) 2 DTP2/XTP (de-embedded HDMI—PCM only, or remote unbalanced analog*) *Available only in DTP mode
Connectors.....	(2) 3.5 mm, 5 pole captive screw for line (2) 3.5 mm, 3 pole captive screw for mic/line 5 female HDMI type A 1 female DisplayPort 2 RJ-45 female
Impedance.....	>10K ohms unbalanced, >20K ohms balanced
Nominal level.....	Line inputs: +4 dBu (1.23 Vrms), -10 dBV (316 mVrms), adjustable Mic/line inputs: -60 dBV, +4 dBu, -10 dBV, adjustable
Maximum level	Line inputs: +21 dBu balanced, +15 dBu unbalanced Mic/line inputs: -60 dBV, +4 dBu, -10 dBV, adjustable
CMRR.....	>80 dB @ 1 kHz

Specifications • IN1808 Series (Continued)

Input gain adjustment.....	Line inputs: -18 dB to +24 dB in 0.1 dB steps, adjustable per input LPCM-2Ch inputs: -18 dB to +24 dB in 0.1 dB steps, adjustable per input Mic/line inputs: -18 dB to +60 dB in 0.1 dB steps, adjustable per input
DC phantom power	+48 VDC ±10% (can be switched on or off per mic/line input)

NOTE: Unbalanced analog inputs applied at a DTP2 transmitter input have +12 dB of gain applied to bring the signal up to a nominal level.

Audio output – Line out

Number/signal type.....	2 stereo or 4 mono, balanced/unbalanced 1 HDMI, embedded 1 DTP2/XTP/HDBT (embedded digital, and remote balanced/unbalanced analog*) *Available only in DTP mode
Connectors.....	(2) 3.5 mm, 5 pole captive screw 1 female HDMI type A 1 female RJ-45
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 0.1 dB steps (Volume control not available on loop output)

NOTE: System gain for the analog DTP2 receiver output is rated at -12 dB (unbalanced) and -6 dB (balanced).

Audio output – power amplifier – IPCP models only

Number/signal type	
IN1808 IPCP SA.....	1 stereo (default) or 2 mono (2 channels total)
IN1808 IPCP MA 70.....	1 mono, 70 V line

NOTE: The 5 mm screw lock captive screw connector accepts wires of 22 AWG to 12 AWG.

Connectors	
IN1808 IPCP SA.....	(1) 5 mm, 4 pole, screw lock captive screw
IN1808 IPCP MA 70.....	(1) 5 mm, 2 pole, screw lock captive screw
Load impedance	
IN1808 IPCP SA.....	4 ohms minimum
IN1808 IPCP MA 70.....	50 ohms minimum
Amplifier type.....	Class D
Output power	
IN1808 IPCP SA.....	25 watts per channel, 8 ohms, 1 kHz, 0.1% THD, or 50 watts per channel, 4 ohms, 1 kHz, 0.1% THD
IN1808 IPCP MA 70.....	100 watts (rms) @ 70 V, 1 kHz, 0.1% THD
Protection	Clip limiting, thermal, short circuit, DC output
Frequency response	20 Hz to 20 kHz, -3 dB to +1 dB @ 1 W
THD + Noise.....	<0.1% @ 1 kHz, 3 dB below clipping
S/N.....	>90 dB, 20 Hz to 20 kHz, unweighted

Communications

Serial control port.....	1 bidirectional RS-232, 3.5 mm, 3 pole captive screw connector (rear panel)
Baud rate and protocol	9600, 8 data bits, 1 stop bit, no parity (default)
Serial control pin configuration	1 = Tx, 2 = Rx, 3 = Gnd
USB control port.....	1 female mini USB B (front panel)
USB standards	USB 2.0, high speed

Specifications • IN1808 Series (Continued)

Ethernet

Connector	1 female RJ-45*
	*IN1808 only. IPCP models use IPCP Ethernet ports.
Ethernet data rate.....	10/100/1000Base-T, half/full duplex with autodetect
Ethernet protocol.....	ARP, ICMP (ping), IP, TCP, DHCP, HTTP, Telnet
Ethernet default settings.....	Link speed and duplex level = autodetected IP address = 192.168.254.254 Subnet mask = 255.255.255.0 Gateway = 0.0.0.0 DHCP = off
Storage	512 MB user memory
Program control.....	Extron Product Configuration Software (PCS) program for Windows® Extron Simple Instruction Set (SIS™) Microsoft® Internet Explorer®

Communications – IPCP Pro Control Processor with AV LAN – IPCP models only

Memory

SDRAM	512 MB
Flash	4.5 GB

Software and control options

Software.....	Extron Global Configurator Plus and Professional for Windows®
Control options.....	GlobalViewer®, eBus®, TouchLink® for Web, Touchlink for iPad®, or TouchLink Pro touchpanels

Ethernet control

Network interface controllers (NICs)

2: 1 LAN, 1 AV LAN

AV LAN network switch

1 unmanaged 3 port switch

Connectors

LAN	1 female RJ-45
AV LAN.....	3 female RJ-45

Ethernet data rate..... 10/100/1000Base-T, half/full duplex with autodetect

Protocols..... DHCP, DNS, HTTP, HTTPS, ICMP, NTP, SFTP, SMTP, SNMP, SSH, TCP/IP, UPD/IP

Default settings

LAN	IP address = 192.168.253.250 Subnet mask = 255.255.255.0 Gateway = 0.0.0.0 DHCP = Off DNS = 127.0.0.1
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AV LAN.....	Link speed and duplex level = autodetect DHCP server = disabled IP address = 192.168.254.250 Subnet mask = 255.255.255.0 Gateway = 0.0.0.0
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DHCP server disabled..	IP address = 192.168.254.250 DNS = 127.0.0.1
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DHCP server enabled ..	IP address = 192.168.254.1 Dynamic leased IP address pool = 192.168.254.100 – 192.168.254.149 Maximum lease count = 50 Lease time = 24 hours
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Specifications • IN1808 Series (Continued)

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

Serial control pass-through ports ...	DTP2 Tx/XTP matrix to IN1808: RS-232 can be transmitted to and from DTP2 Tx/XTP matrix via Ethernet insertion.
	DTP2 Rx/HDBT Rx/XTP matrix: RS-232 can be transmitted to and from DTP2 Rx/HDBT Rx/XTP matrix via Ethernet insertion.
Baud rates.....	Up to 115200 baud
Protocol.....	6 to 8 data bits 1 or 2 stop bits Even or odd parity, no parity Flow control = XON, XOFF, none
IR control pass-through port	IN1808 to TP Rx: (1) 3.5 mm, 3 pole captive screw connector TTL level (0 to 5 V) modulated infrared control from 30 kHz up to 60 kHz
IR control pin configuration	1 = Tx, 2 = Rx, 3 = Gnd

General

Power supply	Internal Input: 100-240 VAC, 50-60 Hz
Power consumption	
Full power	
IN1808	72 watts
IN1808 IPCP SA and IN1808 IPCP MA 70	103 watts
Power save mode	
IN1808	34 watts
IN1808 IPCP SA and IN1808 IPCP MA 70	52 watts
IN1808 IPCP MA 70	TBD 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	
IN1808	2 fans, air flows from right to left (when viewed from the front)
IN1808 IPCP models	1 fan, air flows from right to left (when viewed from the front)
Fan noise	
IN1808	42 dB(A) (ISO3746:2010 variable speed fan measured at max. speed)
IN1808 IPCP models	37 dB(A) (ISO3746:2010 variable speed fan measured at max. speed)
Thermal dissipation	
Full power	
IN1808	201 BTU/hr
IN1808 IPCP SA	243 BTU/hr
IN1808 IPCP MA 70	245 BTU/hr
Power save mode	
IN1808	113 BTU/hr
IN1808 IPCP SA	153 BTU/hr
IN1808 IPCP MA 70	152 BTU/hr
Mounting	
Rack mount.....	Yes, with included, preinstalled brackets
Enclosure type	Metal
Enclosure dimensions	
IN1808	1.75" H x 17.5" W x 10.5" (1U high, full rack wide) (4.4 cm H x 44.4 cm W x 26.7 cm D)
IN1808 IPCP models	3.50" H x 17.5" W x 10.5" D (2U high, full rack wide) (8.9 cm H x 44.4 cm W x 26.7 cm D)

Specifications • IN1808 Series (Continued)

Product weight

IN1808 5.3 lbs (2.4 kg)

IN1808 IPCP SA and IN1808 IPCP MA 70
8.0 lbs (3.6 kg)

Regulatory compliance..... CE, c-UL, UL, PSE, RoHs, and WEEE

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.

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