

NetworkHD 600 Series (SDVoE)

NHD-600-TRX | NHD-600-TRXF



Key Features

- Operates as a transceiver that can encode and decode simultaneously
- Transmissions up to 4K60 4:4:4 8bit with Dolby Vision/HDR compatibility
- USB HID connectivity for extension of keyboard and mouse
- Zero latency A/V transmissions using Genlock processing
- Instant matrix switching speeds using Fast Switch processing
- Native video wall (8x8) and multiview processing (16 windows)

In the Box

- 1x NHD-600-TRX or NHD-600-TRXF
- 1x IR Emitter
- 1x IR Receiver
- 1x Pair of Wall Brackets
- 1x Pair of NHD-000-RACK4 Brackets
- 1x 12V 2A DC Power Supply (US/UK/EU/AU)
- 1x 3-pin Phoenix Connector (for RS-232)
- 1x 5-pin Phoenix Connector (for analog audio)

TRXF Additional Features

- Fiber transport supporting up to 300m distance using OM3 multimode
- High speed USB 2.0 connecting for extension of USB peripherals over the network

NHD-610-TX v2



Key Features

- Pixel-perfect transmissions up to 4K60 4:4:4 8bit with Dolby Vision/HDR compatibility
- USB 1.1 connectivity for extension of USB peripheral devices

In the Box

- 1x NHD-610-TX v2
- 1x IR Emitter
- 1x IR Receiver
- 1x Pair of NHD-000-RACK4 Brackets
- 2x Pair of Wall Brackets
- 1x 12V DC Power Supply (US/UK/EU/AU)
- 1x 3-pin Phoenix Connector (for RS-232)
- 1x 5-pin Phoenix Connector (for analog audio)

- 2CH Dante/AES67 audio output
- Multi-purpose audio input/output for audio ingest or HDMI de-embed

NetworkHD 500 Series (JPEG 2000)

NHD-500-TX v2 | NHD-500-RX v2



Key Features

- HDMI 2.0 encoding/decoding up to 4K60 4:4:4 8bit with Dolby Vision/HDR compatibility
- Ethernet or Fiber connections (550m w/ OM3 MMF or 10km with SMF)
- USB connectivity for extension and routing of USB peripheral devices
- Ultra-low latency transmissions of 3ms

In the Box

- 1x NHD-500-TX or NHD-500-RX
- 1x IR Emitter
- 1x IR Receiver
- 1x Pair of NHD-000-RACK4 Brackets
- 2x Pair of Wall Brackets
- 1x 3-pin Phoenix Connector (for RS-232)
- 1x 5-pin Phoenix Connector (for analog audio)

- Dante AV-A available on both Encoder and Decoder. (license required)
- NHD-500-RX decoder capable of 16x16 video wall processing, including mosaic
- High definition preview streams for control system interfaces
- Audio Return Channel via HDMI or Toslink

NHD-510-TX



Key Features

- HDMI/USB-C with 4K@60Hz (4:4:4) and HDCP 2.2 compliance over Gigabit network.
- Supports full function USB-C for video/audio/USB data (Data USB 2.0)
- HDMI Video Loop out from active video input

In the Box

- 1x NHD-510-TX Encoder
- 1x Pair of Rack Brackets
- 2x Pair of Wall Brackets
- 1x 4-pin Terminal Block
- 1x 5-pin Terminal Block

NHD-500-DNT-TX



Key Features

- HDMI 2.0 encoding/decoding up to 4K60 4:4:4 8bit with Dolby Vision/HDR compatibility
- 2CH Dante/AES67 network audio output
- Ethernet or Fiber connections (550m w/ OM3 MMF or 10km with SMF)

In the Box

- 1x NHD-500-DNT-TX Transmitter
- 1x IR Emitter
- 1x IR Receiver
- 4x Wall Mounting Brackets
- 2x Rack Mounting Brackets
- 1x 3-pin Terminal Block
- 1x 5-pin Terminal Block

NHD-500-E-TX | NHD-500-E-RX



Key Features

- Supports encoding full HDMI 2.0 content up to 4K60 4:4:4 8bit
- Compatible with Dolby Vision, HDR10 & HLG content up to 60Hz
- Essential connectivity for streamlined audio and video distribution

In the Box

- 1x NHD-500-E-TX or NHD-500-E-RX
- 1x IR Emitter (TX only)
- 2x Pair of Wall Brackets
- 1x Pair of Rack Brackets
- 1x 3-pin Terminal Block (RX only)
- 1x 5-pin Terminal Block (TX only)
- 1x Pair of Wall Brackets
- 1x Pair of Rack Brackets

NHD-500-IW-TX



Key Features

- Supports encoding full 4K60 4:4:4 8bit or RGB content
- 2-Gang US style in-wall form factor
- HDMI and USB-C Switchable inputs

In the Box

- 1x NHD-500-IW-TX Encoder
- 1x Decora Face Plate
- 1x Mounting Plate
- 2x Sets of Mounting Screws
- 1x 2-pin Phoenix Connector

- USB extension and routing for peripheral USB devices
- Dedicated stereo input for connecting external audio devices
- Dante AV-A available (license required)

Multiview Processor

NHD-0401-MV



Key Features

- 4-Inputs supporting 4K60 source content
- Multiview processing up to 4 inputs simultaneously

NetworkHD 400 Series (JPEG 2000)

NHD-400-TX | NHD-400-RX



Key Features

- Encoding/decoding up to 4K30 4:4:4 with HDR10/HLG compatibility
- USB connectivity for extension and routing of USB peripheral devices
- Ultra-low, single frame latency
- NHD-400-RX decoder capable of 16x16 video wall processing, including

NHD-400-E-TX | NHD-400-E-RX



Key Features

- Lite' versions of the NHD-400-TX/RX with only essential I/O
- Encoding/decoding up to 4K30 4:4:4 with HDR10/HLG compatibility
- Ultra-low, single frame latency

NHD-400-DNT-TX



Key Features

- NHD-400-TX with added 2CH Dante/AES67 network output
- Includes additional stereo audio input (switchable)
- Encoding up to 4K30 4:4:4 with HDR10/HLG compatibility

In the Box

- 1x NHD-0401-MV Multiview Processor
- 1x 12V Power Supply (US/EU/AU/UK)
- 1x IR Remote
- 1x IR Receiver Cable
- 1x 3-pin Terminal Block
- 4x Wall Mounting Brackets
- 2x Mounting Brackets
- 1x QuickStart Guide

- Works seamlessly with NetworkHD 400 & 500 series
- Can be used as a standalone multiview processor

In the Box

- 1x NHD-400-TX or NHD-400-RX
- 1x Pair of Wall Brackets
- 1x Pair of NHD-000-RACK4 Brackets
- 1x IR Emitter
- 1x IR Receiver
- 1x 5-pin Phoenix Connector (analog audio) RX only
- 1x 4-Pin Phoenix Connector (RS232) RX only

- Discrete routing of all signal flows including video, audio, USB and control signals

In the Box

- 1x NHD-400-E-TX or NHD-400-E-RX
- 2x Pair of Wall Brackets
- 1x Pair NHD-000-RACK4 Brackets
- 1x 4-pin Phoenix Connector (RS232) RX only

- NHD-400-E-RX decoder capable of 16x16 video wall processing, including mosaic
- Compatible with all other NetworkHD 400 series models

In the Box

- 1x NHD-400-DNT-TX Encoder
- 1x 3-pin Phoenix Connector (RS232)
- 1x Pair of NHD-000-RACK4 Brackets
- 1x Pair of Wall Brackets
- 1x IR Emitter Cable
- 1x IR Receiver Cable

- Ultra-low, single frame latency
- Compatible with all other NetworkHD 400 series models

NHD-400-TX-IW



Key Features

- 2-Gang US style wall plate
- Dual input VGA & HDMI with auto switching
- 4K encoding up to 4K30 4:4:4 with HDR10/HLG compatibility

In the Box

- 1x NHD-400-TX-IW Encoder
- 1x 12V DC Power Supply (US | UK | EU)
- 1x 2-Pin Terminal Block (DC Power)
- 1x 3.5mm Stereo TRS Plug to 3-pin Terminal Block RS-232 Adapter
- 1x White Decorative Plate with 4 Screws

- USB connectivity for extension and routing of USB peripheral devices
- Ultra-low, single frame latency

NetworkHD 100/200 Series (H.264/5)

NHD-120-TX | NHD-120-RX



Key Features

- Transmits AV streams up to 4k 30Hz using H.264 or H.265 encoding
- AV streams can be encrypted using an AES 128-bit algorithm
- Compatible with the NHD-000-RACK4 for professional rack mounting of up to 12 encoders per rack
- Powers via PoE from compatible network switch using 802.1af

In the Box

- 1x NHD-120-TX Encoder
- 2x 3-pin Terminal Block
- 2x Wall Mounting Brackets
- 2x Rack Mounting Brackets
- 1x IR Transmitter
- 1x IR Receiver
- 1x Quickstart Guide

- Live video preview streams for use with NetworkHD Touch iPad app or a custom control UI
- Analog audio de-embed for easy connection to external audio DSP or amplifier
- Companion Control app compatible for source control

NHD-150-RX



Key Features

- Powerful processor for displaying multiple video sources on a display
- Capable of processing up to nine 4K30 inputs at the same time
- Touch™ control app for live previews with drag and drop source selection

In the Box

- 1x NHD-150-RX Decoder
- 2x 3-Pin Terminal Blocks
- 4x Pair of Wall Brackets
- 1x Pair of Rack Brackets
- 4x Bracket Screws

- Utilizes H.264 and H.265 encoding for visually lossless video distribution
- Audio de-embed, CEC and RS-232 control of connected devices

NHD-124-TX



In the Box

- 1x NHD-124-TX Encoder
- 1x 12V DC Power Supply (US | UK | EU)
- 2x Pair of Wall Brackets
- 2x Pair of Rack Brackets

Key Features

- Ultra-low network bandwidth encoder for 4 simultaneous HDMI inputs
- 4 streams over 1 Ethernet connection
- Seamlessly integrates with NetworkHD 120 Series decoders

- Touch™ control app for live previews with drag and drop source selection
- Up to 100m (328ft) distance over standard Cat5e

NHD-120-IW-TX



In the Box

- 1x NHD-120-IW-TX Encoder
- 1x 3-pin 3.5mm Phoenix Connector for RS-232 (debug)
- 1x 3-pin 3.5mm Phoenix Connector for audio out
- 1x 2-pin 3.5mm Phoenix Connector for power
- 1x IR Transmitter
- 1x Plastic Decora Panel

Key Features

- Transmits AV streams up to 4K 30Hz using H.264 or H.265 encoding
- AV streams can be encrypted using an AES 128-bit algorithm
- 2-Gang US style wall plate
- Powers via PoE from compatible network switch using 802.1af
- Live video preview streams for use with NetworkHD Touch iPad app or a custom control UI

- Analog audio de-embed for easy connection to external audio DSP or amplifier
- Companion Control app compatible for source control
- Ethernet port on the front panel provides a network connection to the source device

NHD-CTL-PRO v2 (Controller)



In the Box

- 1x NHD-CTL-PRO v2 Controller
- 2x NHD-000-RACK4 Brackets
- 4x Wall Brackets
- 1x 6-pin Phoenix Connector
- 1x QuickStart Guide

Key Features

- Auto discovery of all NetworkHD endpoints
- Powerful web-based UI for intuitive control & management
- Isolated AV and control LAN ports for seamless integration into any network
- LED screen for access to system info
- Compact chassis for installation into NHD-000-RACK4

Specifications

Audio and Video			
	NHD-610-TX v2	NHD-600-TRX	NHD-600-TRXF
Inputs/Outputs	1x HDMI 2.0 Input 1x HDMI 2.0 Loop Output 1x 5-pin Balanced analog audio In/Out	1x HDMI 2.0 Input 1x HDMI 2.0 Output 1x 5-pin Balanced Analog Audio In/Out	1x HDMI 2.0 Input 1x HDMI 2.0 Output 1x 5-pin Balanced Analog Audio In/Out
Maximum Pixel Clock	600Mhz		
Video Encoding	SDVoE Pixel Pipeline Dante/AES67 proprietary protocols	SDVoE Pixel Pipeline	SDVoE Pixel Pipeline
Encoding Data Rate	1080p@60Hz 8bit - 3.4Gbps 4K UHD@30Hz 4:4:4 8bit - 6.4Gbps 4K UHD@60Hz 4:4:4 8bit - 8.7Gbps (with light compression)		
Max End to End Latency	Genlock Mode: Uncompressed = 30us, Compressed <120us Fast Switch Mode: 1~2 video frames = min. between 16.7 – 33.4ms @ 60fps		
Max Video Resolutions	4096x2160p @ 60Hz 8bit 4:4:4 or RGB 3840x2160p @ 60Hz 12bit 4:2:2 Dolby Vision 3840x2160p @ 60Hz 10bit 4:2:2 HDR10/HLG 1920x1080p @ 60Hz 12bit		
Supported Standards	RGB DCI USB		
Communication and Control			
HDMI	HDMI 2.0b HDCP 2.2 CEC EDID		
Network	1x 10GbE RJ45 (AV) 1x 1GbE RJ45 (LAN/Dante) <i>Dante only available on 610-TX</i>		1x 10Gbps SFP+ (AV) 10GBASE-SR: 300m OM3 MMF 1x 1GbE RJ45 (LAN)
RS-232	1x 3-pin Phoenix Connector 2 Way Broadcast Routed API Programmable		
IR	1x IR TX 3.5mm TS Mono Jack API Programmable 1x IR RX 3.5mm TRS Stereo Jack API Programmable		
USB	3x USB 1.1 Type A 1x USB 1.1 Type B Host	3x USB 1.1 Type A 1x USB 1.1 Type B Host	3x USB 2.0 Type A 1x USB 2.0 Type B Host USB Bandwidth: 480Mbps
Security Protocols	AES 128 SSH TLS HTTPS		
Power			
Power Supply	12V 2A DC PSU 802.3at PoE+ compliant	12V 2A DC PSU 802.3at PoE+ compliant	12V 2A DC PSU
Power Consumption	Max: 24w Average: 10w		
Environmental			
Operating Temperature	+32°F ~ +104°F (0°C ~ +45°C) 10% ~ 90% non-condensing		
Storage Temperature	-4°F to ~ 140°F (-20°C ~ +70°C) 10% ~ 90% non-condensing		
Maximum BTU	34 BTU/hr		
Dimensions & Weight	Length x Width x Height: 215mm x 140mm x 25mm Weight: 1.75lbs		
Regulatory			
Safety and Emission	CE FCC RoHS RCM EAC		

Specifications

Audio and Video					
	NHD-500-TX v2	NHD-500-RX v2	NHD-510-TX	NHD-500-DNT-TX	NHD-500-IW-TX
Inputs/Outputs	1x HDMI In 1x HDMI Loop Out 1x 3.5mm TRS Analog In 1x 5-pin Balanced Analog Out 1x Toslink Digital Out	1x HDMI Out 1x 5-pin Balanced Analog Out 1x Toslink Digital In	1x HDMI In 1x USB-C In 1x HDMI Loop Out 1x 5-pin Balanced Analog Out	1x HDMI In 1x 3.5mm TRS Analog In 1x 5-pin Balanced Analog Out 1x Toslink Digital Out	1x HDMI In 1x USB-C In 1x 3.5mm TRS Analog In
Maximum Pixel Clock	600Mhz				
Max Video Resolutions	4096x2160p @ 60Hz 8bit 4:4:4 or RGB 3840x2160p @ 60Hz 12bit 4:2:2 Dolby Vision 3840x 2160p @ 60Hz 10bit 4:2:2 HDR10/HLG 1920x1080p @60Hz 12bit				
Audio Formats	Passthrough: 2ch PCM and up to DTS:X and Dolby Atmos ARC: 2ch PCM and up to Dolby Digital+ and DTS 5.1 Dante/AES67: 2CH PCM (Dante AV-A or DNT-TX)				
Supported Standards	RGB DCI USB 1.1, 2.0 BT.2020				
Output Video Encoding	JPEG 2000				
Encoding Data Rate	Max: 850Mbps (Configurable)				
End to End Latency	4ms video latency @4K60 (pass-through mode) 1-2 video frames latency (scaler/VW mode)				
Communication and Control					
HDMI	HDMI 2.0b HDCP 2.2 CEC EDID ARC				
Network	1x 1GbE RJ45 1x 1GbE RJ45 for Dante 1x 1Gbps SFP Supported SFP Modules: (1000Base-SX: 550m using OM3 multi-mode) (1000Base-LX: 5km using single-mode) (1000Base-LX10: 10km using single-mode)				1x 1GbE RJ45
RS-232	1x 3-Pin Phoenix Connector 2-way API Programmable				1x 3.5mm 2-way API Programmable
IR	1x IR TX 3.5mm TS Mono Jack API Programmable 1x IR RX 3.5mm TRS Stereo Jack API Programmable				N/A
USB	1x USB 2.0 Type Host (Max 200Mbps upstream)	2x USB 1.1 Type A 2x USB 2.0 Type A	1x USB 2.0 Type Host (Max 200Mbps upstream)	1x USB 2.0 Type Host (Max 200Mbps upstream)	1x USB-C Host (Up to 200Mbps upstream)
Security Protocols	AES 256 SSH HTTPS				
Power					
Power Supply	12V DC 1A 802.3at PoE+ Compliant	12V DC 1A 12V DC 3A(USB peripherals connected) 802.3at PoE+ Compliant	20V DC 6A 802.3at PoE+ Compliant	12V DC 1A 802.3af PoE Compliant	20V DC 6A 802.3af PoE Compliant
Power Consumption	Max: 15.4w Average: 8w				
Environmental					
Operating Temperature	0 to + 45°C (32 to + 113 °F), 10% to 90%, non-condensing				
Storage Temperature	-20 to +70°C (-4 to + 158 °F), 10% to 90%, non-condensing				
Maximum BTU	51.18 BTU/hr				
Dimensions & Weight	Length x Width x Height: 215mm x 120mm x 25mm Weight: 1.75lbs				2-gang US J-Box Height x Width x Depth: 121mm x 121mm x 51.4mm Weight: 1lbs
Regulatory					
Safety and Emission	CE FCC RoHS EAC RCM UKCA				

Specifications

Audio and Video				
	400 Series	400-E Series	NHD-400-DNT-TX	NHD-400-TX-IW
Inputs/Outputs	TX	TX	1x HDMI Input 1x Audio In: 3.5mm (1/8in) 1x IR In: 3.5mm (1/8in) 1x Audio Out: 3.5mm (1/8in)	1x HDMI Input 1x VGA Input 1x Audio In: 3.5mm (1/8in)
	1x HDMI Input 1x HDMI Output 1x Audio In: 3.5mm (1/8in)	1x HDMI Input		
	RX	RX		
	1x HDMI Output 1x Audio Out: 5-Pin Phoenix	1x HDMI Output		
Maximum Pixel Clock	300MHz			
Output Video Encoding	JPEG 2000			
Encoding Data Rate	Max: 850Mbps (Configurable)			
Max End to End Latency	1 video frame latency (pass-through mode) 16ms @60fps 2 video frames latency (scaler/VW mode)			
Max Video Resolutions	3840x2160p @ 60Hz 8bit 4:2:0 3840x2160p @ 30Hz 8bit 4:4:4 or RGB 3840x2160p @ 30Hz 10bit 4:2:2 HDR/HLG 1920x1080p @ 60Hz 12bit			
Communication and Control				
HDMI	HDMI 2.0 HDCP 2.2 CEC EDID			
Ethernet	1x 1GbE 8-pin RJ-45			
RS-232	1x RS-232: 4-pin Phoenix (RX only)		1x RS-232: 3-pin Phoenix	1x RS-232: 3.5mm (1/8in) TRS Stereo 2 Way
IR	1x IR TX: 3.5mm TS Mono 1x IR RX: 3.5mm TRS Stereo Bidirectional Over Ethernet	N/A	1x IR TX: 3.5mm TS Mono 1x IR RX: 3.5mm TRS Stereo Bidirectional Over Ethernet	N/A
USB	RX: 2x USB Device: USB Type A TX: 1x USB Host: USB Type B Power: 5v 500ma per port Data Rate: Max 9MB/s	N/A	1x USB Host: USB Type B Data Rate: Max 9MB/s	1x USB Host: USB Type B Data Rate: Max 9MB/s
Security Protocols	AES 128 SSH TLS HTTPS			
Power				
Power Supply	12V DC			
PoE	IEEE 802.3af			
Power Consumption	8W			
Environmental				
Operating Temperature	0 to + 45°C (32 to + 113 °F), 10% to 90%, non-condensing			
Storage Temperature	-20 to +70°C (-4 to + 158 °F), 10% to 90%, non-condensing			
Maximum BTU	51.18 BTU/hr			19.45 BTU/hr
Dimensions & Weight	Length x Width x Height: 220mm x 140mm x 25mm Weight: 1.75lbs			2-gang US J-Box H x W x D: 108mm x 91mm x 45mm Weight: 1lbs
Regulatory				
Safety and Emission	CE FCC RoHS EAC RCM			

Specifications

Audio and Video			
	NHD-150-RX	NHD-124-TX	NHD-120 Series
Inputs/Outputs	1x 8-pin RJ-45 female Input 1x HDMI Output 1x Audio Out: 3-Pin Phoenix	4x HDMI Input 1x 8-pin RJ-45 female Output	TX
			1x HDMI Input 1x Audio Out: 3-Pin Phoenix
			RX
			1x 8-pin RJ-45 female 1x HDMI Output 1x Audio Out: 3-Pin Phoenix
Output Video Encoding	H.264/H.265	H.264/H.265	H.264/H.265
Encoding Data Rate	H.264: 30Mbps H.265: 5Mbps	H.264: 30Mbps H.265: 5Mbps	H.264: 30Mbps H.265: 5Mbps
Max End to End Latency	1080p LLM: 80ms HQM: 250ms 4K LLM: 150ms HQM: 300ms	1080p LLM: 80ms HQM: 250ms 4K LLM: 150ms HQM: 300ms	1080p LLM: 80ms HQM: 250ms 4K LLM: 150ms HQM: 300ms
Max Video Resolutions	1920x1080p @ 60Hz 3840x2160p @ 60Hz	1920x1080p @ 60Hz 3840x2160p @ 30Hz	1920x1080p @ 60Hz 3840x2160p @ 30Hz 4:2:0 8bit
Communication and Control			
HDMI	HDMI 1.4 HDCP 2.2 EDID CEC	HDMI 1.4 HDCP 2.2 EDID	HDMI 1.4 HDCP 2.2 EDID CEC
Ethernet	1x 8-pin RJ-45 female 10/100/1000 Base -T PoE 802.1af	1x 8-pin RJ-45 female 10/100/1000 Base -T	1x 8-pin RJ-45 female 10/100/1000 Base -T PoE 802.1af
RS-232	1x RS-232: 3-pin Phoenix API Control	N/A	1x RS-232: 3-pin Phoenix API Control
IR	N/A		1x IR TX: 3.5mm TS Mono 1x IR RX: 3.5mm TRS Stereo Routed API Programmable
Security Protocols	AES 128 SSH TLS HTTPS		
Power			
Power Supply	12V DC 1A	12V DC 3A	12V DC 1A
PoE	IEEE 802.3af	N/A	IEEE 802.3af
Power Consumption	3.6W	3.6W	3.6W
Environmental			
Operating Temperature	0 to + 45°C (32 to + 113 °F), 10% to 90%, non-condensing		
Storage Temperature	-20 to +70°C (-4 to + 158 °F), 10% to 90%, non-condensing		
Maximum BTU			20.47 BTU/hr
Dimensions & Weight	220mm x 130mm x 25mm Weight: 1.25lbs	260mm x 215mm x 25mm Weight: 3.21lbs	NHD-120-TX/RX: 175mm x 100mm x 25mm Weight: 1.25lbs NHD-120-IW-TX (without decora plate) 105.6mm x 90mm x 45.8mm
Regulatory			
Safety and Emission	CE FCC RoHS EAC RCM		
Communication and Control			
	NHD-CTL-PRO v2		
Network	2x 1GbE RJ45 (Control & AV)		
RS-232	1x RS-232 6-Pin Phoenix Connector		
HDMI	Reserved for future use		
USB	Reserved for future use		
Security Protocols	Telnet Telnet over TLS SSH HTTPS		
Power			
Power Supply	12V DC 1A		
PoE	802.3af PoE Compliant		
Power Consumption	N/A		
Environmental			
Operating Temperature	0 to + 45°C (32 to + 113 °F), 10% to 90%, non-condensing		
Storage Temperature	-20 to +70°C (-4 to + 158 °F), 10% to 90%, non-condensing		
Maximum BTU	N/A		
Dimensions & Weight	Length x Width x Height: 215mm x 120mm x 25mm Weight: N/A		
Regulatory			
Safety and Emission	CE FCC RoHS EAC RCM		