

NetworkHD 600 Series (SDVoE)

NHD-610-TX | NHD-610-RX



In the Box

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

Key Features

- Pixel-perfect transmissions up to 4K60 4:4:4 8bit with Dolby Vision/HDR compatibility
- High speed USB 2.0 connectivity for extension of USB peripheral devices
- 2CH Dante/AES67 audio output on NHD-610-TX encoder
- NHD-610-RX decoder capable of video wall (8x8) and multiview processing (16 windows)
- Multi-purpose audio input/output for audio ingest or HDMI de-embed

NHD-600-TRX | NHD-600-TRXF



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)

Key Features

- Operates as a transceiver that can encode and decode simultaneously
- Pixel-perfect 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)

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

NetworkHD 500 Series (JPEG 2000)

NHD-500-TX | NHD-500-RX



In the Box

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

Key Features

- HDMI 2.0 encoding/decoding up to 4K60 4:4:4 8bit with Dolby Vision/HDR compatibility
- Flexible output supports either Ethernet or Fiber connections (300m w/ OM3 fiber)
- USB connectivity for extension and routing of USB peripheral devices
- Ultra-low latency transmissions of less than a single video frame
- NHD-500-RX decoder capable of 16x16 video wall processing, including mosaic
- High definition preview streams for control system interfaces

NetworkHD 400 Series (JPEG 2000)

NHD-400-TX | NHD-400-RX



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

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

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



In the Box

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

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

NHD-400-DNT-TX



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

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

NHD-400-TX-IW



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

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

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

NHD-250-RX



In the Box

- 1x NHD-250-RX Decoder
- 1x 12V DC Power Supply (US | UK | EU)
- 3x 3-pin Phoenix Connectors (RS232 & analog audio)
- 1x Pair of NHD-000-RACK4 Brackets
- 1x Pair of Wall Brackets

Key Features

- Multiview processor supports up to 9 unique PiP windows
- Fully customizable multiview layouts
- 4K output scaling
- Interoperable with NHD-110-TX and NHD-140-TX

NHD-140-TX



In the Box

- 1x NHD-140-TX Encoder
- 1x 12V DC Power Supply (US | UK | EU)
- 1x Pair of NHD-000-RACK4 Brackets

Key Features

- Quad encoder helps reduce amount of separate components
- Combines all four inputs into a single ethernet output
- Low bandwidth H.264 1080p60 encoding
- Interoperable with NHD-110-TX/RX
- Easily rack mountable with the NHD-140-RACK-1U

NHD-110-TX | NHD-110-RX



In the Box

- 1x NHD-110-TX or NHD-110-RX
- 1x IR Emitter
- 1x IR Receiver
- 2x 3-pin Phoenix Connector (RS232 & analog audio)
- 1x Pair of Wall Brackets
- 1x Pair of NHD-000-RACK4 Brackets

Key Features

- Low bandwidth 1080p60 encoding/decoding
- Dual encoding options allow either H.264 or HEVC H.265
- Instant matrix switching with no freeze frames
- NHD-110-RX supports video wall processing up to 16x16
- Discrete routing of all signal flows including video, audio and control signals

NHD-000-CTL (Controller)



In the Box

- 1x NHD-000-CTL Controller
- 1x Pair of NHD-000-RACK4 brackets
- 1x Quickstart Guide
- 1x 6-pin Terminal Block
- 1x 12V Power Supply (US/UK/EU/AU)

Key Features

- Provides automatic discovery of NetworkHD encoders and decoders
- Simple browser management of encoders and decoders
- Integrates with major control systems, including the NetworkHD Touch™ control app
- Dual Ethernet ports for complete isolation of control and AV network traffic
- PoE or DC power options

Specifications

Audio and Video				
	NHD-610-TX	NHD-610-RX	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	1 x HDMI 2.0 Output 1x HDMI 2.0 Switchable Input 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			
Output Video Encoding	SDVoE Pixel Pipeline Dante/AES67 proprietary protocols	SDVoE Pixel Pipeline	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)			1x 10Gbps SFP+ (AV) 10GBASE-SR: 300m using OM3 multi-mode 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	3 x USB 2.0 Type A 1 x USB 2.0 Type B Host USB Bandwidth: 480Mbps	3 x USB 2.0 Type A 1 x USB 2.0 Type B Host USB Bandwidth: 480Mbps	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 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	140mm x 215mm x 25mm			
Weight	1.75lbs			
Regulatory				
Safety and Emission	CE FCC RoHS RCM EAC			

Specifications

Audio and Video		
	NHD-500-TX	NHD-500-RX
Inputs/Outputs	1x HDMI In 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
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	
Supported Standards	RGB DCI USB	
Output Video Encoding	JPEG 2000	
Encoding Data Rate	Max: 850Mbps (Configurable)	
End to End Latency	1 video frame latency (pass-through mode) 16ms @ 4K60 2 video frames latency (scaler/VW mode)	
Communication and Control		
HDMI	HDMI 2.0b HDCP 2.2 CEC EDID	
Network	1x 1GbE RJ45 1 x 1Gbps SFP (1000BaseT-SX: 550m using OM3 multi-mode)	
RS-232	1x 3-Pin Phoenix Connector 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	
USB	1x USB 2.0 Type Host	2x USB 1.1 Type A 1x USB 2.0 Type A
Security Protocols	AES 128 SSH TLS HTTPS	
Power		
Power Supply	12V DC 1A 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	
Regulatory		
Safety and Emission	CE FCC RoHS EAC RCM	

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	HDCP 2.2 CEC			
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
Regulatory				
Safety and Emission	CE FCC RoHS EAC RCM			

Specifications

Audio and Video			
	NHD-250-RX	NHD-140-TX	NHD-110 Series
Inputs/Outputs	1x HDMI Output 1x Audio Out: 3-Pin Phoenix	4x HDMI Input	TX
			1x HDMI Input 1x Audio Out: 3-Pin Phoenix
			RX
			1x HDMI Output 1x Audio Out: 3-Pin Phoenix
Output Video Encoding	N/A	H.264	H.264/H.265
Encoding Data Rate	N/A	120Mbps (30Mbps per encoder)	H.264: 30Mbps H.265: 5Mbps
Max End to End Latency	~80ms (low latency mode) ~300ms (high quality mode)		
Max Video Resolutions	3840x2160p @60Hz (Tile mode) 1920x1080p @60Hz	1920x1080p @60Hz 8bit	1920x1080p @60Hz 8bit
Communication and Control			
HDMI	HDMI 1.2 HDCP 1.4 CEC	HDMI 1.2 HDCP 1.4	HDMI 1.2 HDCP 1.4 CEC
Ethernet	1x 1GbE 8-pin RJ-45		
RS-232	1x RS-232: 3-pin Phoenix Routed API Programmable	N/A	1x RS-232: 3-pin Phoenix Routed API Programmable
IR	N/A	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		
PoE	IEEE 802.3af	N/A	IEEE 802.3af
Power Consumption	8.3W	19.44W	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	31 BTU/hr	68 BTU/hr	20.47 BTU/hr
Regulatory			
Safety and Emission	CE FCC RoHS EAC RCM		