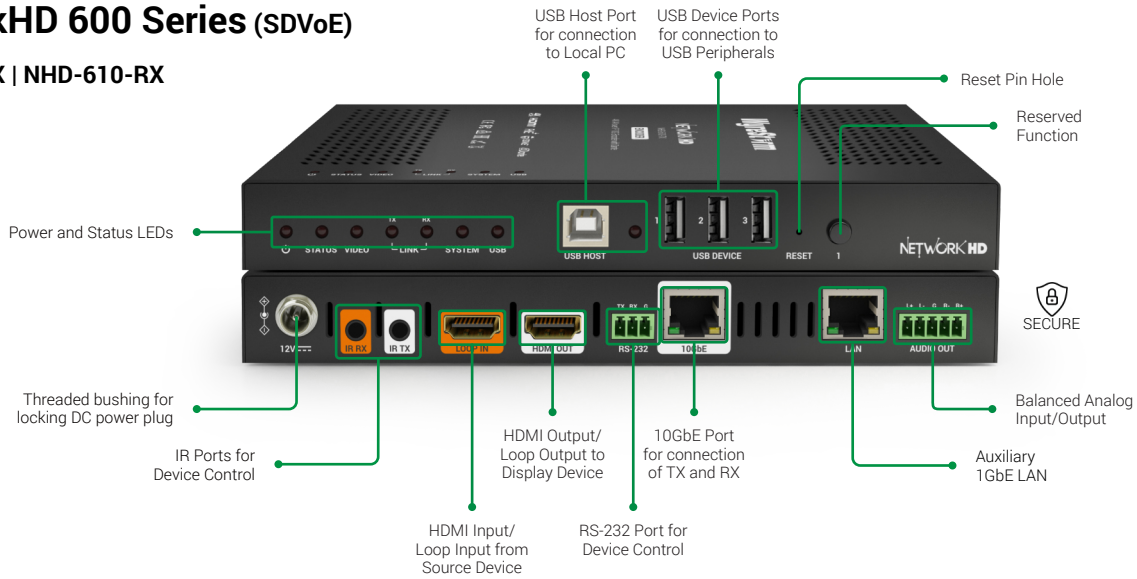


### NetworkHD 600 Series (SDVoE)

NHD-610-TX | NHD-610-RX



#### 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

#### 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)
- 1x 5-pin Phoenix Connector (for analog audio)

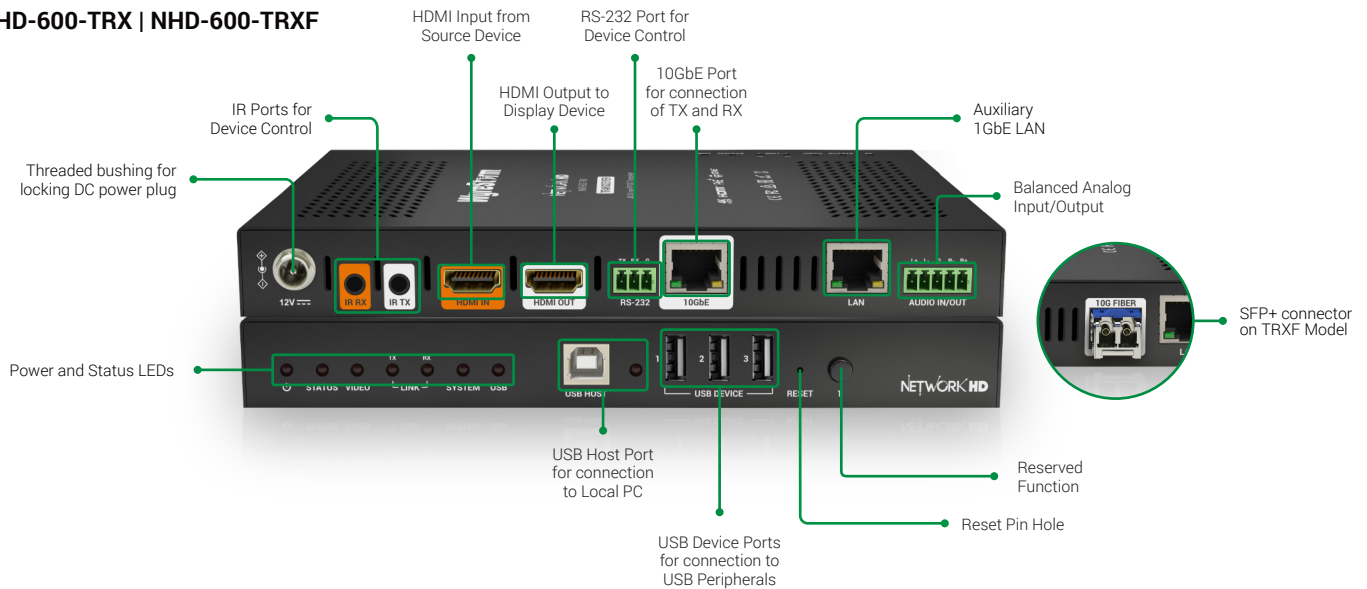
### Specifications

| Audio and Video               |   |   |
|-------------------------------|---|---|
|                               | NHD-610-TX  | NHD-610-RX  |
| <b>Inputs/Outputs</b>         | 1x HDMI Input<br>1x HDMI Loop Output<br>1x 5-pin Balanced analog audio In/Out   | 1x HDMI Output<br>1x HDMI Switchable Input<br>1x 5-pin Balanced analog audio In/Out |
| <b>Maximum Pixel Clock</b>    | 600Mhz  |   |
| <b>Video Encoding</b>         | SDVoE Pixel Pipeline   Dante/AES67 proprietary protocols  | SDVoE Pixel Pipeline  |
| <b>Encoding Data Rate</b>     | 1080p@60Hz 8bit - 3.4Gbps<br>4K UHD@30Hz 4:4:4 8bit - 6.4Gbps<br>4K UHD@60Hz 4:4:4 8bit - 8.7Gbps (with light compression)                              |   |
| <b>Max End to End Latency</b> | Genlock Mode: Uncompressed = 30us, Compressed <120us<br>Fast Switch Mode: 1~2 video frames = min. between 16.7 - 33.4ms @ 60fps                         |   |
| <b>Max Video Resolutions</b>  | 4096x2160p @ 60Hz 8bit 4:4:4 or RGB<br>3840x2160p @ 60Hz 12bit 4:2:2 Dolby Vision<br>3840x2160p @ 60Hz 10bit 4:2:2 HDR10/HLG<br>1920x1080p @ 60Hz 12bit |   |
| <b>Supported Standards</b>    | RGB   DCI   USB   BT.2020   Rec.709   |   |
| Communication and Control     |   |   |
| <b>HDMI</b>                   | HDMI 2.0b   HDCP 2.2   CEC   EDID   |   |
| <b>Network</b>                | 1x 10GbE RJ45 (AV)<br>1x 1GbE RJ45 (LAN/Dante)<br><i>Dante only available on 610-TX</i>   |   |

| <b>RS-232</b>                  | 1x 3-pin Phoenix Connector   2 Way   Broadcast   Routed   API Programmable                          |   |
|--------------------------------|---|---|
| <b>IR</b>                      | 1x IR TX 3.5mm TS Mono Jack   API Programmable<br>1x IR RX 3.5mm TRS Stereo Jack   API Programmable |   |
| <b>USB</b>                     | 3x USB 2.0 Type A<br>1x USB 2.0 Type B Host<br>USB Bandwidth: 480Mbps                               | 3x USB 2.0 Type A<br>1x USB 2.0 Type B Host<br>USB Bandwidth: 480Mbps |
| <b>Security Protocols</b>      | AES 128   SSH   TLS   HTTPS   |   |
| Power                          |   |   |
| <b>Power Supply</b>            | 12V 2A DC PSU   802.3at PoE+ compliant  |   |
| <b>Power Consumption</b>       | Max: 24w   Average: 10w   |   |
| Environmental                  |   |   |
| <b>Operating Temperature</b>   | +32°F ~ +104°F (0°C ~ +45°C)   10% ~ 90% non-condensing   |   |
| <b>Storage Temperature</b>     | -4°F to ~ 140°F (-20°C ~ +70°C)   10% ~ 90% non-condensing  |   |
| <b>Maximum BTU</b>             | 34 BTU/hr   |   |
| <b>Dimensions &amp; Weight</b> | Length x Width x Height: 215mm x 140mm x 25mm<br>Weight: 1.75lbs                                    |   |
| Regulatory                     |   |   |
| <b>Safety and Emission</b>     | CE   FCC   RoHS   RCM   EAC   |   |

# 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)

### TRXF Additional Features

- SFP+ module for transporting via single-mode or multi-mode fiber.
- High speed USB 2.0 connecting for extension of USB peripherals over the network

### 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)

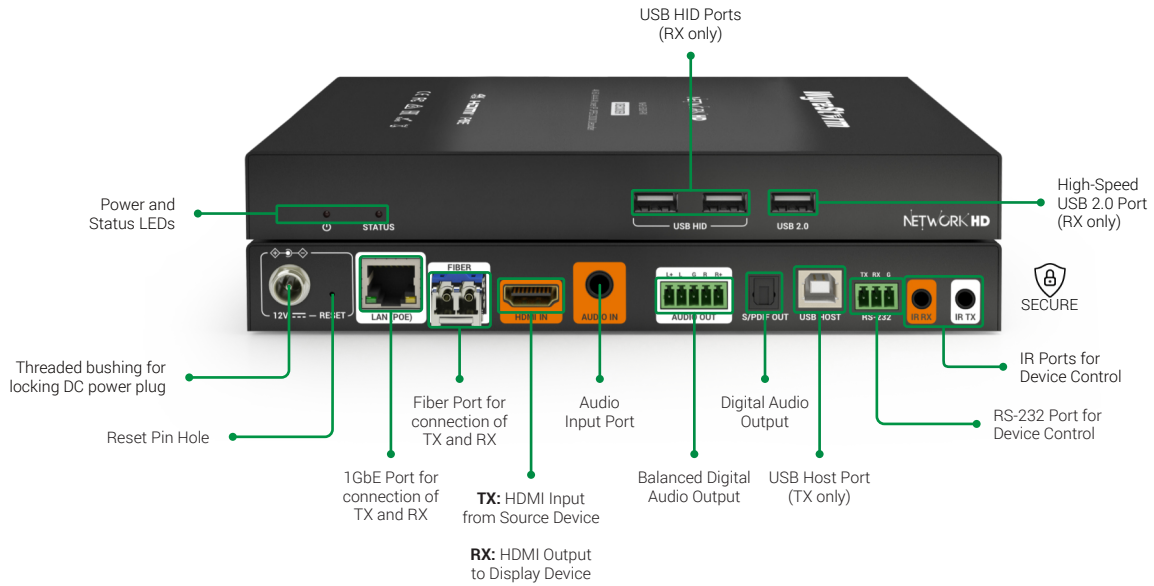
## Specifications

| Audio and Video               |   |   |
|-------------------------------|---|---|
|                               | NHD-600-TRX   | NHD-600-TRXF  |
| <b>Inputs/Outputs</b>         | 1x HDMI Input<br>1x HDMI Output<br>1x 5-pin Balanced Analog Audio In/Out  | 1x HDMI Input<br>1x HDMI Output<br>1x 5-pin Balanced Analog Audio In/Out                                |
| <b>Maximum Pixel Clock</b>    | 600Mhz  |   |
| <b>Video Encoding</b>         | SDVoE Pixel Pipeline  |   |
| <b>Encoding Data Rate</b>     | 1080p@60Hz 8bit - 3.4Gbps<br>4K UHD@30Hz 4:4:4 8bit - 6.4Gbps<br>4K UHD@60Hz 4:4:4 8bit - 8.7Gbps (with light compression)                              |   |
| <b>Max End to End Latency</b> | Genlock Mode: Uncompressed = 30us, Compressed <120us<br>Fast Switch Mode: 1~2 video frames = min. between 16.7 - 33.4ms @ 60fps                         |   |
| <b>Max Video Resolutions</b>  | 4096x2160p @ 60Hz 8bit 4:4:4 or RGB<br>3840x2160p @ 60Hz 12bit 4:2:2 Dolby Vision<br>3840x2160p @ 60Hz 10bit 4:2:2 HDR10/HLG<br>1920x1080p @ 60Hz 12bit |   |
| <b>Supported Standards</b>    | RGB   DCI   USB   BT.2020   Rec.709   |   |
| Communication and Control     |   |   |
| <b>HDMI</b>                   | HDMI 2.0b   HDCP 2.2   CEC   EDID   |   |
| <b>Network</b>                | 1x 10GbE RJ45 (AV)<br>1x 1GbE RJ45 (LAN)  | 1x 10Gbps SFP+ (AV)<br>10GBASE-SR: 300m OM3 MMF<br>1x 1GbE RJ45 (LAN)<br>10GBASE-LR: 10km using OM3 SMF |

| <b>RS-232</b>                  | 1x 3-pin Phoenix Connector   2 Way   Broadcast   Routed   API Programmable                          |   |
|--------------------------------|---|---|
| <b>IR</b>                      | 1x IR TX 3.5mm TS Mono Jack   API Programmable<br>1x IR RX 3.5mm TRS Stereo Jack   API Programmable |   |
| <b>USB</b>                     | 3x USB 1.1 Type A<br>1x USB 1.1 Type B Host   | 3x USB 2.0 Type A<br>1x USB 2.0 Type B Host<br>USB Bandwidth: 480Mbps |
| <b>Security Protocols</b>      | AES 128   SSH   TLS   HTTPS   |   |
| Power                          |   |   |
| <b>Power Supply</b>            | 12V 2A DC PSU   802.3at<br>PoE+ compliant   | 12V 2A DC PSU   |
| <b>Power Consumption</b>       | Max: 24w   Average: 10w   |   |
| Environmental                  |   |   |
| <b>Operating Temperature</b>   | +32°F ~ +104°F (0°C ~ +45°C)   10% ~ 90% non-condensing   |   |
| <b>Storage Temperature</b>     | -4°F to ~ 140°F (-20°C ~ +70°C)   10% ~ 90% non-condensing  |   |
| <b>Maximum BTU</b>             | 34 BTU/hr   |   |
| <b>Dimensions &amp; Weight</b> | Length x Width x Height: 215mm x 140mm x 25mm<br>Weight: 1.75lbs                                    |   |
| Regulatory                     |   |   |
| <b>Safety and Emission</b>     | CE   FCC   RoHS   RCM   EAC   |   |

# NetworkHD 500 Series (JPEG 2000)

NHD-500-TX | NHD-500-RX



## 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 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
- Audio Return Channel via HDMI or Toslink

## 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)

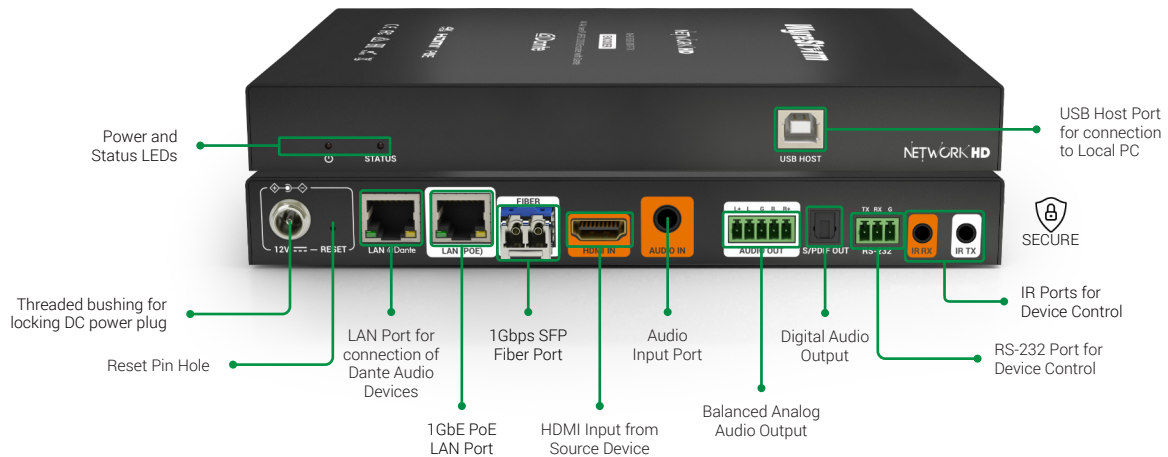
## Specifications

| Audio and Video              |  |  |
|------------------------------|--|--|
|                              | NHD-500-TX   | NHD-500-RX   |
| <b>Inputs/Outputs</b>        | 1x HDMI In<br>1x 3.5mm TRS Analog In<br>1x 5-pin Balanced Analog Out<br>1x Toslink Digital Out   | 1x HDMI Out<br>1x 5-pin Balanced Analog Out<br>1x Toslink Digital In |
| <b>Maximum Pixel Clock</b>   | 600Mhz   |  |
| <b>Max Video Resolutions</b> | 4096x2160p @ 60Hz 8bit 4:4:4 or RGB<br>3840x2160p @ 60Hz 12bit 4:2:2 Dolby Vision<br>3840x 2160p @ 60Hz 10bit 4:2:2 HDR10/HLG<br>1920x1080p @60Hz 12bit                                      |  |
| <b>Audio Formats</b>         | <b>Passthrough:</b> 2ch PCM and up to DTS:X and Dolby Atmos<br><b>ARC:</b> 2ch PCM and up to Dolby Digital+ and DTS 5.1  |  |
| <b>Supported Standards</b>   | RGB   DCI   USB   BT.2020   Rec.709  |  |
| <b>Output Video Encoding</b> | JPEG 2000  |  |
| <b>Encoding Data Rate</b>    | Max: 850Mbps (Configurable)  |  |
| <b>End to End Latency</b>    | 1 video frame latency (pass-through mode) 16ms @ 4K60   2 video frames latency (scaler/VW mode)  |  |
| Communication and Control    |  |  |
| <b>HDMI</b>                  | HDMI 2.0b   HDCP 2.2   CEC   EDID   ARC  |  |
| <b>Network</b>               | 1x 1GbE RJ45<br>1x 1Gbps SFP<br><b>Supported SFP Modules:</b><br>(1000Base-SX: 550m using OM3 multi-mode)<br>(1000Base-LX: 5km using single-mode)<br>(1000Base-LX10: 10km using single-mode) |  |

| <b>RS-232</b>                  | 1x 3-Pin Phoenix Connector   2-way   API Programmable   |  |
|--------------------------------|---|--|
| <b>IR</b>                      | 1x IR TX 3.5mm TS Mono Jack   API Programmable<br>1x IR RX 3.5mm TRS Stereo Jack   API Programmable |  |
| <b>USB</b>                     | 1x USB 2.0 Type-B Host (Max 300Mbps upstream)   | 2x USB 1.1 Type A<br>1x USB 2.0 Type A |
| <b>Security Protocols</b>      | AES 128   SSH   TLS   HTTPS   |  |
| Power                          |   |  |
| <b>Power Supply</b>            | 12V DC 1A   802.3af PoE Compliant   |  |
| <b>Power Consumption</b>       | Max: 15.4w   Average: 8w  |  |
| Environmental                  |   |  |
| <b>Operating Temperature</b>   | 0 to +45°C (32 to +113 °F), 10% to 90%, non-condensing  |  |
| <b>Storage Temperature</b>     | -20 to +70°C (-4 to +158 °F), 10% to 90%, non-condensing  |  |
| <b>Maximum BTU</b>             | 51.18 BTU/hr  |  |
| <b>Dimensions &amp; Weight</b> | Length x Width x Height: 215mm x 120mm x 25mm<br>Weight: 1.75lbs                                    |  |
| Regulatory                     |   |  |
| <b>Safety and Emission</b>     | CE   FCC   RoHS   EAC   RCM   |  |

# NetworkHD 500 Series (JPEG 2000)

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)
- USB connectivity for extension and routing of USB peripheral devices
- Ultra-low latency transmissions of less than a single video frame
- High definition preview streams for control system interfaces

## In the Box

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

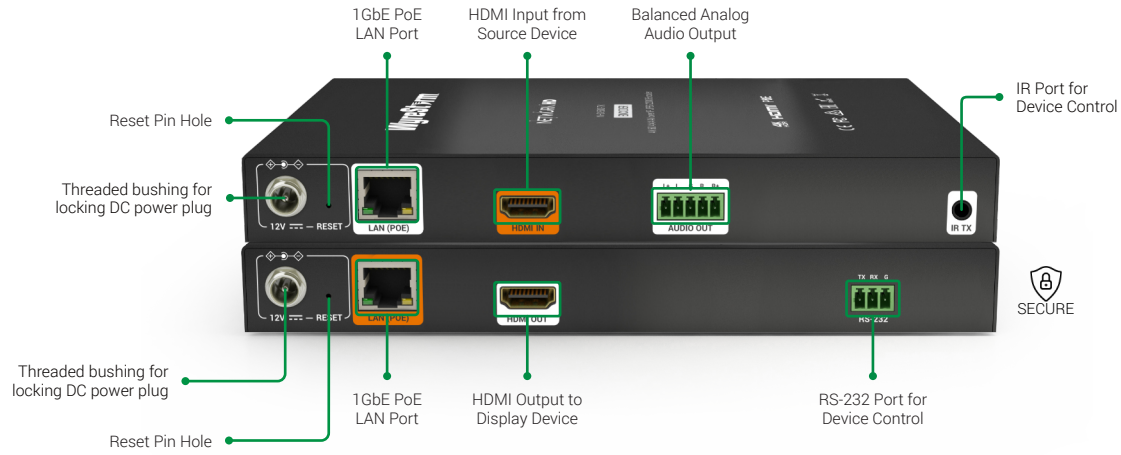
## Specifications

| Audio and Video              |  |
|------------------------------|--|
| <b>Inputs/Outputs</b>        | 1x HDMI In<br>1x 3.5mm TRS Analog In<br>1x 5-pin Balanced Analog Out<br>1x Toslink Digital Out   |
| <b>Maximum Pixel Clock</b>   | 600Mhz   |
| <b>Max Video Resolutions</b> | 4096x2160p @ 60Hz 8bit 4:4:4 or RGB<br>3840x2160p @ 60Hz 12bit 4:2:2 Dolby Vision<br>3840x 2160p @ 60Hz 10bit 4:2:2 HDR10/HLG<br>1920x1080p @60Hz 12bit  |
| <b>Audio Formats</b>         | <b>Passthrough:</b> 2ch PCM and up to DTS:X and Dolby Atmos<br><b>ARC:</b> 2ch PCM and up to Dolby Digital+ and DTS 5.1<br><b>Dante/AES67:</b> 2CH PCM   |
| <b>Supported Standards</b>   | RGB   DCI   USB  |
| <b>Output Video Encoding</b> | JPEG 2000  |
| <b>Encoding Data Rate</b>    | Max: 850Mbps (Configurable)  |
| <b>End to End Latency</b>    | 1 video frame latency (pass-through mode) 16ms @ 4K60   2 video frames latency (scaler/VW mode)  |
| Communication and Control    |  |
| <b>HDMI</b>                  | HDMI 2.0b   HDCP 2.2   CEC   EDID   ARC  |
| <b>Network</b>               | 1x 1GbE RJ45<br>1x 1GbE RJ45 Dante Out<br>1x 1Gbps SFP<br><b>Supported SFP Modules:</b><br>(1000Base-SX: 550m using OM3 multi-mode)<br>(1000Base-LX: 5km using single-mode)<br>(1000Base-LX10: 10km using single-mode) |

| <b>RS-232</b>                  | 1x 3-Pin Phoenix Connector   2-way   API Programmable   |
|--------------------------------|---|
| <b>IR</b>                      | 1x IR TX 3.5mm TS Mono Jack   API Programmable<br>1x IR RX 3.5mm TRS Stereo Jack   API Programmable |
| <b>USB</b>                     | 1x USB 2.0 Type-B Host (Max 300Mbps upstream)   |
| <b>Security Protocols</b>      | AES 128   SSH   TLS   HTTPS   |
| Power                          |   |
| <b>Power Supply</b>            | 12V DC 1A   802.3af PoE Compliant   |
| <b>Power Consumption</b>       | Max: 15.4w   Average: 8w  |
| Environmental                  |   |
| <b>Operating Temperature</b>   | 0 to + 45°C (32 to + 113 °F), 10% to 90%, non-condensing  |
| <b>Storage Temperature</b>     | -20 to +70°C (-4 to + 158 °F), 10% to 90%, non-condensing   |
| <b>Maximum BTU</b>             | 51.18 BTU/hr  |
| <b>Dimensions &amp; Weight</b> | Length x Width x Height: 215mm x 120mm x 25mm<br>Weight: 1.75lbs                                    |
| Regulatory                     |   |
| <b>Safety and Emission</b>     | CE   FCC   RoHS   EAC   RCM   |

# NetworkHD 500 Series (JPEG 2000)

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



## Key Features

- Supports encoding or decoding 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
- Video wall processing up to a 16x16 with bezel adjustments

## In the Box

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

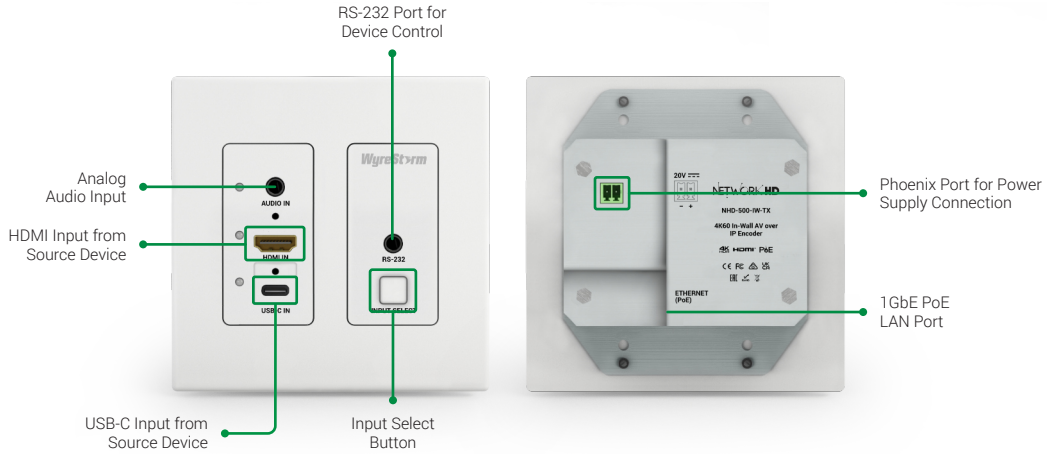
## Specifications

| Audio and Video               |   |                |
|-------------------------------|---|----------------|
|                               | NHD-500-E-TX  | NHD-500-E-RX   |
| <b>Inputs/Outputs</b>         | 1x HDMI Input<br>1x 5-Pin Balanced Audio Out  | 1x HDMI Output |
| <b>Maximum Pixel Clock</b>    | 600Mhz  |                |
| <b>Video Encoding</b>         | JPEG 2000   |                |
| <b>Encoding Data Rate</b>     | Max: 850Mbps (configurable)   |                |
| <b>Max End to End Latency</b> | 1 video frame latency (pass-through mode) 16ms @ 4K60   2 video frames latency (scaler/video wall mode)   |                |
| <b>Max Video Resolutions</b>  | 4096x2160p @ 60Hz 8bit 4:4:4 or RGB<br>3840x2160p @ 60Hz 12bit 4:2:2 Dolby Vision<br>3840x2160p @ 60Hz 10bit 4:2:2 HDR10/HLG<br>1920x1080p @ 60Hz 12bit |                |
| <b>Supported Standards</b>    | RGB   DCI   USB   |                |
| Communication and Control     |   |                |
| <b>HDMI</b>                   | HDMI 2.0b   HDCP 2.2   EDID   CEC   ARC   |                |
| <b>Network</b>                | 1x 1GbE RJ45  |                |

| <b>RS-232</b>                  | 1x 3-Pin Phoenix   2-way   API Programmable (RX only)            |
|--------------------------------|--|
| <b>IR</b>                      | 1x 3.5mm TX   API Programmable (TX only)                         |
| <b>Security Protocols</b>      | AES 128   SSH   TLS   HTTPS                                      |
| Power                          |  |
| <b>Power Supply</b>            | 12V DC 1A   802.3af PoE Compliant                                |
| <b>Power Consumption</b>       | Max 15.4   Average: 8w   |
| Environmental                  |  |
| <b>Operating Temperature</b>   | +32°F ~ +104°F (0°C ~ +45°C)   10% ~ 90% non-condensing          |
| <b>Storage Temperature</b>     | -4°F to ~ 140°F (-20°C ~ +70°C)   10% ~ 90% non-condensing       |
| <b>Maximum BTU</b>             | 51.18 BTU/hr   |
| <b>Dimensions &amp; Weight</b> | Length x Width x Height: 215mm x 120mm x 25mm<br>Weight: 1.68lbs |
| Regulatory                     |  |
| <b>Safety and Emission</b>     | CE   FCC   RoHS   RCM   EAC                                      |

# NetworkHD 500 Series (JPEG 2000)

## 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
- USB extension and routing for peripheral USB devices
- Dedicated stereo input for connecting external audio devices

### In the Box

- 1x NHD-500-IW-TX
- 1x 2-pin Phoenix Connector

### Specifications

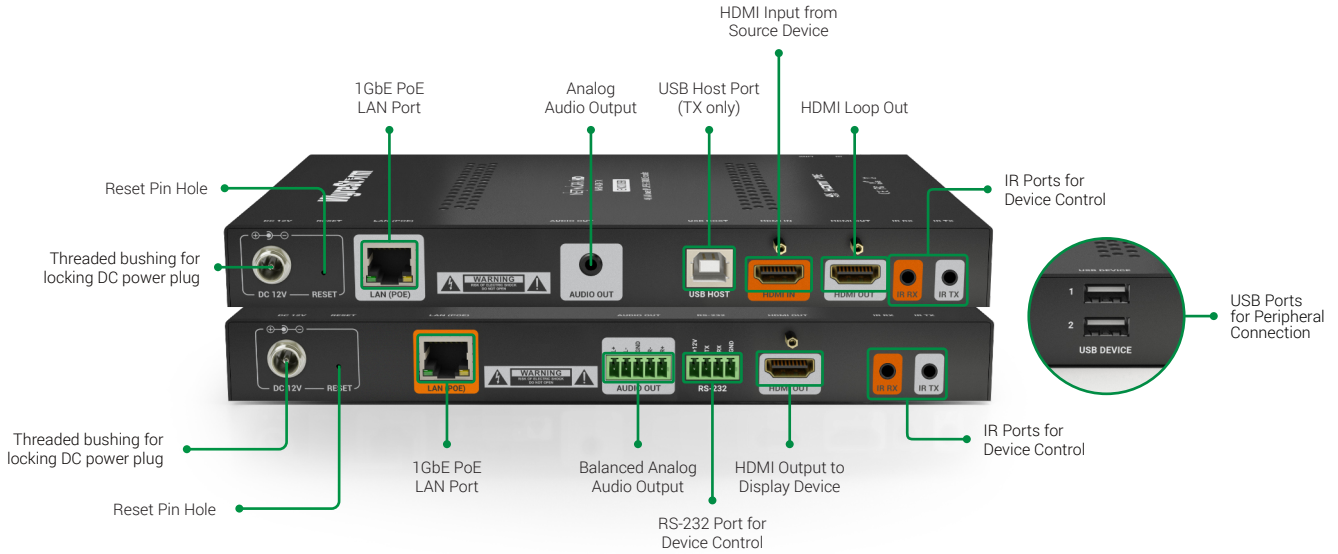
| Audio and Video               |   |
|-------------------------------|---|
| <b>Inputs/Outputs</b>         | 1x HDMI Input<br>1x USB-C Input w/ Alt-mode<br>1x 3.5mm Analog Audio In   |
| <b>Maximum Pixel Clock</b>    | 600MHz  |
| <b>Output Video Encoding</b>  | JPEG 2000   |
| <b>Encoding Data Rate</b>     | Max: 850Mbps (Configurable)   |
| <b>Max End to End Latency</b> | 1 video frame latency (pass-through mode) 16ms @60fps   2 video frames latency (scaler/VW mode)   |
| <b>Max Video Resolutions</b>  | 4096x2160p @ 60Hz 8bit 4:4:4 or RGB<br>3840x2160p @ 60Hz 12bit 4:2:2 Dolby Vision<br>3840x 2160p @ 60Hz 10bit 4:2:2 HDR10/HLG<br>1920x1080p @60Hz 12bit |
| <b>Supported Standards</b>    | RGB   DCI   USB   BT.2020   Rec.709   |
| Communication and Control     |   |
| <b>HDMI</b>                   | HDMI 2.0b   HDCP 2.2   EDID   |
| <b>Ethernet</b>               | 1x 1GbE 8-pin RJ-45   |
| <b>RS-232</b>                 | 1x 3.5mm   2-way   API Programmable   |
| <b>USB</b>                    | 1x USB-C Host<br>(Up to 300Mbps upstream)   |
| <b>Security Protocols</b>     | AES 128   SSH   TLS   HTTPS   |

| Power                          |   |
|--------------------------------|---|
| <b>Power Supply</b>            | 12V DC  |
| <b>PoE</b>                     | IEEE 802.3af  |
| <b>Power Consumption</b>       | 8W  |
| Environmental                  |   |
| <b>Operating Temperature</b>   | 0 to + 45°C (32 to + 113 °F), 10% to 90%, non-condensing          |
| <b>Storage Temperature</b>     | -20 to +70°C (-4 to + 158 °F), 10% to 90%, non-condensing         |
| <b>Maximum BTU</b>             | 19.45 BTU/hr  |
| <b>Dimensions &amp; Weight</b> | 2-gang US J-Box<br>H x W x D: 108mm x 91mm x 45mm<br>Weight: 1lbs |
| Regulatory                     |   |
| <b>Safety and Emission</b>     | CE   FCC   RoHS   EAC   RCM                                       |



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

## In the Box

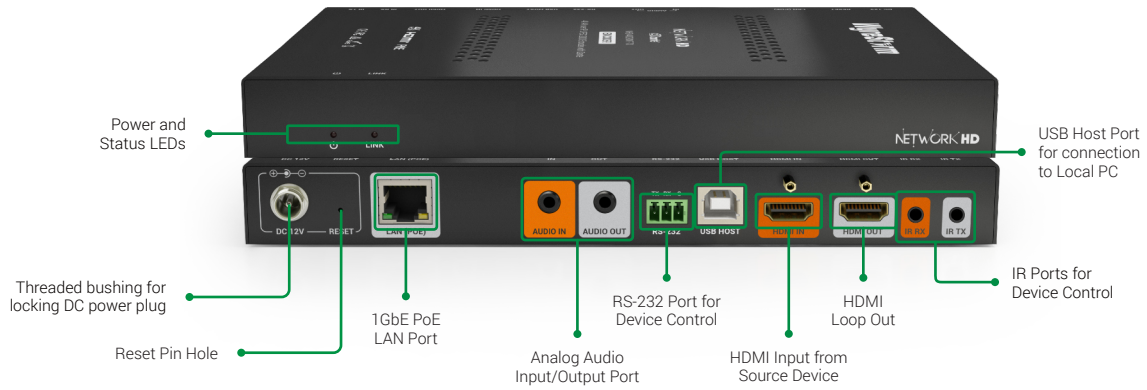
- 1x NHD-400-TX or NHD-400-RX
- 1x Pair of Wall Brackets
- 1x Pair of NHD-000-RACK4 Brackets
- 1x IR Emitter
- 1x IR Receiver
- 1x 5-pin Phoenix Connector (analog audio) RX only
- 1x 4-Pin Phoenix Connector (RS232) RX only

| Audio and Video               |   |   |
|-------------------------------|---|---|
|                               | NHD-400-TX  | NHD-400-RX                                    |
| <b>Inputs/Outputs</b>         | 1x HDMI Input<br>1x HDMI Output<br>1x Audio Out: 3.5mm (1/8in)  | 1x HDMI Output<br>1x Audio Out: 5-Pin Phoenix |
| <b>Maximum Pixel Clock</b>    | 300MHz  |   |
| <b>Output Video Encoding</b>  | JPEG 2000   |   |
| <b>Encoding Data Rate</b>     | Max: 850Mbps (Configurable)   |   |
| <b>Max End to End Latency</b> | 1 video frame latency (pass-through mode) 16ms @60fps   2 video frames latency (scaler/VW mode)   |   |
| <b>Max Video Resolutions</b>  | 3840x2160p @ 60Hz 8bit 4:2:0<br>3840x2160p @ 30Hz 8bit 4:4:4 or RGB<br>3840x2160p @ 30Hz 10bit 4:2:2 HDR/HLG<br>1920x1080p @ 60Hz 12bit |   |
| Communication and Control     |   |   |
| <b>HDMI</b>                   | HDMI 2.0   HDCP 2.2   CEC   EDID  |   |
| <b>Ethernet</b>               | 1x 1GbE 8-pin RJ-45   |   |
| <b>RS-232</b>                 | 1x RS-232: 4-pin Phoenix (RX only)  |   |
| <b>IR</b>                     | 1x IR TX: 3.5mm TS Mono<br>1x IR RX: 3.5mm TRS Stereo<br>Bidirectional Over Ethernet  |   |

| <b>USB</b>                     | RX: 2x USB Device: USB Type A   TX: 1x USB Host: USB Type B   Power: 5v 500ma per port   Data Rate: Max 9MB/s |
|--------------------------------|---|
| <b>Security Protocols</b>      | AES 128   SSH   TLS   HTTPS   |
| Power                          |   |
| <b>Power Supply</b>            | 12V DC  |
| <b>PoE</b>                     | IEEE 802.3af  |
| <b>Power Consumption</b>       | 8W  |
| Environmental                  |   |
| <b>Operating Temperature</b>   | 0 to +45°C (32 to +113 °F), 10% to 90%, non-condensing  |
| <b>Storage Temperature</b>     | -20 to +70°C (-4 to +158 °F), 10% to 90%, non-condensing  |
| <b>Maximum BTU</b>             | 51.18 BTU/hr  |
| <b>Dimensions &amp; Weight</b> | Length x Width x Height: 220mm x 140mm x 25mm<br>Weight: 1.75lbs  |
| Regulatory                     |   |
| <b>Safety and Emission</b>     | CE   FCC   RoHS   EAC   RCM   |

# NetworkHD 400 Series (JPEG 2000)

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
- Ultra-low, single frame latency
- 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

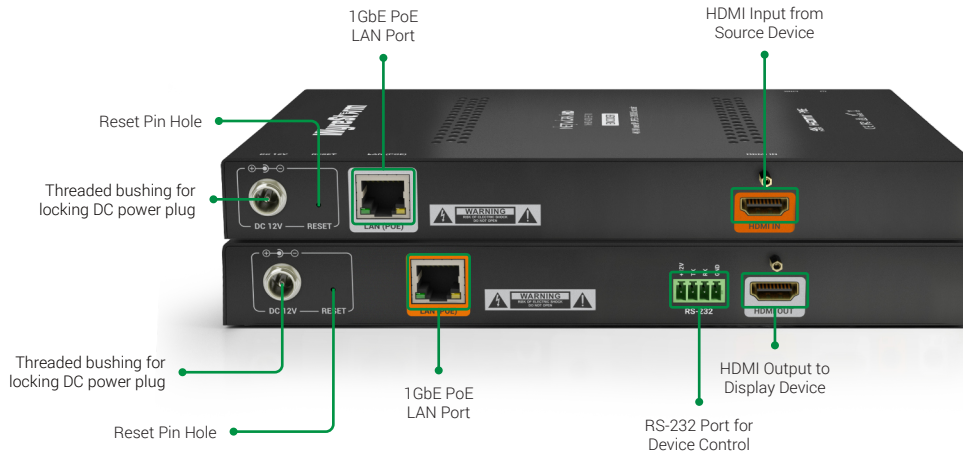
| Audio and Video               |   |
|-------------------------------|---|
| <b>Inputs/Outputs</b>         | 1x HDMI Input<br>1x HDMI Loop Out<br>1x Audio In: 3.5mm (1/8in)<br>1x Audio Out: 3.5mm (1/8in)  |
| <b>Maximum Pixel Clock</b>    | 300MHz  |
| <b>Output Video Encoding</b>  | JPEG 2000   |
| <b>Encoding Data Rate</b>     | Max: 850Mbps (Configurable)   |
| <b>Max End to End Latency</b> | 1 video frame latency (pass-through mode) 16ms @60fps   2 video frames latency (scaler/VW mode)   |
| <b>Max Video Resolutions</b>  | 3840x2160p @ 60Hz 8bit 4:2:0<br>3840x2160p @ 30Hz 8bit 4:4:4 or RGB<br>3840x2160p @ 30Hz 10bit 4:2:2 HDR/HLG<br>1920x1080p @ 60Hz 12bit |
| Communication and Control     |   |
| <b>HDMI</b>                   | HDMI 2.0   HDCP 2.2   CEC   EDID  |
| <b>Ethernet</b>               | 1x 1GbE 8-pin RJ-45   |
| <b>RS-232</b>                 | 1x RS-232: 3-pin Phoenix  |
| <b>IR</b>                     | 1x IR TX: 3.5mm TS Mono<br>1x IR RX: 3.5mm TRS Stereo<br>Bidirectional Over Ethernet  |

| <b>USB</b>                     | 1x USB Host: USB Type B<br>Data Rate: Max 9MB/s                  |
|--------------------------------|--|
| <b>Security Protocols</b>      | AES 128   SSH   TLS   HTTPS                                      |
| Power                          |  |
| <b>Power Supply</b>            | 12V DC   |
| <b>PoE</b>                     | IEEE 802.3af   |
| <b>Power Consumption</b>       | 8W   |
| Environmental                  |  |
| <b>Operating Temperature</b>   | 0 to + 45°C (32 to + 113 °F), 10% to 90%, non-condensing         |
| <b>Storage Temperature</b>     | -20 to +70°C (-4 to + 158 °F), 10% to 90%, non-condensing        |
| <b>Maximum BTU</b>             | 51.18 BTU/hr   |
| <b>Dimensions &amp; Weight</b> | Length x Width x Height: 220mm x 140mm x 25mm<br>Weight: 1.75lbs |
| Regulatory                     |  |
| <b>Safety and Emission</b>     | CE   FCC   RoHS   EAC   RCM                                      |



# NetworkHD 400 Series (JPEG 2000)

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-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-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

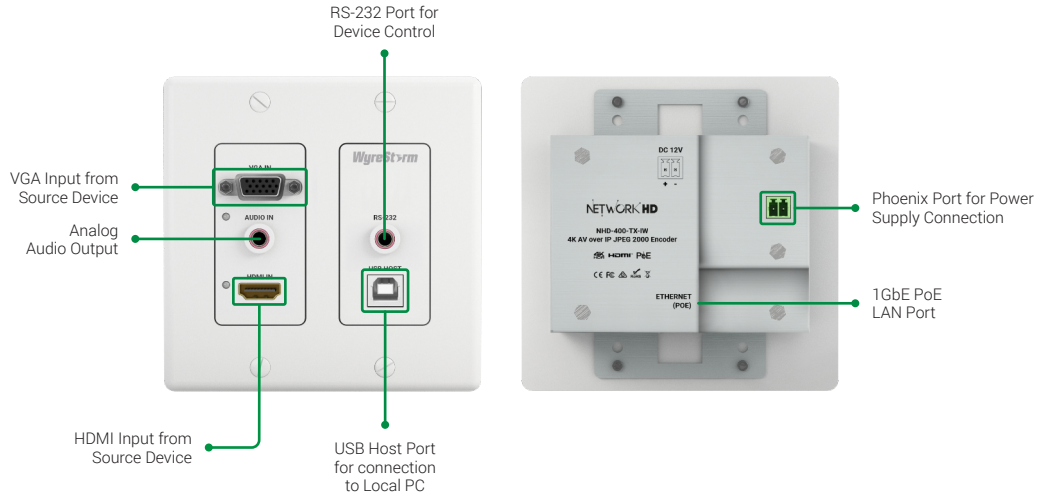
## Specifications

| Audio and Video               |   |                |
|-------------------------------|---|----------------|
|                               | NHD-400-E-TX  | NHD-400-E-RX   |
| <b>Inputs/Outputs</b>         | 1x HDMI Input   | 1x HDMI Output |
| <b>Maximum Pixel Clock</b>    | 300MHz  |                |
| <b>Output Video Encoding</b>  | JPEG 2000   |                |
| <b>Encoding Data Rate</b>     | Max: 850Mbps (Configurable)   |                |
| <b>Max End to End Latency</b> | 1 video frame latency (pass-through mode) 16ms @60fps   2 video frames latency (scaler/VW mode)   |                |
| <b>Max Video Resolutions</b>  | 3840x2160p @ 60Hz 8bit 4:2:0<br>3840x2160p @ 30Hz 8bit 4:4:4 or RGB<br>3840x2160p @ 30Hz 10bit 4:2:2 HDR/HLG<br>1920x1080p @ 60Hz 12bit |                |
| Communication and Control     |   |                |
| <b>HDMI</b>                   | HDMI 2.0   HDCP 2.2   CEC   EDID  |                |
| <b>Ethernet</b>               | 1x 1GbE 8-pin RJ-45   |                |
| <b>RS-232</b>                 | 1x RS-232: 4-pin Phoenix (RX only)  |                |

| <b>Security Protocols</b>      | AES 128   SSH   TLS   HTTPS                                      |
|--------------------------------|--|
| Power                          |  |
| <b>Power Supply</b>            | 12V DC   |
| <b>PoE</b>                     | IEEE 802.3af   |
| <b>Power Consumption</b>       | 8W   |
| Environmental                  |  |
| <b>Operating Temperature</b>   | 0 to + 45°C (32 to + 113 °F), 10% to 90%, non-condensing         |
| <b>Storage Temperature</b>     | -20 to +70°C (-4 to + 158 °F), 10% to 90%, non-condensing        |
| <b>Maximum BTU</b>             | 51.18 BTU/hr   |
| <b>Dimensions &amp; Weight</b> | Length x Width x Height: 220mm x 140mm x 25mm<br>Weight: 1.75lbs |
| Regulatory                     |  |
| <b>Safety and Emission</b>     | CE   FCC   RoHS   EAC   RCM                                      |

# NetworkHD 400 Series (JPEG 2000)

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

### 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 to 3-pin RS-232 Adapter
- 1x White Decorative Plate with 4 Screws

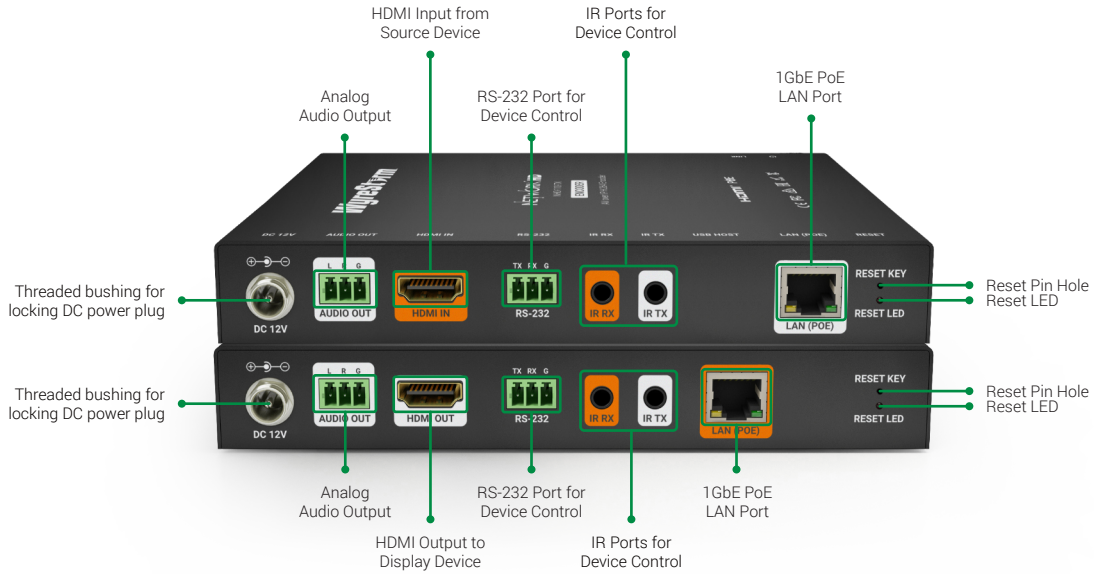
### Specifications

| Audio and Video               |   |
|-------------------------------|---|
| <b>Inputs/Outputs</b>         | 1x HDMI Input<br>1x VGA Input<br>1x Audio In: 3.5mm (1/8in)   |
| <b>Maximum Pixel Clock</b>    | 300MHz  |
| <b>Output Video Encoding</b>  | JPEG 2000   |
| <b>Encoding Data Rate</b>     | Max: 850Mbps (Configurable)   |
| <b>Max End to End Latency</b> | 1 video frame latency (pass-through mode) 16ms @60fps   2 video frames latency (scaler/VW mode)   |
| <b>Max Video Resolutions</b>  | 3840x2160p @ 60Hz 8bit 4:2:0<br>3840x2160p @ 30Hz 8bit 4:4:4 or RGB<br>3840x2160p @ 30Hz 10bit 4:2:2 HDR/HLG<br>1920x1080p @ 60Hz 12bit |
| Communication and Control     |   |
| <b>HDMI</b>                   | HDMI 2.0   HDCP 2.2   CEC   EDID  |
| <b>Ethernet</b>               | 1x 1GbE 8-pin RJ-45   |
| <b>RS-232</b>                 | 1x RS-232: 3.5mm (1/8in) TRS Stereo   2 Way   |

| <b>USB</b>                     | 1x USB Host: USB Type B   D ata Rate: Max 9MB/s                   |
|--------------------------------|---|
| <b>Security Protocols</b>      | AES 128   SSH   TLS   HTTPS                                       |
| Power                          |   |
| <b>Power Supply</b>            | 12V DC  |
| <b>PoE</b>                     | IEEE 802.3af  |
| <b>Power Consumption</b>       | 8W  |
| Environmental                  |   |
| <b>Operating Temperature</b>   | 0 to +45°C (32 to +113 °F), 10% to 90%, non-condensing            |
| <b>Storage Temperature</b>     | -20 to +70°C (-4 to +158 °F), 10% to 90%, non-condensing          |
| <b>Maximum BTU</b>             | 19.45 BTU/hr  |
| <b>Dimensions &amp; Weight</b> | 2-gang US J-Box<br>H x W x D: 108mm x 91mm x 45mm<br>Weight: 1lbs |
| Regulatory                     |   |
| <b>Safety and Emission</b>     | CE   FCC   RoHS   EAC   RCM                                       |

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

NHD-110-TX | NHD-110-RX



## 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

## 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

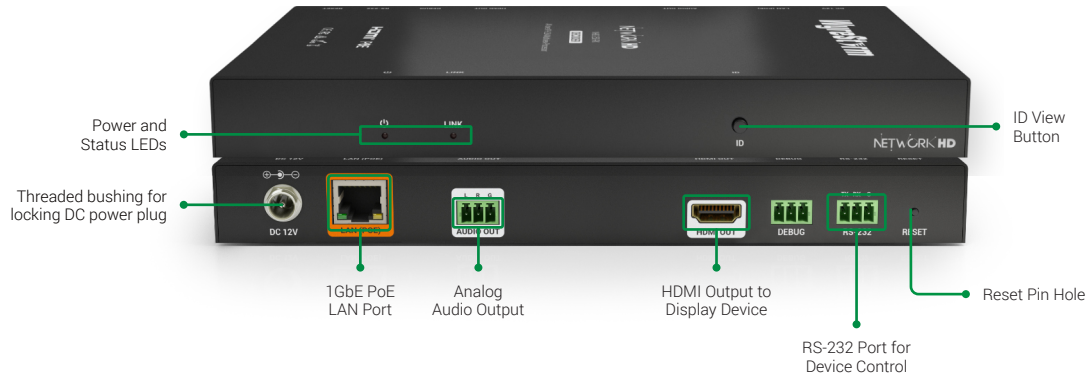
## Specifications

| Audio and Video                  | NHD-110-TX   | NHD-110-RX                                    |
|----------------------------------|--|---|
| <b>Inputs/Outputs</b>            | 1x HDMI Input<br>1x Audio Out: 3-Pin Phoenix                                       | 1x HDMI Output<br>1x Audio Out: 3-Pin Phoenix |
| <b>Output Video Encoding</b>     | H.264/H.265  |   |
| <b>Encoding Data Rate</b>        | H.264: 30Mbps   H.265: 5Mbps   |   |
| <b>Max End to End Latency</b>    | ~80ms (low latency mode)   ~300ms (high quality mode)                              |   |
| <b>Max Video Resolutions</b>     | 1920x1080p @60Hz 8bit  |   |
| <b>Communication and Control</b> |  |   |
| <b>HDMI</b>                      | HDMI 1.4   HDCP 1.4   CEC  |   |
| <b>Ethernet</b>                  | 1x 1GbE 8-pin RJ-45  |   |
| <b>RS-232</b>                    | 1x RS-232: 3-pin Phoenix   Routed   API Programmable                               |   |
| <b>IR</b>                        | 1x IR TX: 3.5mm TS Mono<br>1x IR RX: 3.5mm TRS Stereo<br>Routed   API Programmable |   |
| <b>Security Protocols</b>        | AES 128   SSH   TLS   HTTPS  |   |

| Power                          |  |
|--------------------------------|--|
| <b>Power Supply</b>            | 12V DC   |
| <b>PoE</b>                     | IEEE 802.3af   |
| <b>Power Consumption</b>       | 6W   |
| <b>Environmental</b>           |  |
| <b>Operating Temperature</b>   | 0 to +45°C (32 to +113 °F), 10% to 90%, non-condensing   |
| <b>Storage Temperature</b>     | -20 to +70°C (-4 to +158 °F), 10% to 90%, non-condensing |
| <b>Maximum BTU</b>             | 20.47 BTU/hr   |
| <b>Dimensions &amp; Weight</b> | L x W x H: 175mm x 100mm x 25mm<br>Weight: 1.25lbs       |
| <b>Regulatory</b>              |  |
| <b>Safety and Emission</b>     | CE   FCC   RoHS   EAC   RCM                              |

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

## NHD-250-RX



### 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

### In the Box

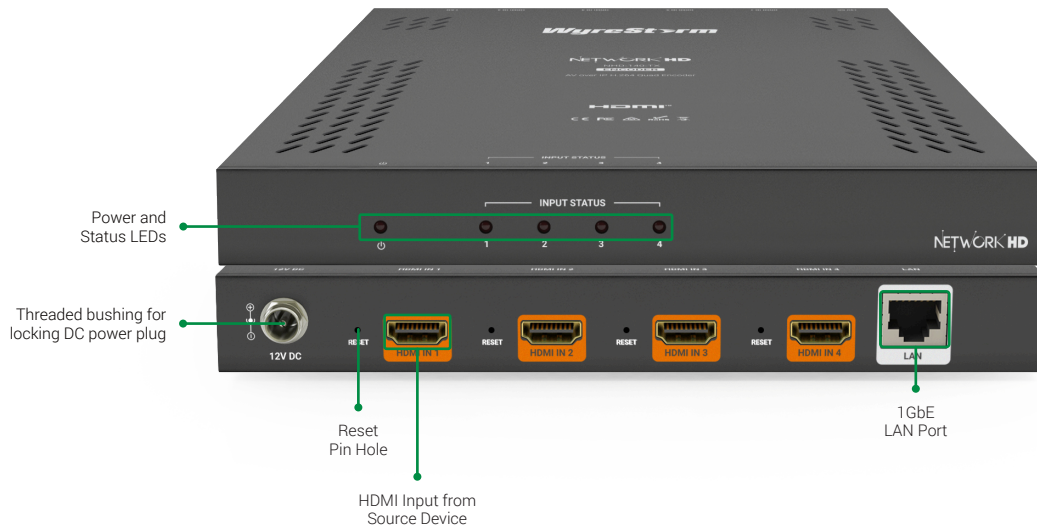
- 1x NHD-250-RX Decoder
- 1x 12V DC Power Supply (US | UK | EU)
- 3x 3-pin Phoenix Connectors (RS232 & analog audio)
- 1x Pair of NHD-000-RACK4 Brackets
- 1x Pair of Wall Brackets

| Audio and Video               |  |
|-------------------------------|--|
| <b>Inputs/Outputs</b>         | 1x HDMI Output<br>1x Audio Out: 3-Pin Phoenix          |
| <b>Input Video Decoding</b>   | H.264/H.265  |
| <b>Max End to End Latency</b> | ~80ms (low latency mode)<br>~300ms (high quality mode) |
| <b>Max Video Resolutions</b>  | 3840x2160p @60Hz (Tile mode)<br>1920x1080p @60Hz       |
| Communication and Control     |  |
| <b>HDMI</b>                   | HDMI 1.4   HDCP 1.4   CEC                              |
| <b>Ethernet</b>               | 1x 1GbE 8-pin RJ-45                                    |
| <b>RS-232</b>                 | 1x RS-232: 3-pin Phoenix   Routed   API Programmable   |
| <b>Security Protocols</b>     | AES 128   SSH   TLS   HTTPS                            |

| Power                          |  |
|--------------------------------|--|
| <b>Power Supply</b>            | 12V DC   |
| <b>PoE</b>                     | IEEE 802.3af   |
| <b>Power Consumption</b>       | 8.3W   |
| Environmental                  |  |
| <b>Operating Temperature</b>   | 0 to +45°C (32 to +113 °F), 10% to 90%, non-condensing   |
| <b>Storage Temperature</b>     | -20 to +70°C (-4 to +158 °F), 10% to 90%, non-condensing |
| <b>Maximum BTU</b>             | 31 BTU/hr  |
| <b>Dimensions &amp; Weight</b> | L x W x H: 220mm x 140mm x 25mm<br>Weight: 1.75lbs       |
| Regulatory                     |  |
| <b>Safety and Emission</b>     | CE   FCC   RoHS   EAC   RCM                              |

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

## NHD-140-TX



### 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

### In the Box

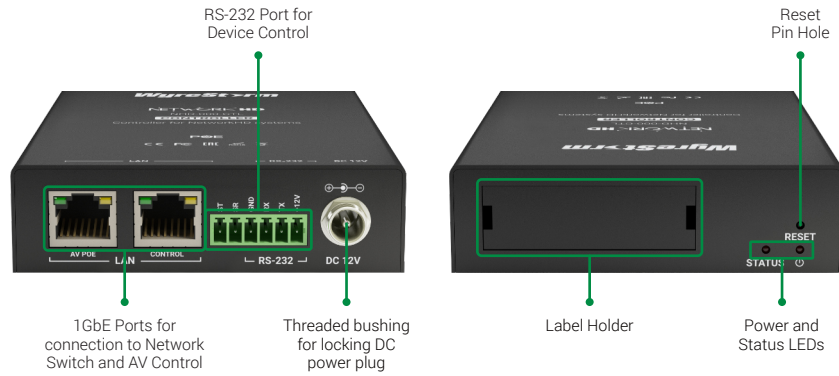
- 1x NHD-140-TX Encoder
- 1x 12V DC Power Supply (US | UK | EU)
- 1x Pair of NHD-000-RACK4 Brackets

### Specifications

| Audio and Video           |  |
|---------------------------|--|
| Inputs/Outputs            | 4x HDMI Input  |
| Output Video Encoding     | H.264  |
| Encoding Data Rate        | 120Mbps (30Mbps per encoder)                           |
| Max End to End Latency    | ~80ms (low latency mode)<br>~300ms (high quality mode) |
| Max Video Resolutions     | 1920x1080p @60Hz 8bit                                  |
| Communication and Control |  |
| HDMI                      | HDMI 1.4   HDCP 1.4                                    |
| Ethernet                  | 1x 1GbE 8-pin RJ-45                                    |
| Security Protocols        | AES 128   SSH   TLS   HTTPS                            |

| Power                 |  |
|-----------------------|--|
| Power Supply          | 12V DC   |
| PoE                   | N/A  |
| Power Consumption     | 19.44W   |
| 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           | 68 BTU/hr  |
| Dimensions & Weight   | L x W x H: 260mm x 210mm x 25mm<br>Weight: 2.25lbs       |
| Regulatory            |  |
| Safety and Emission   | CE   FCC   RoHS   EAC   RCM                              |

# NHD-000-CTL (Controller)



## 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

## In the Box

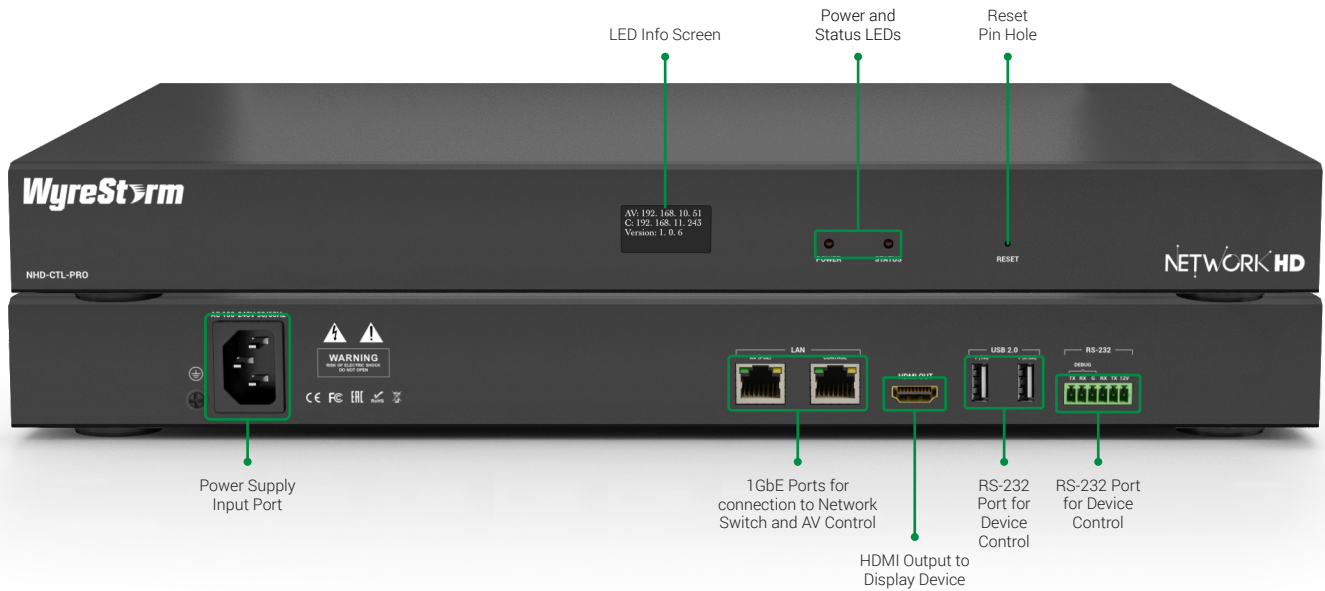
- 1x NHD-000-CTL Controller
- 1x Pair of NHD-000-RACK4 brackets
- 1x Quickstart Guide
- 1x 6-pin Terminal Block
- 1x 12V Power Supply (US/UK/EU/AU)

| Communication and Control |  |
|---------------------------|--|
| <b>Network</b>            | 2x 1GbE RJ45 (Control & AV)            |
| <b>RS-232</b>             | 1x RS-232 6-Pin Phoenix Connector      |
| <b>Security Protocols</b> | Telnet   Telnet over TLS   SSH   HTTPS |
| Power                     |  |
| <b>Power Supply</b>       | 12V DC 1A                              |
| <b>PoE</b>                | 802.3af PoE Compliant                  |
| <b>Power Consumption</b>  | Max: 15.4w   Average: 5w               |

| Environmental                  |  |
|--------------------------------|--|
| <b>Operating Temperature</b>   | 0 to +45°C (32 to +113 °F), 10% to 90%, non-condensing       |
| <b>Storage Temperature</b>     | -20 to +70°C (-4 to +158 °F), 10% to 90%, non-condensing     |
| <b>Maximum BTU</b>             | 20 BTU/hr  |
| <b>Dimensions &amp; Weight</b> | Length x Width x Height: 140mm x 90mm x 25mm<br>Weight: 1lbs |
| Regulatory                     |  |
| <b>Safety and Emission</b>     | CE   FCC   RoHS   EAC   RCM                                  |



# NHD-CTL-PRO (Controller)



## 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
- 1U chassis for easy installation into equipment racks

## In the Box

- 1x NHD-CTL-PRO Controller
- 1x Pair of Rack Brackets
- 1x Power Supply (US/UK/EU/AU)
- 1x 6-pin Terminal Block

| Communication and Control |  |
|---------------------------|--|
| <b>Network</b>            | 2x 1GbE RJ45 (Control & AV)            |
| <b>RS-232</b>             | 1x RS-232 6-Pin Phoenix Connector      |
| <b>HDMI</b>               | Reserved for future use                |
| <b>USB</b>                | Reserved for future use                |
| <b>Security Protocols</b> | Telnet   Telnet over TLS   SSH   HTTPS |
| Power                     |  |
| <b>Power Supply</b>       | 12V DC 1A                              |
| <b>PoE</b>                | 802.3af PoE Compliant                  |
| <b>Power Consumption</b>  | Max: 15.4w   Average: 10w              |

| Environmental                  |   |
|--------------------------------|---|
| <b>Operating Temperature</b>   | 0 to +45°C (32 to +113 °F), 10% to 90%, non-condensing          |
| <b>Storage Temperature</b>     | -20 to +70°C (-4 to +158 °F), 10% to 90%, non-condensing        |
| <b>Maximum BTU</b>             | 51.18 BTU/hr  |
| <b>Dimensions &amp; Weight</b> | Length x Width x Height: 215mm x 120mm x 25mm<br>Weight: 2.3lbs |
| Regulatory                     |   |
| <b>Safety and Emission</b>     | CE   FCC   RoHS   EAC   RCM                                     |