

💡 WyreStorm recommends reading through this document in its entirety to become familiar with the product's features prior to starting the installation process.

NETWORK HD NDI

⚠️ IMPORTANT! Installation

- Read through the [Wiring and Connections](#) section for important wiring guidelines before creating or choosing premade cables.
- Visit the product pages to download the latest firmware, document version, additional documentation, and configuration tools.

In the Box

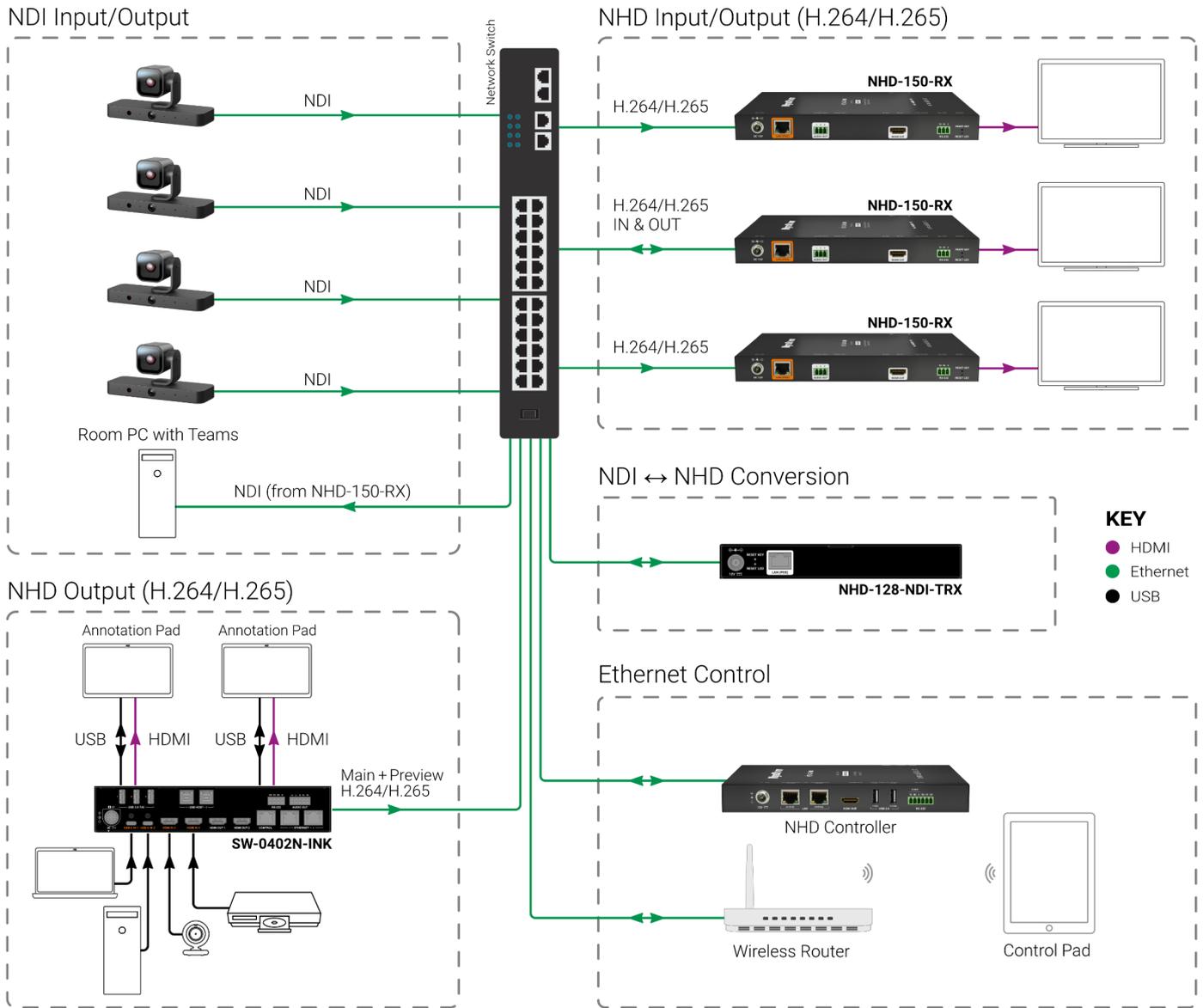
- 1x NHD-128-NDI-TRX Gateway
- 4x Wall Mounting Ears (Plastic)
- 2x Rack Mounting Ears for NHD-000-RACK4 (Vertical Installation)
- 1x Quickstart Guide (This Document)

WyreStorm Documentation and Firmware

Download the following items from the product page on wyrestorm.com. They are essential for accurate configuration and use of the NetworkHD system.

- Latest NetworkHD Firmware
- NetworkHD Installation Guide
- NetworkHD Technical Reference Guide
- NetworkHD Certified Switches
- NetworkHD Switch Configuration Guides
- NetworkHD Switch Mapping Worksheet
- 3rd Party Control System Drivers

Basic Wiring Diagram



Network Switch Requirements

- WyreStorm highly recommends the use of a certified network switch. Certified switches have been verified by WyreStorm to meet the requirements of a NetworkHD system. Visit wyrestorm.com to view the list of certified switches.
- Configuration guides for certified switches are available at wyrestorm.com.
- WyreStorm cannot guarantee the performance of a network switch that has not been certified. Refer to the NetworkHD Technical Reference Guide for general networking requirements which can aid the configuration of a non-certified switch.

Wiring and Connections

WyreStorm recommends that all wiring for the installation is run and terminated prior to making connections to the gateway. Read through this section in its entirety before running or terminating the wires to ensure proper operation and to avoid damaging equipment. The use of patch panels, wall plates, cable extenders, kinks in cables, and electrical or environmental interference will have an adverse effect on signal transmission which may limit performance. Steps should be taken to minimize or remove these factors completely during installation for best results.

Setup and Configuration

IMPORTANT! Before Installation

- Be sure to fully configure network switches BEFORE connecting NetworkHD components. Configuration guides for approved switches can be found at wyrestorm.com
- NetworkHD encoders & decoders use DHCP to assign IP addresses by default. In the absence of a DHCP server an AutoIP address will be assigned in the subnet 169.254.0.0/16. Ensure the PC being used for configuration obtains an IP via DHCP or is set to an address in the AutoIP range prior to starting the configuration process.
- In order to configure the NetworkHD encoders and decoders, the AV port on the NHD-CTL-PRO MUST be connected to the same LAN/VLAN and subnet as the NetworkHD encoders and decoders.
- The NHD-CTL-PRO's two Ethernet ports are designed to be used in different Networks or VLANs. When using a single Network or VLAN for example when using NetworkHD Touch - do not connect both ports - only use the AV port of the CTL.
- Install NetworkHD devices to allow airflow through the product - WyreStorm recommends using the NetworkHD rack mounts. The install location should be dry, well ventilated and guaranteed to maintain the mandatory operating temperature range of the product.

LAN Port Wiring

The NetworkHD 100 Series network port is a 1GbE link for connection to a 1000BASE-T Ethernet switch. Refer to IEEE 802.3ab for official guidance. Cables must be tested to 100MHz across the entire link. 1000BASE-T uses the IEC 60603-7 8P8C connector.

Technical	
Video Input Port	LAN: 1x RJ-45 Female Connector
Video Input Type	NHD: H.264/H.265, RTP/UDP, Multicast NDI: NDI HX (NDI 6), RUDP/TCP, Multicast
Input Resolutions	NHD: Up to 4K@30Hz NDI Main Stream: Up to 4K@30Hz Preview Stream: Up to 480P@60Hz
Input Bitrate	NHD: Up to 16Mbps NDI Main Stream: Up to 16Mbps Preview Stream: Up to 1Mbps
Video Output	LAN: 1 x RJ-45 Female Connector
Video Output Type	NHD: H.264/H.265, RTP/UDP, Multicast NDI Main stream: NDI HX (NDI 6), RUDP/TCP, Multicast Preview Stream: MJPEG, HTTP
Output Resolutions	NHD: Up to 4K@30Hz NDI Main stream: Up to 4K@30Hz Preview Stream: CIF (360 x 240) @30Hz
Output Encoding Rate	NHD: Up to 16Mbps NDI Main stream: Up to 20Mbps Preview Stream: Up to 512Kbps
Control Method	Front panel LED screen Rear panel RESET button LAN-based control (Web UI, Telnet API, and NHD-CTL-PRO controller)

Specifications

Audio and Video	
Video Input Port	LAN: 1x RJ-45 Female Connector
Video Input Type	NHD: H.264/H.265, RTP/UDP, Multicast NDI: NDI HX (NDI 6), RUDP/TCP, Multicast
Input Resolutions	NHD: Up to 4K@30Hz NDI Main Stream: Up to 4K@30Hz Preview Stream: Up to 480P@60Hz
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Output Encoding Rate	NHD: Up to 16Mbps NDI Main Stream: Up to 20Mbps Preview Stream: Up to 512Kbps
Control Method	Front panel LED screen Rear panel RESET button LAN-based control (Web UI, Telnet API, and NHD-CTL-PRO controller)
Power	
Power	20V DC 1A, PoE
ESD Protection	Human body model: ±12kV (air-gap discharge) / ±8kV (contact discharge)
Environmental	
Operating Temperature	32°F to 113°F (0°C to 45°C), 10% to 90%, non-condensing
Storage Temperature	-4°F to 158°F (-20°C to 70°C), 10% to 90%, non-condensing
Dimensions and Weight	
Width x Height x Depth	6.89" x 0.98" x 3.94" (175mm x 25mm x 100.2mm)
Net Weight	1.14lbs (0.52kg)
Regulatory	
Safety and Emission	CE FCC RoHS RCM EAC UKCA

Note: WyreStorm reserves the right to change product specification, appearance or dimensions of this product at any time without prior notice.

Warranty Information

WyreStorm Technologies ProAV Corporation warrants that its products to be free from defects in material and workmanship under normal use for a period of five (5) years from the date of purchase. Refer to the Product Warranty page on wyrestorm.com for more details on our limited product warranty.

