

NETWORK HD

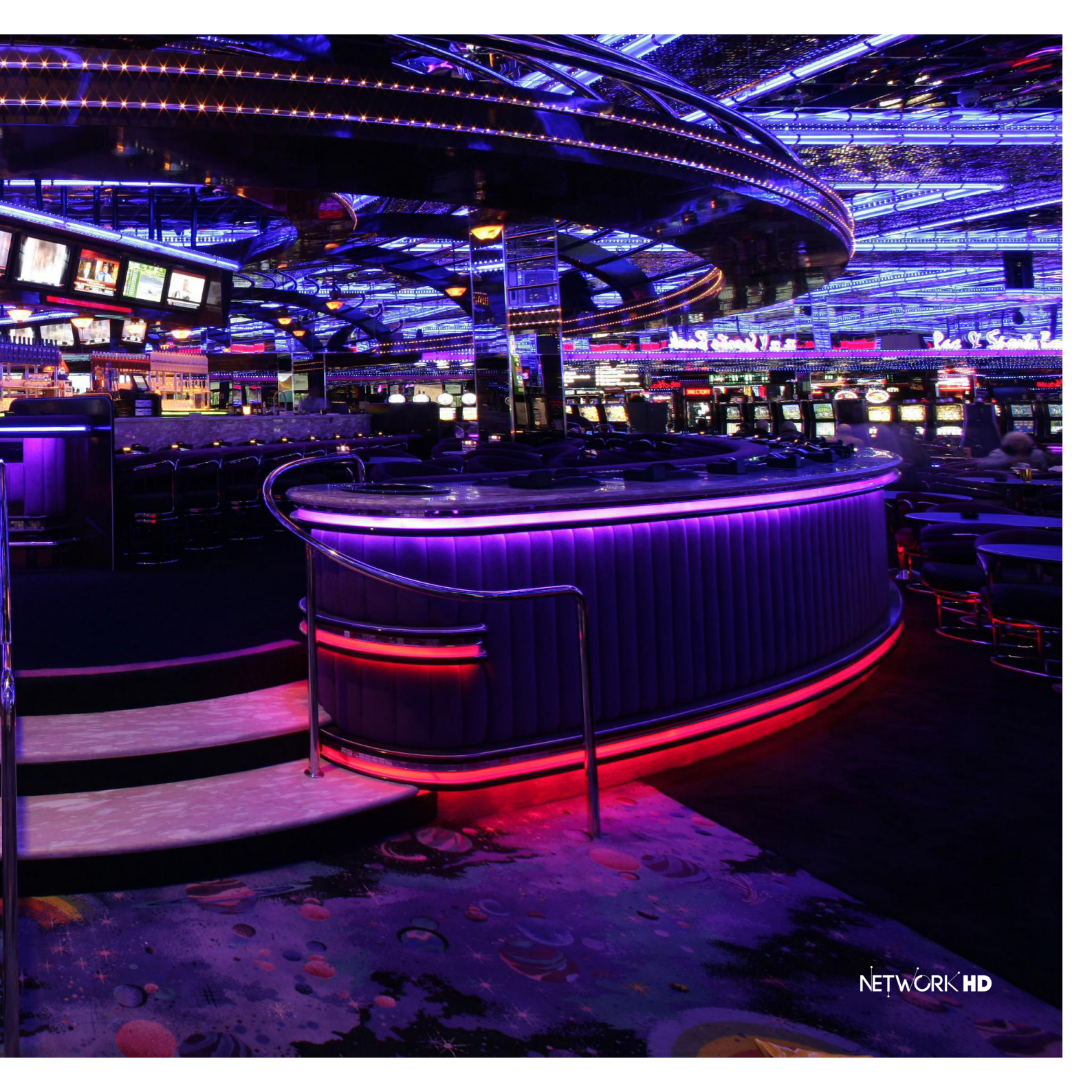
The New Standard in HD over IP





The Future of AV Distribution is Here

What if you could connect high definition AV sources and displays to a standard IP network and seamlessly distribute content from any source to any display at any time? And what if you wanted to build this powerful system for half of what it cost yesterday? Now you can! Introducing NetworkHD™.



NETWORK HD



AV Meet IP. IP Meet AV.

Combining proven data networking technologies with today's high definition digital audio and video, NetworkHD™ provides a highly reliable solution for distributing HD audio and video anywhere and everywhere.



NETWORK HD

Powerfully Simple to Configure and Use

Traditional AV distribution systems involve lots of devices including separate digital & analog matrixes, video wall & windowing processors, scalers, transmitters and receivers. NetworkHD™ achieves a higher performance using only three devices: encoder, decoder and controller. This simplified design reduces sync problems, failure points and overall cost of the system without compromising quality or function.



Modular

Unlike fixed port solutions, NetworkHD™ can grow by adding new displays and sources as needed.



Auto Discovery

Setup is quick and easy with auto discovery of all connected sources and displays.



QuickSync™

Super-fast switching between sources (<500ms) means if you blink, you'll miss it.



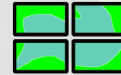
PoE – Power over Ethernet

Power over Ethernet allows the encoders and decoders to be powered over the network cable - no need for local power.



Multi-format Input

Analog and digital sources using 200-Series NetworkHD™ products: DVI, VGA and HDMI inputs. 100-Series is HDMI only.



Video Wall

With the 200 Series products “NHD-210-RX” video walls are easily integrated into the system.

DVI port in, accepts DVI, HDMI (including audio), YUV, VGA or CVBS signals (adapters included)

Line in allows embedded audio from DVI, YUV, VGA or CVBS video signals

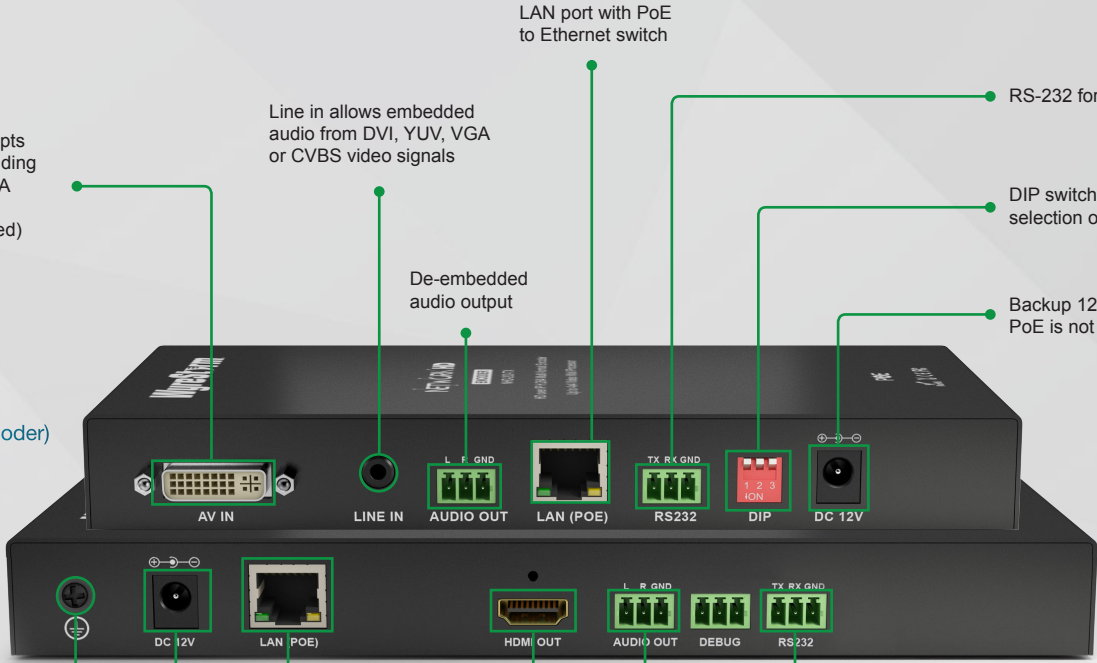
LAN port with PoE to Ethernet switch

RS-232 for source control

DIP switches for selection of video type

Backup 12v DC input if PoE is not available

NHD-200-TX (Encoder)



Earth grounding point

LAN port with PoE to Ethernet switch

HDMI port out to display or projector

NHD-200-RX (Decoder)

RS-232 port for control of connected display or projector

Backup 12v DC input if PoE is not available

De-embedded audio output

The Bigger the Better

No application is too big for NetworkHD™. Displays and sources can be located in the same building. Or using fiber optic cabling between buildings, NetworkHD™ is perfect for multi-location applications.



H.264 Compression Technology

As a proven method for efficiently encoding and decoding video content, H.264 compression standards are leveraged across the NetworkHD™ solution.



Audio Where You Want It

NetworkHD™ encoders and decoders allow de-embedding audio for use with amplifiers and other distributed audio devices.



Intuitive Setup

With auto-device-discovery capabilities and menu-driven configuration software, the system can be up and running in literally minutes.



Control System Integration

NetworkHD™ can be used with or without a separate control system and is fully compatible with most major brands, including the Enado™ Control System.



Long Distance Abilities

With fiber optic cabling between network switches, NetworkHD™ is ideal for use across multiple buildings.



Cost Savings

The bigger the system, the greater the savings over fixed port systems. With a simplified setup process, total cost savings are significant with NetworkHD™.





NETWORK HD

Sportech - Sports Bar - California, USA

When this sports betting organization needed a highly reliable solution to distribute HD content throughout the establishment, NetworkHD™ was the winning choice.



NETWORK HD

 Sportech



KEY

■ NHD-200-TX Encoders (Sources)

■ Cisco SG500-52-MP (Network Switches)

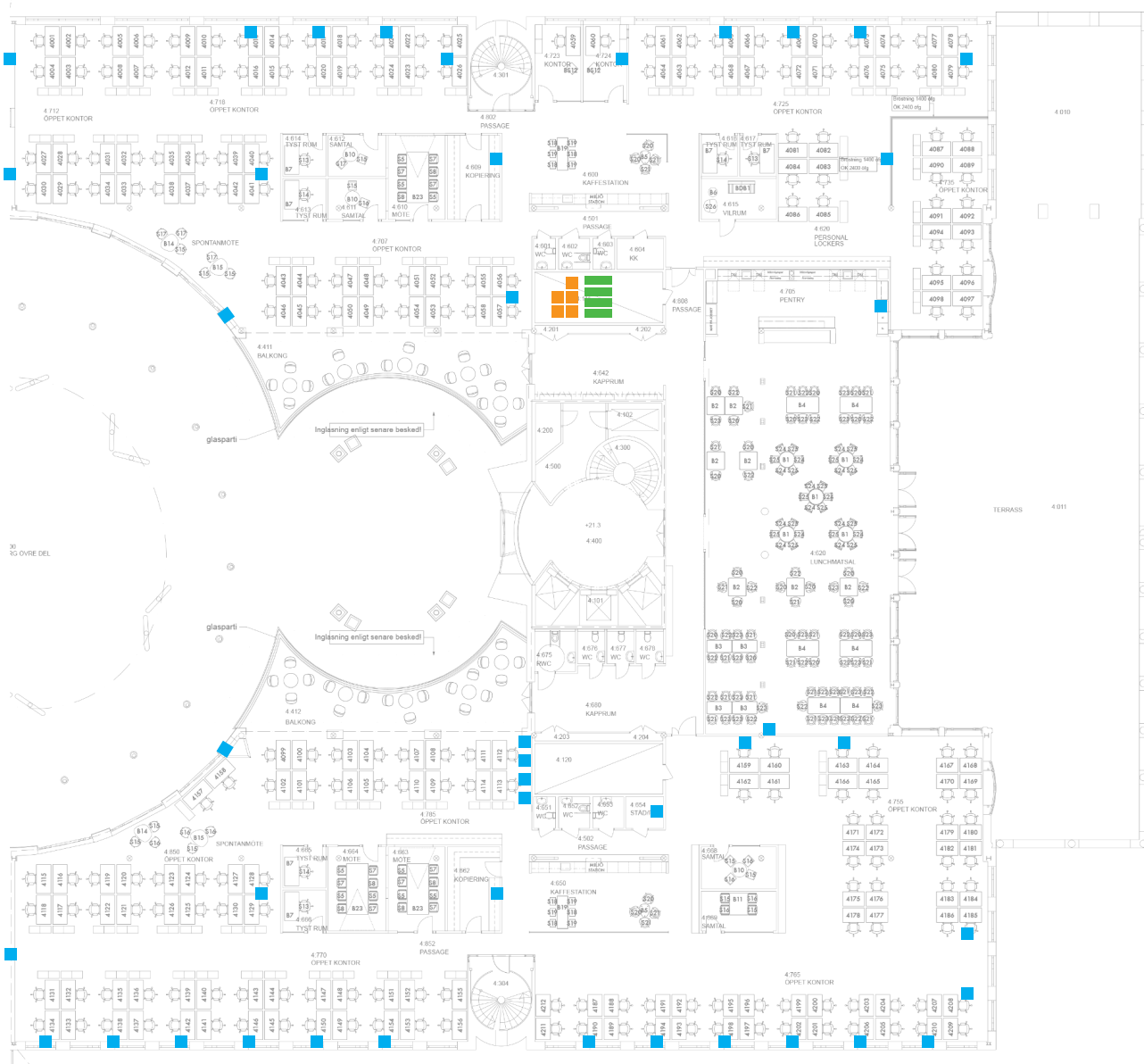
■ NHD-200-RX Decoder s (Displays)

■ NHD-210-RX Video Wall Decoders (Displays)

Banking Corporate Offices - Stockholm, Sweden

Information is money. NetworkHD™ was the preferred choice to help this banking company distribute important information to over 70 screens throughout their headquarter location.





KEY

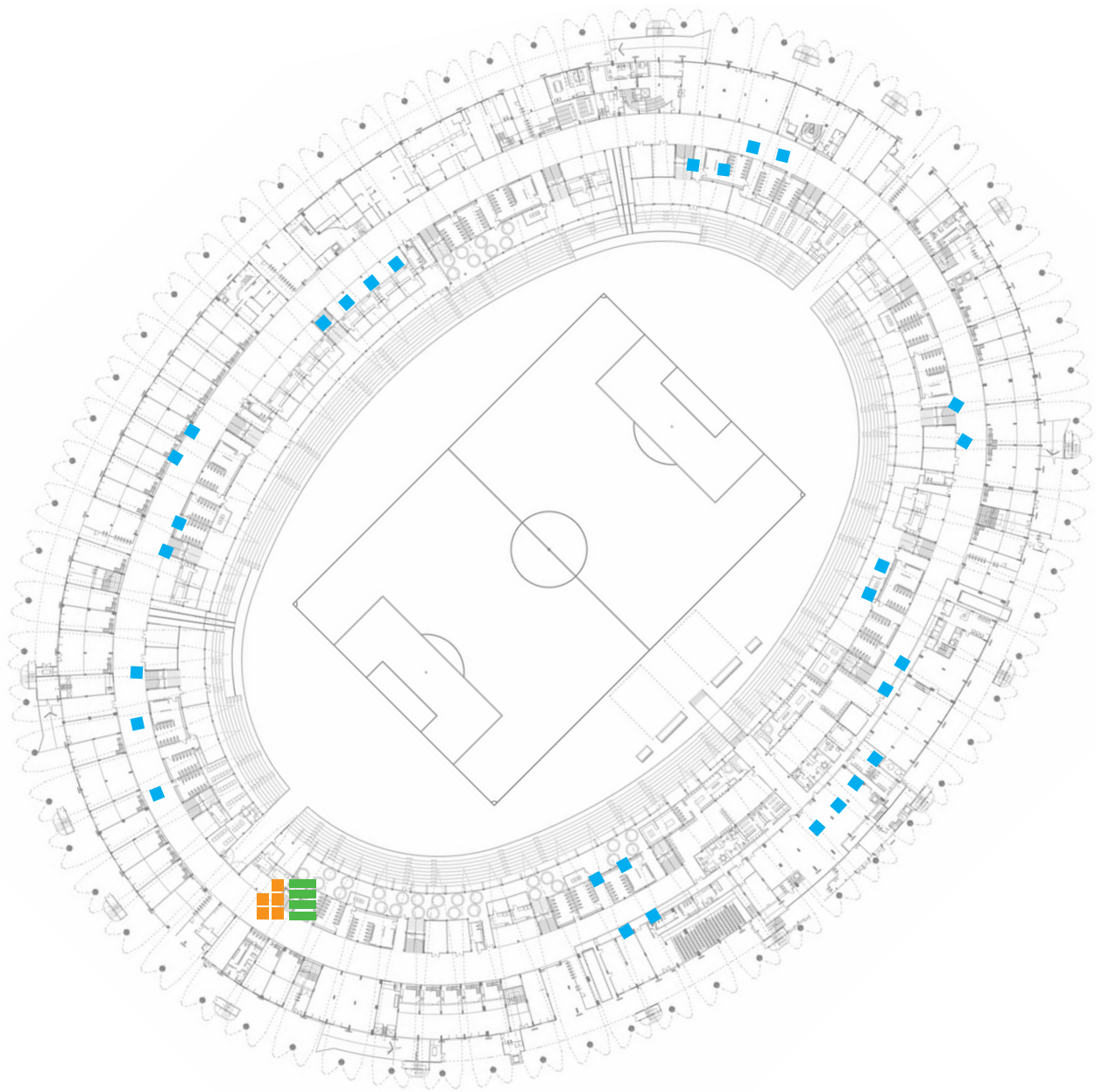
- NHD-200-TX Encoders (Sources)
- Cisco CATALYST 2960-X (Network Switches)
- NHD-200-RX Decoder s (Displays)
- NHD-210-RX Video Wall Decoders (Displays)

Gooooaallllll! Holland, Nertherland





When fans demand to see every second of the match, the stadium must deliver. With NetworkHD™, a live feed of the action can be viewed on screens throughout the concession and ticketing areas.



NETWORK HD



KEY

- | | | | | | | | |
|---|-------------------------------|---|--------------------------------------|---|--------------------------------|---|---|
|  | NHD-200-TX Encoders (Sources) |  | Cisco SG500-52-MP (Network Switches) |  | NHD-200-RX Decoders (Displays) |  | NHD-210-RX Video Wall Decoders (Displays) |
|---|-------------------------------|---|--------------------------------------|---|--------------------------------|---|---|

Audi Dealership - Swindon, UK

The car doesn't sell itself. That's why this dealership relied on NetworkHD™ to provide an immersive video experience around the entire showroom.



NETWORK HD





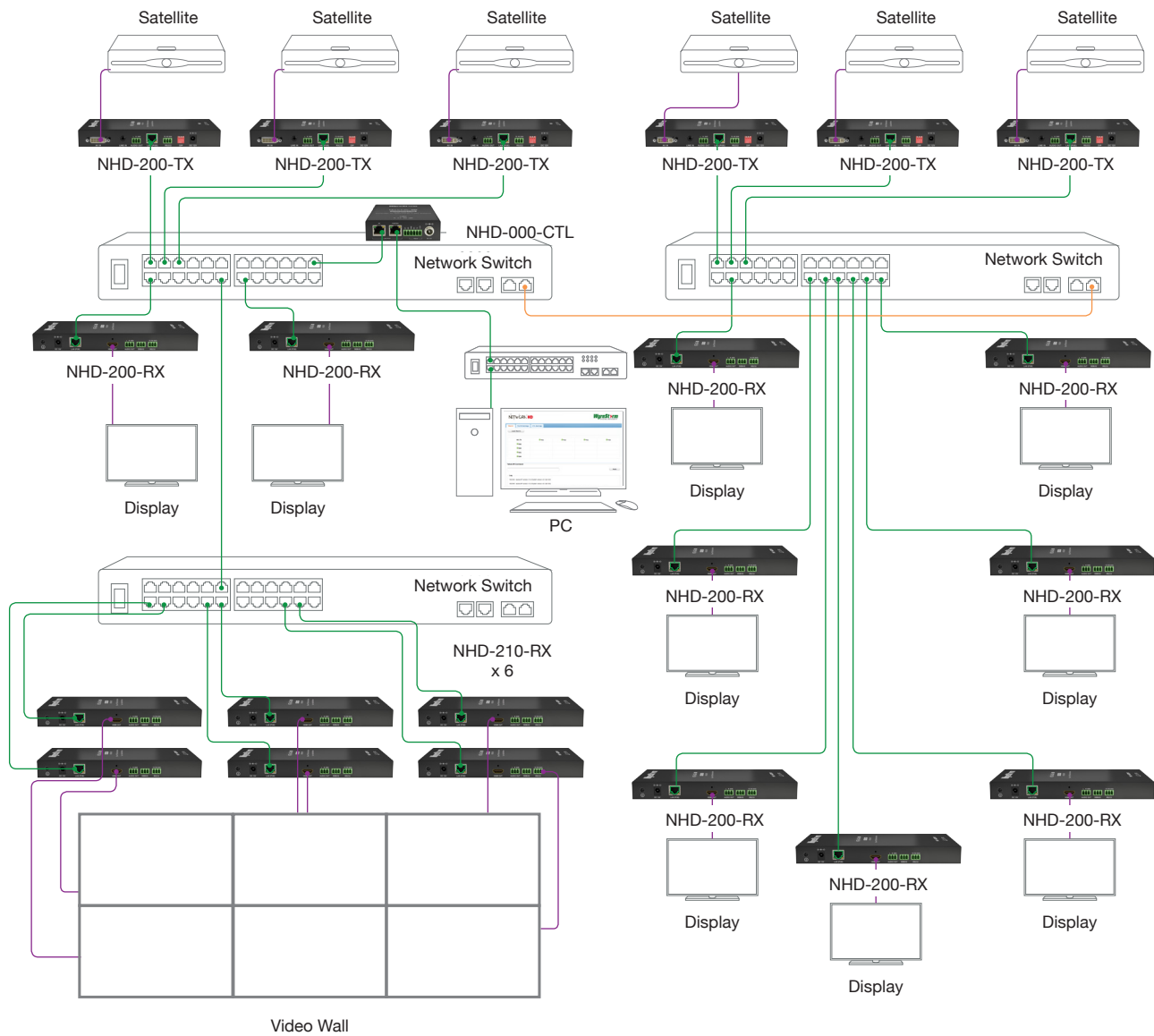
KEY

- NHD-200-TX Encoders (Sources)
- CISCO CISCO SG300-28P (Network Switches)
- NHD-200-RX Decoder s (Displays)
- NHD-210-RX Video Wall Decoders (Displays)

Striders - Sports Bar - California, USA

With nine displays and a three by two video wall, this bar served up the perfect combination of NetworkHD™ 200 Series products. And with the Enado Control Solution, the entire wait staff had complete control of system.





KEY

■ Cat5
 ■ HDMI
 ■ Fiber
 For cable runs over 100m/330ft an active network device such as a hub or switch is required.

NetworkHD™ 200-Series Encoder and Decoders:

The 200 Series products are used when one or more video walls are required in the system. The 200 Series also allows for additional input format options, including component video, DVI, composite and HDMI. The NHD-210-RX decoder unit is necessary for the video wall functionality.



Features

- Highly scalable HD over IP solution with powerful video wall functionality (NHD-210-RX only) up to 4 x 4 displays
- Multi-format DVI-I input selectable to HDMI, DVI, Component, VGA & Composite
- Plug and Play setup with automatic networking configuration and discovery of all Encoders & Decoders
- Quick Sync™ technology for virtually instantaneous, seamless switching
- Supports PoE, eliminating the need for a nearby power outlet
- CEC One-Touch Play & Standby or RS-232 control of connected displays
- Supports video previewing on a PC or mobile device
- Compatible control brands include AMX, Crestron, Control4, RTI & WyreStorm™ Enado

NHD-200-TX

Technical

- Input Video Ports: 1x DVI-I
- Input Video Type: HDMI, DVI 1.0, VGA, Component
- Input Video Resolutions: HDMI & DVI: 640x480@60Hz upto 1920x1200@60Hz
VGA: 640x480@60Hz up-to 1920x1200@60Hz
Component: 720x480p@60Hz, 720x576p@50Hz, 1280x720p@50Hz, 1280x720p@60Hz
- Input Video Signal: 0.5 ~ 1.2 V p-p
- Encoding Data Rate: Up to 40Mbps, configurable
- Output Video Ports: 1x 10/100 Ethernet
- Output Video Type: H.264/MPEG-4 AVC
- Output Video Resolutions: Large IP stream: 480p@60Hz~1920x1200@60Hz
Small IP stream: 352x288@5Hz
- Video Impedance: 100Ω
- Input DDC Signal: 5V p-p (TTL)
- End-to-End Time Latency: • About 60ms-90ms (Low Latency mode)
• About 250ms-300ms (High Quality mode)
- Input Audio Ports: 1x 3.5mm Audio Jack
- Input Audio Format: Stereo
- Output Audio Ports: 1x 3 pin Phoenix Connector
- Output Audio Format: 2ch Stereo

Control

- Control Method: Rear panel source switch, PC configurator and RS-232

NHD-200-RX & NHD-210-RX

Technical

- Input Video Ports: 1x 10/100 Ethernet
- Input Video Type: H.264/MPEG-4 AVC
- Input Video Resolutions: 480p@60Hz~1920x1200@60Hz
- Output Video Ports: 1x HDMI
- Output Video Type: HDMI 1.3, HDCP Compliant
- Output Video Resolutions: HDMI: 480p@60Hz upto 1920x1200@60Hz
- Video Impedance: 100Ω
- End-to-End Time Latency: • About 60ms-90ms (Low latency mode)
• About 250ms-300ms (High quality mode)
- Input Audio Ports: 1x LAN
- Input Audio Format: Audio embedded in streaming media input
- Output Audio Ports: 1x 3 pin Phoenix Connector
- Output Audio Format: 2ch Stereo

Control

- Control Method: NHD-000-CTL, NetworkHD™ Console Windows Software, Telnet IP API, Leading Control System Drivers

General

- Operating Temperature: +32°F ~ +113°F (0°C ~ +45°C) 10% ~ 90%
- Storage Temperature: -4°F ~ 140°F (-20°C ~ +70°C) 10% ~ 90%
- Power: 12V DC 1A
- Power Consumption: 6W (Max.)
- ESD Protection: Human body model: • ±8kV (air-gap discharge)
• ±4kV (contact discharge)
Voltage ±1 kV
- Surge Protection: 310mm x 76mm x 180mm / 12.2" x 3.0" x 7.1"
- Case Dimensions (WxHxD): 228mm x 25 mm x 111mm / 9.0' x 1.0" x 4.4"
- Weight: 0.6Kg
- Certification: CE, FCC, RoHS compliant

NetworkHD™ 100 Series Encoder & Decoder:

The 100 Series products are used with multi-source, multi-display applications, without the need for a video wall. Source inputs on the 100 Series products accommodate only HDMI.



Features

- Highly scalable HD over IP solution using the most efficient compression technology to allow for very large commercial AV deployments
- Plug and Play setup with automatic networking configuration and discovery of all Encoders & Decoders
- Quick Sync™ technology for virtually instantaneous, seamless switching
- Supports PoE to enable remote powering from POE network switches, eliminating the need for a nearby power outlet
- CEC One-Touch Play & Standby or RS-232 control of connected displays
- Supports video previewing on a PC or mobile device
- Compatible control brands include AMX, Crestron, Control4, RTI & WyreStorm™ Enado

NHD-100-TX

Technical

- Input Video Ports: 1x HDMI IN
- Input Video Type: HDMI
- Input Video Resolutions: HDMI: 640x480@60Hz upto 1920x1200@60Hz
- Input Video Signal: 0.5 ~ 1.2 V p-p
- Encoding Data Rate: Up to 40Mbps, configurable
- Output Video Ports: 1x 10/100 Ethernet
- Output Video Type: H.264/MPEG-4 AVC
- Output Video Resolutions: Large IP stream: 480p@60Hz~1920x1200@60Hz
Preview stream: 352x288@5Hz
- Video Impedance: 100Ω
- Input DDC Signal: 5V p-p (TTL)
- End-to-End Time Latency: • About 60ms-90ms (Low Latency mode)
• About 250ms-300ms (High Quality mode)
- Input Audio Ports: Stereo
- Input Audio Format: Stereo
- Output Audio Ports: 1x 3 pin Phoenix Connector
- Output Audio Format: 2ch Stereo

Control

- Control Method: NHD-000-CTL, NetworkHD™ Console Windows Software, Telnet IP API, Leading Control System Drivers

General

- Operating Temperature: +32°F ~ +113°F (0°C ~ +45°C) 10% ~ 90%
- Storage Temperature: -4°F ~ 140°F (-20°C ~ +70°C) 10% ~ 90%
- Power: 12V DC 1A
- Power Consumption: 6W (Max.)
- ESD Protection: Human body model: • ±8kV (air-gap discharge)
• ±4kV (contact discharge)
- Surge Protection: Voltage ±1 kV
- Case Dimensions (WxHxD): 310mm x 76mm x 180mm / 12.2" x 3.0" x 7.1"
- Product Dimensions (WxHxD): 200mm x 25 mm x 94mm / 7.9" x 1.0" x 3.7"
- Weight: 0.48Kg
- Certification: CE, FCC, RoHS compliant

NHD-100-RX

Technical

- Input Video Ports: 1x LAN
- Input Video Type: H.264/MPEG-4 AVC
- Input Video Resolutions: 480p@60Hz~1920x1200@60Hz
- Output Video Ports: 1x HDMI
- Output Video Type: HDMI 1.3, HDCP Compliant
- Output Video Resolutions: HDMI: 480p@60Hz upto 1920x1200@60Hz
100Ω
- Video Impedance: 100Ω
- End-to-End Time Latency: • About 60ms-90ms (Low latency mode)
• About 250ms-300ms (High quality mode)
- Input Audio Ports: 1x LAN
- Input Audio Format: Audio embedded in streaming media input
- Output Audio Ports: 1x Phoenix Connector
- Output Audio Format: 2ch Stereo

Control

- Control Method: NHD-000-CTL, NetworkHD™ Console Windows Software, Telnet IP API, Leading Control System Drivers

General

- Operating Temperature: +32°F ~ +113°F (0°C ~ +45°C) 10% ~ 90%
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- Weight: 0.6Kg
- Certification: CE, FCC, RoHS compliant

Product Comparison

NHD 200 Series



NHD 100 Series



Products:	NHD-200-RX NHD-210-RX NHD-200-TX	NHD-100-RX NHD-100-TX
Recommended Applications	Commercial, residential with video wall	Residential and light commercial (no video wall)
Input Connector (Encoder)	DVI (HDMI Converter Provided)	HDMI
Input Technology (Encoder)	HDMI 1.3, DVI 1.0, VGA, YPbPr	HDMI 1.3
Output Connector (Decoder)	HDMI	HDMI
Encoding Rate	Up to 40Mbps, configurable	Up to 40Mbps, configurable
Compression Technology	H.264 / MPEG-4 AVC	H.264 / MPEG-4 AVC
Video Resolutions	480p up to 1920x1200@60Hz	480p up to 1920x1200@60Hz
Audio Input (Encoder)	Stereo Mini and HDMI	HDMI only
Video Wall Capable	Yes (4x4 max)	No
QuickSync™ Technology	Yes	Yes
Audio Format	2ch (stereo)	2ch (stereo)
Audio Output (Phoenix Connector)	On Encoder and Decoder	On Encoder and Decoder
Control Methods	CEC, PC (LAN), NHD-000-CTL, RS-232 and third party control systems	CEC, PC (LAN), NHD-000-CTL, RS-232 and third party control systems
Support HDCP	Yes	Yes
PoE	Yes - 2 Way	Yes - 2 Way
Certification	CE, FCC, RoHS	CE, FCC, RoHS

About WyreStorm

WyreStorm is a leading manufacturer of audio/video distribution and control solutions, serving both commercial and residential markets throughout the world.

Our award-winning products include a comprehensive range of HDMI, HD over IP and HDBaseT products. We also offer the WyreStorm Enado™ Control System, an easy to configure and simple to use webserver-based control solution.

Visit our website to learn more about NetworkHD™ and other WyreStorm solutions.



More Information



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