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

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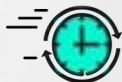
Modular
Unlike fixed port solutions, NetworkHD™ can grow by adding new displays and sources as needed.

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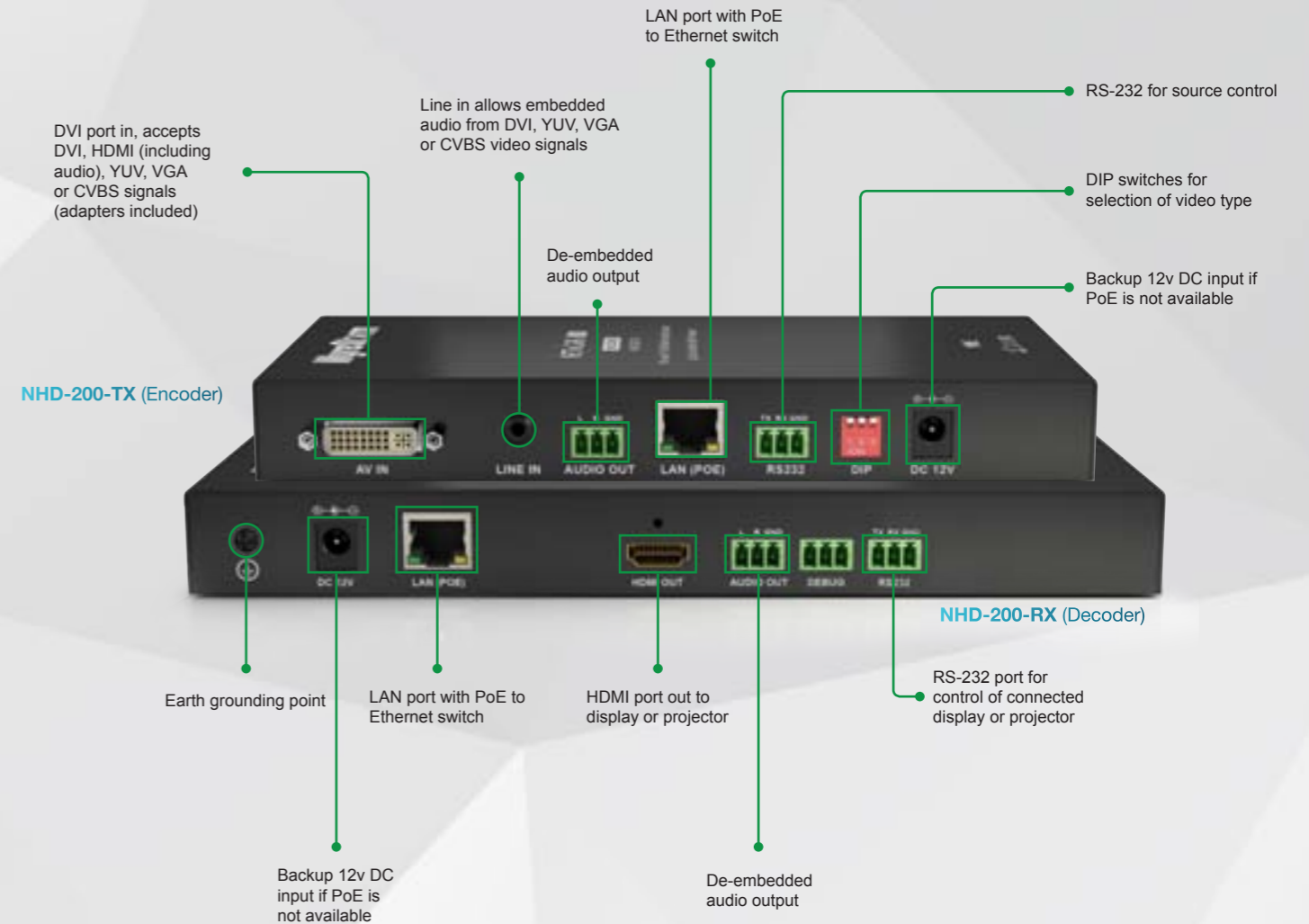
Multi-format Input
Analog and digital sources using 200-Series NetworkHD™ products: DVI,VGA and HDMI inputs. 100-Series is HDMI only.

Video Wall
With the 200 Series products "NHD-210-RX" video walls are easily integrated into the system.

POE
Power over Ethernet

NHD-200-TX (Encoder)

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

De-embedded audio output

DIP switches for selection of video type

Backup 12v DC input if PoE is not available

NHD-200-RX (Decoder)

Earth grounding point

LAN port with PoE to Ethernet switch

HDMI port out to display or projector

RS-232 port for control of connected display or projector

Backup 12v DC input if PoE is not available

De-embedded audio output

NETWORK **HD**

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.
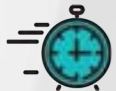
H.264 Compression Technology

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**

NETWORK HD

You're In Control with NetworkHD Touch™

Available as a free iPad App from the App Store, NetworkHD Touch make controlling the system easy. With real time previews of sources, there's no guessing which sources go with which displays. Instant switching between sources is done by dragging the desired source to the appropriate display on the iPad screen. Source control is possible when used in conjunction with the WyreStorm Enado™ Control System.

Keep customers happy using the right Touch.

TOUCH

Available on the App Store

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.
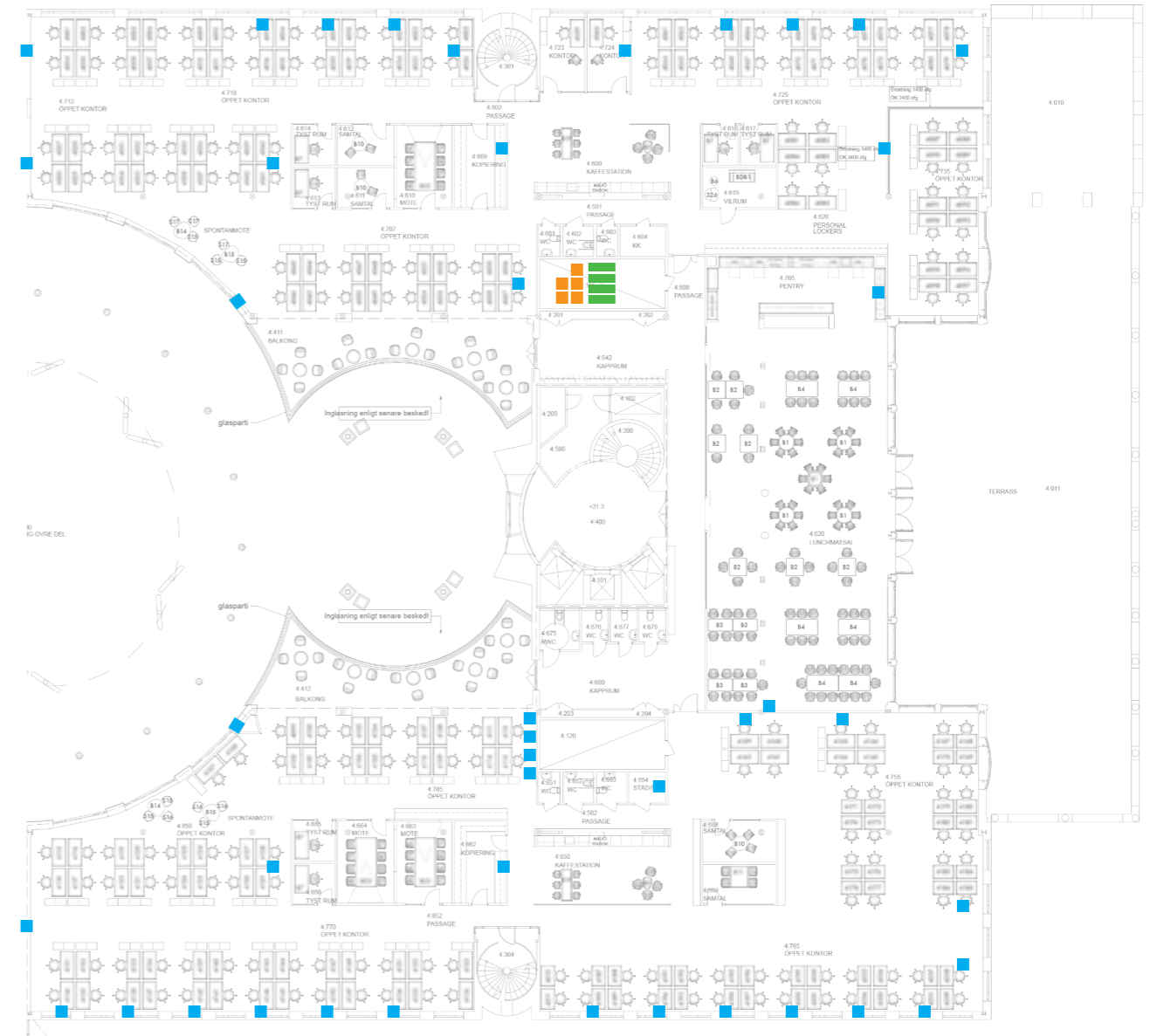
NETWORK**HD**

⚡ **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.
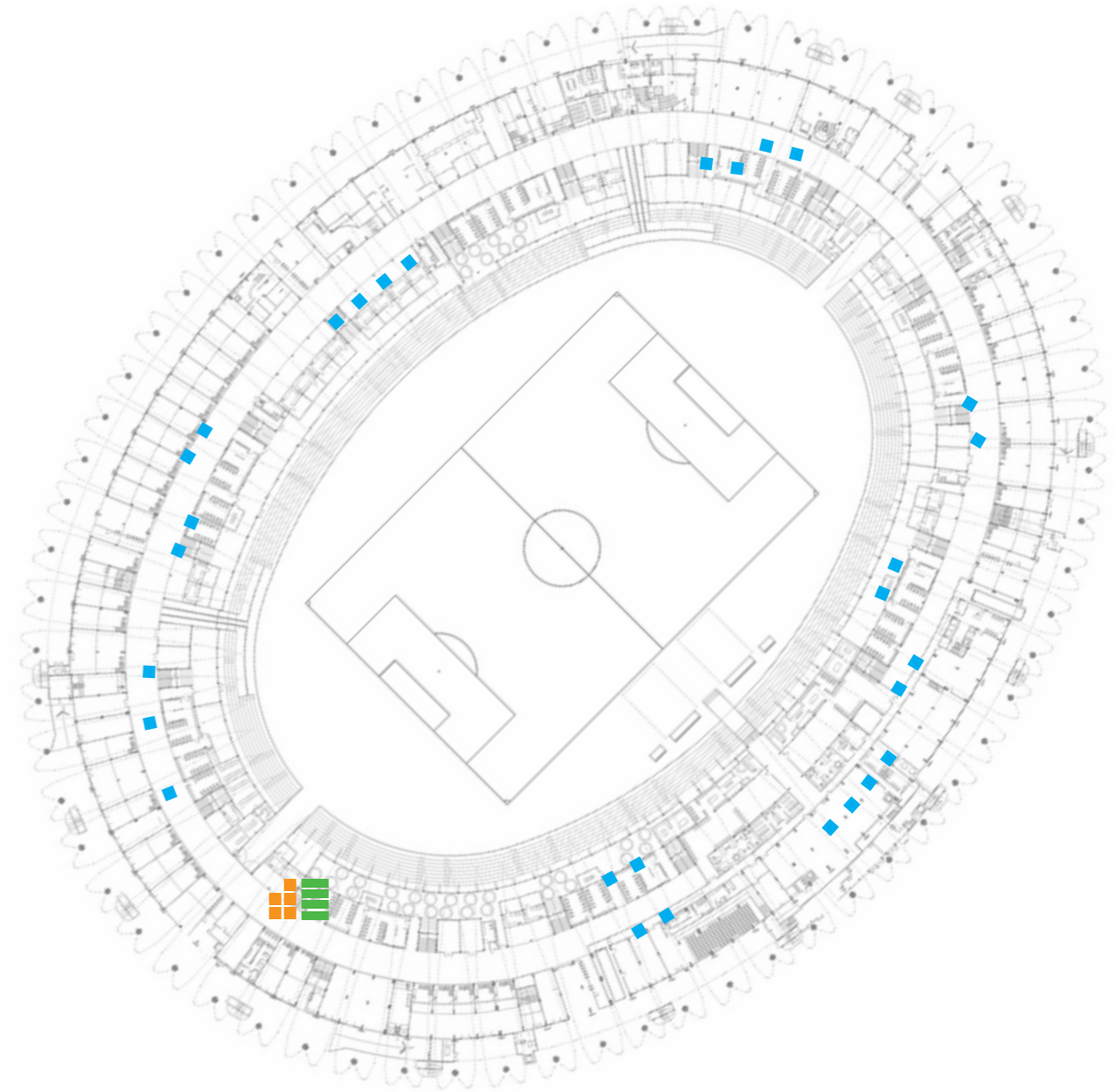

NETWORK HD

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)

Gooooooallllll! 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 Decoder s (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.
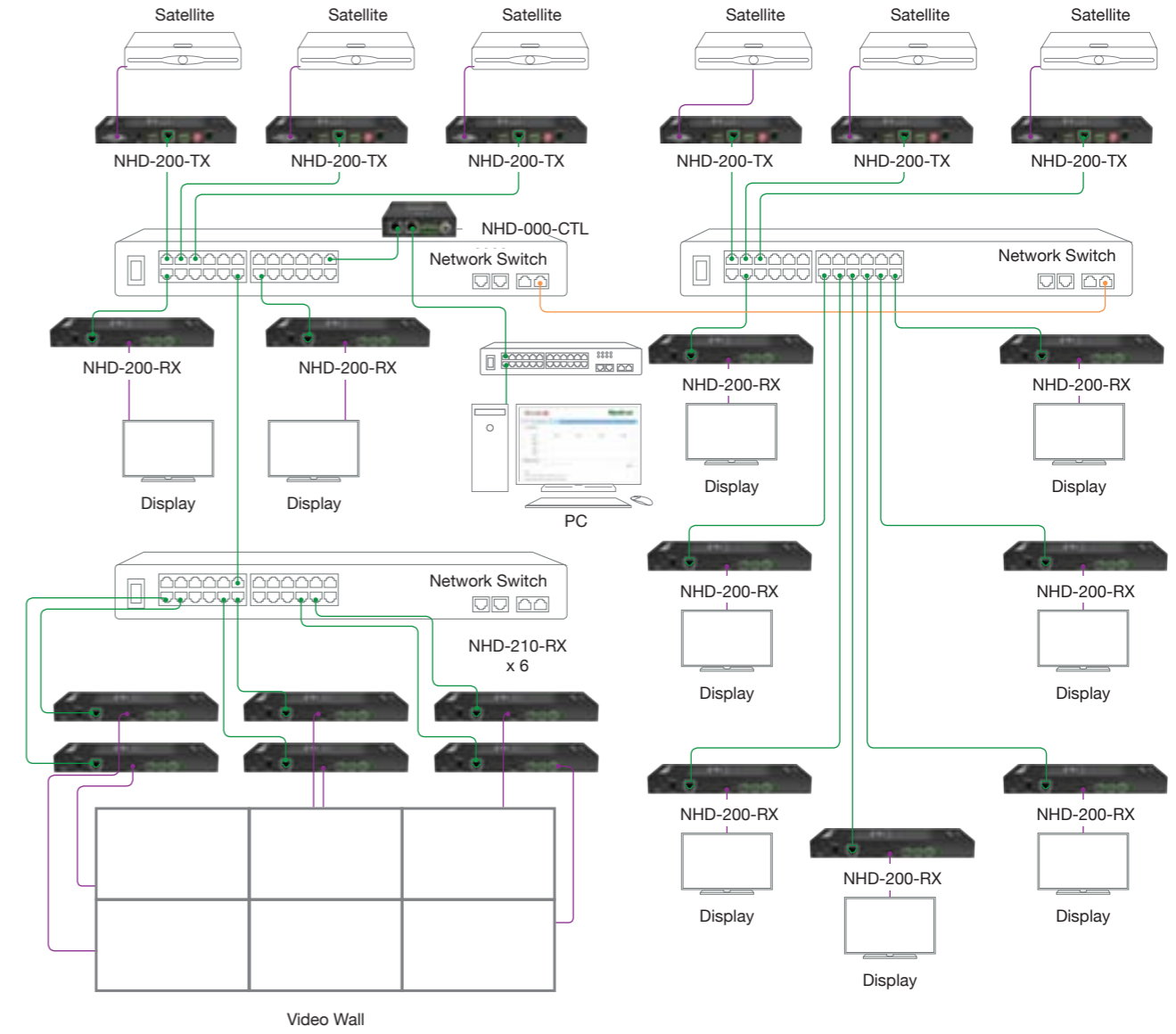

NETWORK**HD**

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.

NETWORK HD

System Diagram

Satellite — NHD-200-TX
Satellite — NHD-200-TX
Satellite — NHD-200-TX
Satellite — NHD-200-TX
Satellite — NHD-200-TX
Satellite — NHD-200-TX

NHD-000-CTL

Network Switch

Network Switch

NHD-200-RX — Display
NHD-200-RX — Display

PC

NHD-200-RX — Display
NHD-200-RX — Display

Network Switch

NHD-210-RX x 6

NHD-200-RX — Display
NHD-200-RX — Display

NHD-200-RX — Display
NHD-200-RX — Display

NHD-200-RX — Display

Video Wall

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: 1× 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: 1× 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)
- Surge Protection: Voltage ±1 kV
- Case Dimensions (WxHxD): 310mm x 76mm x 180mm / 12.2" x 3.0" x 7.1"
- Product 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: 1× 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:
- 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: 1× 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
- 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%
- 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): 228mm x 25 mm x 111mm / 9'.0" x 1.0" x 4.4"
- Weight: 0.6Kg
- Certification: CE, FCC, RoHS compliant

Product Comparision

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 Convertor 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

Contact Us

WyreStorm®