Manuals+ — User Manuals Simplified.

AMX N-Series Stream Compatibility Encoder User Guide

**N-Series Stream Compatibility Encoder
User Guide**

Contents

N-Series Stream Compatibility Encoder

N-Series Networked AV solutions can be used in a wide range of environments: from small, isolated systems to larger, integrated deployments with complicated topologies. With this broad spectrum of use cases to support, N-Series development engineers have designed networked AV solutions using multiple approaches, fostering the diversity necessary for covering as many networking scenarios as possible while at the same time enhancing the balance between bandwidth, image quality, and streaming capabilities.

N-Series Encoders, Decoders, and Windowing Processors are divided into five main product series lines: N1000, N2000, N2300, N2400, and N3000. Although in most cases these five product lines represent independent solutions that support a specific networking environment type, you must also consider other compatibility considerations when designing the ideal system that will fit your project needs. This document provides basic system design guidelines with a focus on stream compatibility.

Product Details

An N-Series system is comprised of Encoders, Decoders, Windowing Processor units, Network Video Recording

solutions, and Audio Transceivers. N-Series systems allow you to distribute up to 4K@60 4:4:4, HDR, HDCP 2.2, HDMI 2.0 video and AES67 audio across a Gigabit Ethernet network.

This section provides details on the individual N-Series products available. Refer to the N-Series Networked AV – Stream Compatibility Chart on page 3 for more details.

N1000 Series

- **Minimal Proprietary Compression (MPC) –** Compatible across all MPC-enabled products.
- **Uncompressed –** N1000 Uncompressed will also work with legacy N1000 products.
- **N1512 Windowing Processor –** Compatible with both MPC and uncompressed modes. Takes up to 4 input streams and outputs a single MPC or uncompressed stream. Allows for stacking of windows processors to increase the number of windows available.

N2000 Series

- **JPEG 2000 –** Compatible across all current and legacy N2000 product lines with the exception of N2300 4K and N2400 4K Compressed products. See the N-Series Networked AV – Stream Compatibility Chart on page 3 for seamless switching restrictions.
- **N2510 Windowing Processor –** Compatible across all current and legacy N2000 product lines with the exception of N2300 4K and N2400 4K. Can ingest up to four streams and will output one JPEG 2000 stream. See the N-Series Networked AV – Stream Compatibility Chart on page 3 for seamless switching restrictions. Allows for stacking of windows processors to increase the number of windows available.

N2300 Series

- **N2300 4K Compressed –** Compatible only between the N2300 4K Compressed Encoders and Decoders.

N2400 Series

- **N2400 4K Compressed –** Compatible only between the N2400 4K Compressed Encoders and Decoders.
- **N2410 Windowing Processor –** Compatible across all N2400 4K product lines. Takes up to 4 input streams and outputs a single N2400 4K JPEG2000 Compressed stream. Allows for stacking of windows processors to increase the number of windows available.

N3000 Series

- **H.264 –** Uses industry-standard H.264 encoding and decoding methods and is directly compatible across all N3000 products. Can be run in SVSI Encoder, RTP, RTSP, HTTP Live, and RTMP stream modes. It also can be set up in either unicast or multicast mode with the ability to output a multicast stream and a single unicast stream simultaneously.
- **N3510 Windowing Processor –** Compatible across all N3000 product lines. Takes up to nine inputs and then outputs a single H.264 stream. Also has a single, direct HDMI output. Allows for stacking of windows processors to increase the number of windows available.
- **Third-Party H.264 –** The N3000 uses H.264 standards for encoding and decoding and can therefore be used with third-party H.264 networked AV products. HDCP protected sources cannot be streamed to third-party devices.

NOTE: H.264 implementations can vary greatly with each manufacturer, so it is best to test compatibility in-house with the N3000 units before specifying, designing, purchasing, and/or implementing a system with a mixed approach.

N4321 Audio Transceiver (ATC)

- **Audio Only –** Compatible across all product lines regardless of video stream type. Ability to input mic/line level analog audio to generate a SVSI audio network stream. Can also take any SVSI network audio stream, convert it to analog, and output balanced or unbalanced audio.
- **Audio Streams –** All audio streams are 100% compatible across all product lines regardless of video stream type.

N6123 Network Video Recorder (NVR)
Able to record and playback MPC, JPEG 2000, JPEG 2000-4K, N2400 4K, H.264, and legacy uncompressed stream types including HDCP content. Not compatible with uncompressed 4K streams. Can also convert and remote copy recordings, as long as no HDCP content or tag is present. N2300 4K does not have convert and remote copy capability.

AES67 Compatibility
Networked audio delivery via AES67 is available in all "A" versions of the stand-alone and card-based Encoders and Decoders. This includes the following products:

- N1122A Encoder/N1222A Decoder
- N1133A Encoder/N1233A Decoder
- N2122A Encoder/N2222A Decoder/N2212A Decoder
- N2135 Encoder/N2235 Decoder
- N2412A Encoder/N2422A Decoder/N2424A Decoder

Wall Encoders of all product families as well as the N2300 4K do not have AES67 "A" type units available. Note that "A" type units can be configured to use the Harman NAV audio transport method, rather than AES67, in order to transmit audio to non-"A" type units.

N-Series Networked AV – Stream Compatibility Chart

	N1122A Encoder	N1133A Encoder	N1115 Encoder	N1512 WP	N2122A Encoder	N2135A Encoder	N2510 WP	N2312 Encoder	N2315 Wall Encoder	N2412A Encoder	N2410 WP	N3132 Encoder	N3510 WP	N4321 ATR	N6123 NVR
N1222 Decoder	●	●	●	●	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	◆	●
N1233 Decoder	●	●	●	●	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	◆	●
N1512 WP	●	●	●	●	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	◆	●
N2212 Decoder	⊠	⊠	⊠	⊠	◻	◻	◻	⊠	⊠	⊠	⊠	⊠	⊠	◆	◻
N2222 Decoder	⊠	⊠	⊠	⊠	◻	◻	◻	⊠	⊠	⊠	⊠	⊠	⊠	◆	◻
N2235 Decoder	⊠	⊠	⊠	⊠	◻	◻	◻	⊠	⊠	⊠	⊠	⊠	⊠	◆	◻
N2510 WP	⊠	⊠	⊠	⊠	◻	◻	◻	⊠	⊠	⊠	⊠	⊠	⊠	◆	◻
N2322 Decoder	⊠	⊠	⊠	⊠	⊠	⊠	⊠	▲	▲	⊠	⊠	⊠	⊠	◆	⊠
N2422A	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	▼	▼	⊠	⊠	◆	▼
N2424A	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	▼	▼	⊠	⊠	◆	▼
N2410 WP	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	▼	▼	⊠	⊠	◆	▼
N3232 Decoder	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	✿	✿	↕	✿
N3510 WP	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	✿	✿	↕	✿
N4321 ATR	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	↕	↕	◆	◆
N6123 NVR	●	●	●	●	◻	◻	◻	⊠	⊠	▼	▼	✿	✿	◆	❖

Legend

●	N1000 MPC Mode 1920X1200@60
◻	N2000 JPEG 2000 1920×1200@60
▲	N2300 4K 3840×2160@30 4:4:4*
▼	N2400 JPEG2000 4K Compressed Mode 4096 x 2160@60 4:4:4
✿	N3000 H.264 1080×1920@60
◆	N4000 Audio **
↕	N4000 Audio (N3K requires that you enable the Audio Stream setting) **
❖	N6000 Network Transfer
⊠	Incompatible – Requires Transcode

* Supports input resolutions up to 3840×2160@60 4:2:0.
** Audio streams can be shared throughout all products as well as across streams regardless of video stream compatibility.
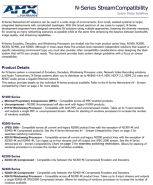
HARMAN

Last Revised: 09/2022

3000 RESEARCH DRIVE, RICHARDSON,
TX 75082 **AMX.com**
800.222.0193 | 469.624.8000 | +1.469.624.7400
Fax 469.624.7153
AMX (UK) LTD, AMX by HARMAN
Unit C, Auster Road, Clifton Moor, York,
YO30 4GD United Kingdom
+44 1904-343-100
www.amx.com/eu/

Documents / Resources

	AMX N-Series Stream Compatibility Encoder [pdf] User Guide N-Series, Stream Compatibility Encoder, Compatibility Encoder, Stream Encoder, Encoder

References

- ᴬᴹˣ **AMX Audio Video Control Systems**
- ᴬᴹˣ **AMX Audio Video Control Systems**

Manuals+,