![AMX by HARMAN logo]

N2300 Series N2315 Networked AV Wallplate 4K Encoder

NMX-ENC-N2315-WP-BL (FGN2315-WP-BL), Black
NMX-ENC-N2315-WP-WH (FGN2315-WP-WH), White

Overview

The NMX-ENC-N2315-WP provides the excellent encoding capabilities of the NMX-ENC-N2312 in a 2-gang wallplate format. This encoder fits conveniently into a 2-gang US back box for easy installation in a wall, floor or lectern. Connect to power and Ethernet using a single category cable.

Any source can be sent to one or more displays by routing through layer-2 / layer-3 switches utilizing standard Cat5e cable. The NMX-ENC-N2315 includes standard features like input scaling, bi-directional serial, IR, embedded 7.1 audio, and KVM-over-IP extension.

The N2300 Series provides a flexible, feature-rich, and simple-to-deploy Networked AV solution that can be used in 4K applications with resolutions up to 4096x2160, with support for HDCP 2.2. This motion-based wavelet codec solution delivers video with nearly imperceptible latency allowing 4K distribution over standard gigabit Ethernet networks.

Features

- **Wallplate Form Factor** – Fits conveniently into a 2-gang US back box for easy installation in a wall, floor, or lectern. It uses standard decor-style faceplates (not included). It is available in black or white and has an industrial design that blends well into commercial installations.
- **Low Latency** – With 1 frame of latency for encode plus decode (34 ms for 4K30 and 17 ms for 1080p60), the N2300-Series offers video distribution with nearly imperceptible latency.
- **HDMI 2.0 and HDCP 2.2 Support** - By incorporating HDMI 2.0 and HDCP 2.2, the N2300-Series products are compatible with all the latest 4K sources and displays.
- **PoE Powered** - only requires a single category cable for power and audio/video transport, which greatly simplifies the installation requirements.
- **Native NetLinx** – Simplifies integration with AMX control to reduce cost of installation.
- **Design Flexibility** – Start as small as 1x1 and grow the system in increments of single sources and devices by simply adding additional encoders and decoders.

Specifications

VIDEO	
Digital Video Input	HDMI 2.0, DVI-D* (through adapter), Dual-Mode DisplayPort (DP++)* *These signal types are supported through a passive adapter
Analog Video Input	HD-15 VGA
Video Output	Network video over Ethernet via RJ45 port or SFP via 1G SFP port
Formats	HDMI 2.0, DVI-D (through adapter), Dual-Mode DisplayPort (DP++), HDCP 2.2 content protection support, RGBHV *DVI-D and Dual-Mode DisplayPort (DP++) are supported through a passive adapter
Progressive Input Resolutions	Supports 4K30 4:2:0 and most common HD resolutions up to 1920x1200 See NMX-ENC-N2312 Installation Manual for all supported resolutions HDMI and DVI (Progressive) •Pixel clock between 27 MHz – 300MHz •Minimum resolution of 720x480p60 •Maximum horizontal resolution of 4096 or a vertical resolution of 2160* •Common acceptable resolutions include: 720x480p60 – 480p, 720x576@50, 800x600p60, 1024x768p60, 1280x720@60Hz - 720p60, 1600x1200@60Hz, 1920x1080@60Hz - 1080p60, 3840x2160(4:2:0)@30Hz - UHD30 aka 4K30, 4096x2160(4:2:0)@30Hz - DCI 4K30
Interlaced Input Resolutions	Supports 1080i60 See NMX-ENC-N2312 Installation Manual for all supported resoltuions HDMI and DVI (Interlaced) •1920x1080@50Hz - 1080i50 •1920x1080@60Hz - 1080i60

	Note: Interlaced resolutions will be de-interlaced if scaled on the decoder; otherwise, the interlaced signal will pass through to the display
Analog Input Resolutions	Supports most common HD resolutions up to 1920x1200 See NMX-ENC-N2312 Installation Manual for all supported resoltuions VGA •Pixel clock between 27 MHz - 165 MHz •Minimum resolution of 640x480 •Maximum horizontal resolution of 1920 or a vertical resolution of 1200 •Common acceptable resolutions include: 640x480p60, 720x480p60 – 480p, 720x576@50, 800x600p60, 1024x768@60Hz, 1280x720@50Hz (720p50), 1280x720@60Hz (720p60), 1280x768@60Hz, 1280x800@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1366x768@60Hz, 1400x1050@60Hz, 1440x900@60Hz, 1600x1200@60Hz, 1680x1050@60Hz, 1920x1080@50Hz (1080p50), 1920x1080@60Hz (1080p60), 1920x1200@60Hz (reduced blanking) Note: Input resolutions supported @60Hz refresh rates are also supported @59.94Hz The N2312 Encoder does not accept Composite or S-Video (YC)
Analog-To-Digital Conversion	8-bit 165 MHz per each of three color channels
Color Space	4:4:4 – HD (1920x1200 and lower)
LocalPlay/HostPlay	8 playlists
HostPlay	1 image/list
Note	Jumbo Frames Required
Video Wall Construction	Supported within the NMX-DEC-N2322, the N2300 Series is not compatible with SVSI Windowing Processors at this time
Network Video Recording	Not compatible with SVSI NVR at this time

AUDIO	
Input Signal Types	Embedded audio on HDMI (DVI-D through adapter) or Analog Stereo
Output Signal Types	Ethernet
Analog Audio Formats	8ch PCM, Stereo 2-channel
Analog-To-Digital Conversion	16-bit 48 kHz
Input Signal Types	Embedded audio on HDMI (DVI-D through adapter) or Analog Stereo

LATENCY	
Latency	17-ms at 60 fps for 1920x1080 and lower resolutions 34-ms at 30 fps for 4K30 NOTE: This is the combined encode plus decode latency. Total latency from source to screen will also include any network latency. Scaling adds one frame of latency (17ms at 60fps)

Switching	Up to 1.5s delay, not seamless

BANDWIDTH	
Bandwidth	200 Mb/s (average) Note: Bandwidths can be as high as 700 Mb/s, depending on the resolution and the amount of motion in the video content. Note: Minimum bandwidth is 50 Mb/s for resolutions <= 1080p60

COMMUNICATIONS	
Ethernet - PO	10/100/1000 Mbps, auto-negotiating, auto-sensing, full/half duplex, DHCP, Auto IP, and Static IP
Ethernet - P1	1 Gbps port which accepts compatible fiber transceivers or direct attach cables, DHCP, Auto IP, and static IP
HDMI	HDCP, EDID management

PORTS	
P0	8-wire RJ45 female 10/100/1000 Mbps 10/100/1000 Base-T auto-sensing gigabit Ethernet switch port Provides network connection, network AV video, and power to the Encoders and Decoders
HDMI IN	HDMI video input
VGA IN	DB15 analog input
USB IN - Host	USB-B host input
USB IN - Maintenance	USB-Mini maintenance input

CONTROLS AND INDICATORS – FRONT PANEL	
RESET button	Recessed pushbutton. Press to initiate a 'warm restart' causing the processor to reset, but not lose power. A reset does NOT affect the current settings
POWER LED	On solid (green) when operating power is supplied (via PoE).
AUDIO LED	On (green) when audio is transmitting.
ANALOG VIDEO LEDs	On (green) when analog source is available and transmitting.

POWER SUPPLY	
Power over Ethernet	Can be powered via a PoE switch or other equipment with a PoE source. Conforms to IEEE 802.3af Class 3 (802.3at Type 1) Point-to-point applications between the encoder and a decoder requires a PoE injector to power the wallplate encoder.
Note	In order for the unit to receive Power over Ethernet (PoE), it must be connected to a switch or other equipment that has a PoE PSE (Power Sourcing

	Equipment) port. Warning: Do not run wiring that is connected to a PoE PSE port outside of the building where the PSE resides. It is for intra-building use only.

ENVIRONMENTAL	
Temperature (Operating)	32° to 104°F (0° to 40°C)
Temperature (Storage)	-22° to 158°F (-30° to 70°C)
Humidity (Operating)	10% to 90% RH (non-condensing)
Humidity (Storage)	0% to 90% RH (non-condensing)
Heat Dissipation	Up to ~26 BTU/Hr

GENERAL	
Dimensions (HWD)	4.06" x 3.5" x 2.25" (10.31 cm x 8.84 cm x 5.72 cm)
Weight	.75 lb (0.34 kg)
Airflow	Natural convection via vent openings on front, back, and top
Installation	•Mounts onto standard 2 gang US back boxes' •Mounts into standard décor style wallplates (not included)
Regulatory Compliance	FCC, CE, and NTRL
Recommended Accessories	PS-POE-AT-TC, High-Power PoE Injector, 802.3AT Compliant (FG423-84)