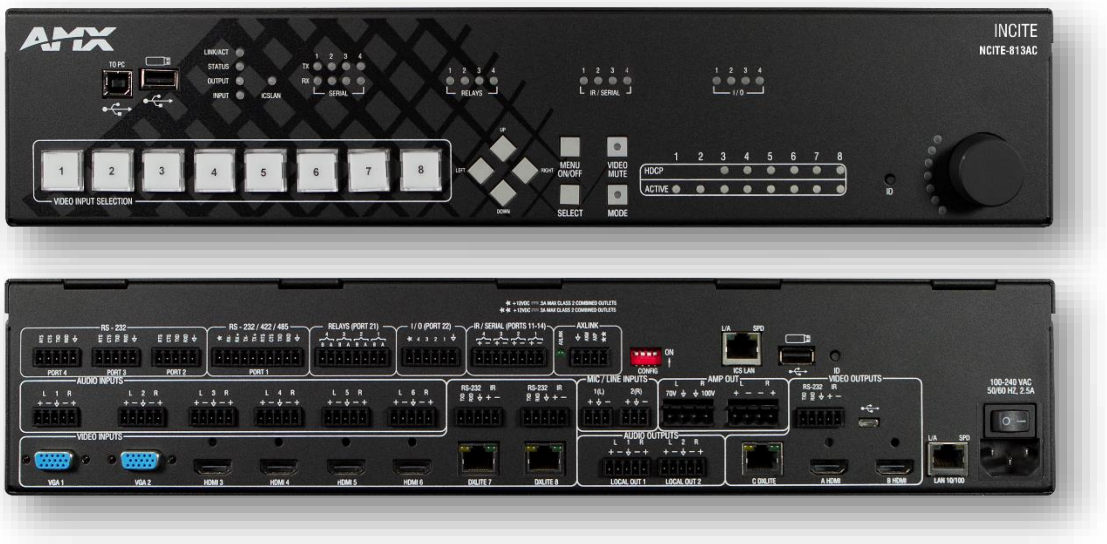
DATA SHEET

# 8x1:3 4K60 4:4:4 Digital Video Presentation Switcher

**with HDCP 2.2, Video Scaling, Distance Transport, Advanced Windowing, DSP, Advanced Feedback Suppression, DriveCore Amplification, Integrated NX Controller**
**HDCP 2.2, Video Scaling, Distance Transport, Advanced Windowing, DSP**
**Advanced Feedback Suppression**

NCITE-813AC (FG1901-16)




## Overview

**AMX Incite Digital Video Presentation Systems are the next generation of presentation switchers that combine AMX control and signal distribution with HARMAN audio. Video presentation features include advanced windowing with scaling allowing for various video configurations (side-by-side, top-bottom, and picture-in-picture), and live production style video features such as transition effects. Support and scaling for 4K/60 4:4:4 and HDCP 2.2, as well as lower resolutions, ensures the Incite family provides flexibility for visiting devices and compatibility from source to display weather using legacy or new devices. Audio features include DSP with advanced capabilities like independent 10-band parametric EQ, independent input gain adjustments, and variable compression, Advanced Feedback Suppression™ and two of the three models also include DriveCore amplification technology.**

Each has 8 inputs (4 HDMI, 2 DXLite, and 2 RGBHV/VGA), and a scaled video feed presented simultaneously to 2 local HDMI outputs and 1 DXLite output. Thus, making it an 8x1:3 presentation switcher.

Distance transport with DXLite on the inputs and output provides 4K/60 4:4:4 support with visually lossless compression for runs up to 70 meters. Use with the DXLink Wall Plate Transmitter to feed inputs into Incite, and

the new DXLite Receiver after the output before the output device (examples include display, projector, and lecture output device).

Embedded audio processing includes switching from any of the 6 embedded digital audio inputs, 6 analog stereo audio inputs or 2 microphone inputs which can be mixed across 2 defined audio output groups. Audio outputs can be assigned to either output group adding to configuration flexibility. Audio outputs are provided on 2 independently configurable balanced pre-amp audio outputs, and as embedded audio paths on each of the 3 mirrored digital video outputs.

There are numerous interface options including integrated web GUI, front control panel, On Screen Menu Setup, and is a Native NetLinx device which can be controlled via native NetLinx ICSP commands. Full feedback and not

The NCITE-813AC includes the next generation NetLinx Integrated Controller technology, the NX-Series. This new controller provides a scalable platform for the future by combining high performance, backward compatibility and extensive network security features.

**Common Applications**
University lecture halls, theaters, and other collaboration spaces; corporate and government boardroom and meeting spaces. Incite delivers precision video, supports new and legacy visiting devices, provides professional presentation transitions and windowing features, and promises the best audio on the market, making it the ideal solution for any high use presentation area.

**Features**

- **4K/60 4:4:4 Support** – Incite supports today's 4K content without modifying the color space or reducing the frame rate.
- **HDMI 2.0 and HDCP 2.2 Support** – By incorporating HDMI 2.0 and HDCP 2.2, Incite is compatible with all the latest 4K sources and displays.
- **Scaled Outputs** – Provides current and future support for permanent and visiting source devices connected at the same time, both 4K and non 4K. Current HD signals can be up-scaled, while 4K60 can be downscaled, providing flexible compatibility from source to display.
- **Advanced Windowing with Scaling** – Send two sources to a single display in various preset configurations (side-by-side, top-bottom, and picture-in-picture) regardless of source resolution, Incite will scale the sources to fit the resolution requirements of the destination display. The Incite also includes "Live Production" Style Video Features such as transition effects when switching between sources providing presenters with a professional look and feel.
- **Crown DriveCore Amplification –** Seamlessly integrates the amplifier drive stage into the power output stage fusing everything into a chip the size of a dime. The foundational DriveCore™ circuitry is based on breakthroughs by Crown's own Gerald Stanley with five patents applying to the advanced feedback, modulation and output stage technologies. DriveCore's front-end drive circuits leverage the inherent efficiency of Class D output stages while also maintaining superb sonic characteristics. The end result is an ultra-efficient one-piece audio amplifier circuit that exhibits the exemplary audio quality of a highly evolved Class AB design.
- **DSP by BSS –** Includes an integrated digital signal processor with advanced capabilities like independent 10-band parametric EQ, independent input gain adjustments and variable compression, allow precision tuning to match unique source and room attributes. Enhanced Microphone Processing includes 3-band EQ, compressional, gating, auto-ducking, and limiting on each microphone input to ensure crystal clear communication.
- **dbx AFS (Advanced Feedback Suppression™)** – Never experience feedback problems again, Advanced Feedback Suppression (AFS) takes the guesswork out of controlling feedback, which is not only annoying but can even damage speakers – and ears. AFS is flexible and easy to use: just choose the level of suppression you want, and you're done. AFS automatically stops feedback in its tracks.
- **Distance Transport** – Extend the reach of 4K60 4:4:4 to 70 meters, well beyond the capabilities of typical HDMI cabling.
- **Flexible Interface Options** – Interface options include integrated web GUI, front control panel, On Screen Menu Setup and is a Native NetLinx device which can be controlled via native NetLinx ICSP commands. Full feedback and notifications are provided for NetLinx integration.
- **Integrated NX Central Control –** The NX-2200 / NetLinx® NX Integrated Controller is a programmable network appliance specifically designed to control AV and building technology using multiple analog and

digital formats. The NX-2200 provides a scalable platform for the future by combining high performance, backward compatibility and extensive network security features. The NX-2200 is ideal for control and automation of medium-sized rooms and multi-room applications.

## Specifications

| GENERAL | |
|---|---|
| Enclosure | Metal with black matte finish |
| Dimensions (HWD) | 3 ½" x 19" x 14" (8.82 cm x 48.3 cm x 35.6 cm) |
| Weight | TBA |
| Regulatory Compliance | TBA |
| Included Accessories | • (1) Power Cord, Universal<br>• (2) Front Rack Mounting Brackets<br>• (4) Rubber feet<br>• Other TBA |

| ACTIVE POWER REQUIREMENTS | |
|---|---|
| Power Consumption | TBA |
| Power Connector | IEC Power Cord Connector<br>100-240 VAC<br>50-60 Hz |

| ENVIRONMENTAL | |
|---|---|
| Temperature (Operating) | 0° C to 40° C (32° F to 104° F) |
| Temperature (Storage) | -10° C to 70° C (14° F to 158° F) |
| Humidity (Operating) | 5% to 85% RH |
| Heat Dissipation (Typical) | TBA |
| Heat Dissipation (Standby) | TBA |

| ETHERNET | |
|---|---|
| Connection | (1) RJ-45 |
| Description | 10/100 Port RJ-45 connector provides TCP/IP communication |
| Link/Act Indicator | Link/Activity LED (green) blinks when receiving Ethernet data packets, one on Ethernet RJ-45 connector and one on the front panel |
| Speed Indicator | Speed LED (yellow) lights On when the connection speed is 100 Mbps Ethernet connection and turns OFF when the speed is 10 Mbps |

| INTEGRATED AMPLIFIER | |
|---|---|
| Crown DriveCore Amplification | Integrated Crown DriveCore Amplifier<br>8 Ohm stereo / 70 V / 100 V mono selectable amplifier |

| ICSLAN | |
|---|---|
| ICSLan Connection | (1) RJ-45, 10/100 Port RJ-45 connector. Auto MDI/MDI-X enabled. Supports IPv4 and IPv6 networks. Supports HTTP, HTTPS, Telnet, FTP |
| ICSLan Link/Active Indicator | ICSLan LED (green) blinks when receiving Ethernet data packets, one on Ethernet RJ-45 connector and one on the front panel |
| ICSLan Speed Indicator | Speed LED (yellow) lights On when the connection speed is 100 Mbps Ethernet connection and turns OFF when the speed is 10 Mbps |

| ONBOARD MASTER | |
|---|---|
| Controller | Integrated Controller is the equivalent of a NetLink NX-2200 Integrated Controller |
| Memory | • NVRAM: 1 MB<br>• Memory Card: 16 GB SD<br>• DDRAM: 1 GB<br>Note: Supports external USB Solid State Drive |
| Processor | 1600 MIPS |
| Program Port | (1) USB Standard B |
| Configuration Dip Switch | 4-Position |
| ID Pushbutton | Black ID pushbutton for setting IP mode and reverting to default configuration and firmware It has no effect on the Internal Switcher Device |
| Status Indicator | Status LED (green) blinks to indicate that the system is programmed and communicating properly |
| Input Indicator | Input LED (yellow) blinks to indicate that the Controller is receiving data |
| Output Indicator | Output LED (red) blinks to indicate that the Controller is transmitting data |
| USB Host Port | (2) USB Standard A, one on front and one on back, USB Host port supports Solid State drive for upgrading firmware, loading code files, copying configuration data and remote storage |

| CONTROL PORTS & INDICATORS | |
|---|---|
| AxLink Port (1) | (1) 4-position 3.5mm Screw Terminal, provides data and power to external AxLink control devices |
| AxLink Indicator | (1) AxLink LED (green) indicates the state of the AxLink port |
| RS-232/422/485 Port | (1) 10-position 3.5mm Screw Terminal<br>NetLinx Port 1<br>XON/XOFF (transmit on / transmit off)<br>CTS/RTS (clear to send/ready to send)<br>300 - 115,200 baud |
| RS-232 Port | (3) 5-position 3.5mm Screw Terminal<br>NetLinx Ports 2-4<br>XON/XOFF (transmit on / transmit off)<br>CTS/RTS (clear to send/ready to send)<br>300 - 115,200 baud |
| Serial Indicator | (4) sets of LEDs (red/yellow) indicate when serial Ports 1-4 are transmitting and receiving data |
| IR/Serial | (4) 2-position 3.5mm Screw Terminal<br>4 IR Transmit / 1-way Serial ports<br>NetLinx Ports 11-14<br>Support high-frequency carriers up to 1.142 MHz<br>4 IR/Serial data signals can be generated simultaneously |
| IR/Serial Indicators | (4) LEDs (red) indicate when each of the IR/Serial ports (11-14) are transmitting control data |
| I/O Channels | (4) One 6-position 3.5mm Screw Terminal<br>4-channel binary I/O port for contact closure with each input being capable of voltage sensing<br>NetLinx Port 22<br>Channels 1-4 |
| I/O Indicator | (4) LEDs (yellow) indicate each of the I/O channels (1-4) are active |

| | |
|---|---|
| Relays | (4) One 2-position 3.5 mm Screw Terminal, (4) single-pole, single-throw relays<br>NetLinx Port 21<br>Channels 1-4<br>Each relay can switch up to 24 VDC or 28 VAC @ 1 A<br>Each relay is independently controlled |
| Relay Indicators | (4) LEDs (red) indicate when each of the relay channels (1-4) are active (closed) |

| **INTEGRATED MATRIX SWITCHER CONTROL** | |
|---|---|
| Source Select Buttons 1-8 | Press to select audio and video source selection |
| Navigation Control (Up, Down, Left, Right, Select) | For onscreen menu navigation and selection |
| Menu On/Off | For entering or exiting onscreen menu mode |
| Video Mute | Press to mute/un-mute (enable/disable) all video output displays. Video Mute results in a blank screen on the output display |
| Volume Knob | Turn for volume up/down, push to mute/unmute, assigned to audio group 1 |

| **PRESENTATION SWITCHER** | |
|---|---|
| Video Switching | 8x1:3 4K60 4:4:4 Video Switching, selected scaled image presented to 3 outputs simultaneously |
| Video Inputs | (2) HD15; supports RGBHV<br>(4) HDMI; supports 4K60 4:4:4 HDMI 2.0/HDCP 2.2<br>(2) DXLite; supports 4K60 4:4:4 HDMI 2.0, HDCP 2.2, audio, and power (receives signals from DX-TX-DWP-4K DXLink 4K HDMI Decor Style Wall Plate Transmitter) |
| Video Outputs | (2) HDMI; supports 4K60 4:4:4 HDMI 2.0/HDCP 2.2<br>(1) DXLite; supports 4K60 4:4:4 HDMI 2.0, HDCP 2.2, audio, power, and USB 2.0 (sends signal to DXL-RX-4K60 DXLite RX) |
| HDCP Support | Yes, including HDCP 1.x and HDCP 2.2<br>Key Management System<br>AMX HDCP InstaGate Pro™ Technology<br>Key support up to 16 devices per output, independent of source device |
| EDID Management | A preferred EDID can be selected for each input or any display EDID can be mirrored to any input independently |

| **HDMI WITH HDMI** | |
|---|---|
| Signal Type Support | HDMI 2.0, HDCP 2.2<br>DVI-D (Single Link With HDMI Cable Adapter)<br>DisplayPort ++ (Input Only, With HDMI Cable Adapter) |
| Input Connectors | (4) HDMI Type A Female Ports |
| Output Connectors | (2) HDMI Type A Female Ports |
| Output Scaling | Yes, selected scaled image presented to 3 outputs (2 HDMI and 1 DXLite) simultaneously |
| Video Data Rate (Max) | 18 Gbps (Max) |
| Video Pixel Clock (Max) | Up to 600 Mhz |
| Progressive Resolution Support | 480p up to 4096x2160@ 60 Hz 4:4:4 including 3840x2160 4:4:4 |
| Interlaced Resolution Support | 480i, 576i, 1080i |
| 4K Resolution Support (Max) | 3840x2160p@24/25/30/60 Hz @ 4:4:4<br>4096x2160p@24/25/30/60 Hz @ 4:4:4 |

| | |
|---|---|
| HDMI Cable Requirement | HDMI High Speed Cable, Category 2, Required |
| Input Equalization | TBA |
| Input Re-clocking (CDR) | TBA |
| HDCP Support | Yes, including HDCP 1.x and HDCP 2.2<br>Key Management System<br>AMX HDCP InstaGate Pro™ Technology<br>Key support up to 16 devices per output, independent of source device |

| **AUDIO** | |
|---|---|
| Audio Inputs | (6) 3.5 mm 5-position captive-wire terminals; support balanced (differential) or unbalanced (single-ended) stereo audio<br>(2) 3.5 mm 3-pin captive-wire MIC connectors; supports up to two mono microphones, unbalanced or balanced audio<br>(4) HDMI connections support digital audio<br>(2) DXLink connections support embedded DXLite audio |
| Audio Outputs | (1) Amplified audio output; 4-position captive wire connector; supports amplified, variable, mono or stereo audio<br>(2) Line level audio output; supports balanced or unbalanced mono or stereo<br>(2) HDMI connections support embedded digital audio<br>(1) DXLite output support embedded digital audio |

| **ANALOG VIDEO (RGBHV WITH HD15)** | |
|---|---|
| Compatible Formats | RGBHV |
| Input Connector | HD-15 |
| Resolution Support | up to 1920x1200@60 Hz Reduce Blanking |
| Auto-Adjust Input | Supported |
| Digital Processing | 24-bit, 165 MHz |

| **DXLITE WITH RJ-45** | |
|---|---|
| Input Connections | (2) RJ-45 |
| Input Compatible Formats | supports 4K60 4:4:4 HDMI 2.0, HDCP 2.2, audio, and power (input) |
| Output Connection | (1) RJ-45 |
| Output Formats | supports 4K60 4:4:4 HDMI 2.0, HDCP 2.2, audio, and power; output supports all this plus USB 2.0 |
| Output Scaling | Yes, selected scaled image presented to 3 outputs (2 HDMI and 1 DXLite) simultaneously |
| HDCP Support | Yes |
| Twisted Pair Cable Type | Shielded Cat6, Cat6A and Cat7<br>**DXLink and DXLite twisted pair cable runs for equipment shall only be run within a common building where a common building is defined as: the walls of the structure(s) are physically connected and the structure(s) share a single ground reference**<br><br>For more details and helpful cabling information, reference the white paper titled Cabling for Success with DXLink, or contact your AMX representative |

| MICROPHONE AUDIO | |
|---|---|
| Microphone Input Connections | (2) 3.5 mm 3-pin captive-wire MIC connectors; supports up to two mono microphones, unbalanced or balanced audio |
| Microphone Input Level (Maximum) | TBA |
| Microphone Input Format Support | Line or Mic level, balanced or unbalanced audio |
| Microphone Input Impedance | TBA |
| Microphone Input Gain | TBA |
| Microphone Input Equalizer | 3-band parametric EQ with variable center frequency, filter type and Q<br>Center Frequency: 20 Hz to 20 kHz<br>EQ Gain per Band: -12 to +12 dB<br>Q per band: 0.1 to 20<br>Filter Types: Bell, Base Shelving, Treble Shelving, Low Pass, High Pass, Band Pass, Band Stop |
| Microphone Input Compression | Independent Compression per Microphone<br>Attack: 1 to 2000 ms<br>Release: 10 to 5000 ms<br>Compression Ratio: 1 to 20<br>Threshold: -60 to 0 dB |
| Microphone Gating | Independent Gating per Microphone<br>Attack: 1 to 2000 ms<br>Release: 10 to 5000 ms<br>Depth: 0 to 20 dB<br>Hold Off: 0 to 2000 ms<br>Threshold: -60 to 0 dB |
| Microphone Limiter | Independent Limiting per Microphone<br>Attack: 1 to 2000 ms<br>Release: 10 to 5000 ms<br>Threshold: -60 to 0 dB |
| Microphone Ducking | Independent Ducking per each of 3 audio paths<br>Attack: 1 to 2000 ms<br>Release: 10 to 5000 ms<br>Attenuation: 0 to 20 dB<br>Hold Off: 0 to 4000 ms<br>Threshold: -60 to 0 dB |

**About AMX by HARMAN**
**Founded in 1982 and acquired by HARMAN in 2014, AMX® is dedicated to providing AV solutions for an IT World. AMX solves the complexity of managing technology with reliable, consistent and scalable systems comprising control, video switching and distribution, digital signage and technology management. AMX systems are deployed worldwide in conference rooms, classrooms, network operation/command centers, homes, hotels, entertainment venues and broadcast facilities, among others. AMX is part of the HARMAN Professional Group, the only total audio, video, lighting, and control vendor in the professional AV market. HARMAN designs, manufactures and markets premier audio, video, infotainment and integrated control solutions for the automotive, consumer and professional markets. Revised 7.17.17.** 

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