New Links to Fiber

INTRODUCING DXLINK FIBER –
EXTENDING THE REACH OF THE ENOVA DGX
UP TO 10 KM

New DXLink Fiber Single Mode and Multimode Transmitters, Receivers, Input and Output Boards expand the reach of HDMI campus-wide – at industry leading speed with 10 Gbps data transfer rate. Now clear, uncompressed, digital video including HDCP protected content can be delivered with maximum security.

- HDMI with HDCP up to 10 Km (6 miles) – Extend the reach of your digital video well beyond the capabilities of twisted pair

- 10 Gbps – Leading the industry with the fastest optical transport data rate

- Secure and isolated – Fiber inherently provides extra security and electrical isolation making it the transport method of choice for many mission-critical secure environments

- Fiber your way – DXLink Fiber TX/RX and I/O Boards are available in single mode or multimode; simplex or duplex to meet the needs of any installation

Epica DGX 288 Fiber Matrix Switcher

The **DXLink Fiber Single Mode Transmitters and Receivers are also compatible with the new Epica DGX 288 Fiber Matrix Switcher. The industry's fastest jumbo-sized optical matrix switcher that securely transports uncompressed video over fiber including HDMI with HDCP.**

NEW

Boards for All
The new Enova DGX 64 Enclosure utilizes the same board sets as the Enova DGX 8/16/32 – lower the total cost of ownership through reduction in spare/expansion inventory

Fiber Your Way
Input/Output Boards available in single mode or multimode fiber each in simplex or duplex – customize the Enova DGX with any combination of boards for campus-wide distribution

SmartScale® Technology
Automatically outputs video that is perfectly scaled for each connected display, preventing inferior video quality which occurs when sources and displays have different supported resolutions

DXLink Twisted Pair Input and Output Boards
HDCP Compliant boards send audio, video, control, Ethernet and power over one standard twisted pair cable up to 200m – 100m to the matrix switcher and 100m after the matrix switcher

HDCP Compliant
Distribute, convert, and scale HDMI signals with full HDCP compliance without interruption using any of the Enova DGX DVI, HDMI or DXLink Boards

Secure and Isolated
Fiber inherently provides maximum security and electrical isolation making it the transport method of choice for mission-critical environments

Enova DGX 64 + DXLink Fiber = 100x Greater Distribution Footprint

All the Features, Capabilities and Functionality of the Enova DGX Family Now in an I/O Range of 64x64 and Distribution up to 6 Miles

The new Enova DGX 64 Enclosure includes all the features that have made the Enova DGX Series the leader in the world of digital media switchers including Integrated NetLinx Controller, redundant power supplies, SmartScale, InstaGate Pro, integrated Ethernet Switch and more. Does it get any better? Yes, actually, how about distribution up to 6 miles? The addition of new single mode and multimode fiber board options (each available in simplex or duplex) makes campus-wide distribution of uncompressed content (including HDCP protected content) a breeze.

Key Features

- **HDCP With Simplicity of Analog** – Hassle free plug and play operation eliminates the need for time consuming cumbersome work around tools to deal with HDCP key constraints and resolution incompatibilities

- **All-In-One Control and Distribution Solution** – Powerful combination of modular matrix switcher, built-in controller, embedded Ethernet switch and

Quick Facts Enova DGX 64 System

Control	Max Inputs/ Max Outputs	AIE Board Slots	Video	Audio	Integrated Technologies	Enclosure Size (HWD)
Integrated NetLinx Central Controller	64 x 64	4 in 4 out	HDMI, DVI, DisplayPort++, RGBHV, Component, S-Video, Composite	Dolby TrueHD, Dolby Digital, DTS-HD Master Audio, DTS, 2 CH though 8 CH L-PCM, Dolby Digital and DTS support up to 48kHz, 5.1 channels	DXLink Fiber Single Mode & Multimode Distribution, DXLink Twisted Pair Distribution, Embedded Ethernet Switch, HDCP Compliance	22 11/16" x 19" x 20 1/8" (13 RU)

video scaling on every output simplifies the end-to-end distribution and management of audio, video and control throughout multiple rooms

- **Fast Easy Installation** – Easily incorporate HDCP into system designs - No tools, no delays, and no key constraints – it just works

Common Applications

The Enova DGX 64 can route and transmit up to 64 pure high resolution analog and digital video sources up to 6 miles making it the perfect solution for government agencies, command-and-control environments, universities, hospitals, casinos, retail environments or any facility that demands the highest quality video be shared campus-wide.

ENOVA DGX

NEW Now with Fiber!

New DXLink Fiber TX/RX and I/O Boards available in single mode or multimode; simplex or duplex are compatible with Enova DGX 8, 16, 32 and 64 Enclosures

NEW Even More High Powered

Enova DGX 8/16/32 enclosures can now power even more devices over DXLink with new 1200 (DGX 32) and 850 (DGX 8/16) watt power supplies - two per enclosure

SmartScale® Technology

Automatically outputs video that is perfectly scaled for each connected display, preventing inferior video quality which occurs when sources and displays have different supported resolutions

Built in NetLinx Controller

Easily program and manage the entire solution including source equipment and display devices located across multiple rooms – all from a single point of control

InstaGate Pro® Technology

Easily integrate HDCP into system designs and enjoy hassle-free matrix switching to all compliant displays. No tools, no delays, and no key constraints – it just works

HDCP Compliant

Distribute, convert, and scale HDMI signals with full HDCP compliance without interruption using any of the Enova DGX DVI, HDMI or DXLink Boards

DXLink Twisted Pair Input and Output Boards

HDCP Compliant boards send audio, video, control, Ethernet and power over one standard twisted pair cable up to 200m – 100m to the matrix switcher and 100m after the matrix switcher

Combining Switching and Control Plus a Whole Lot More

The Enova DGX is the most reliable end-to-end analog, digital and HDMI/HDCP signal distribution solution on the market today. And now it also includes control, transcoding, scaling – all in a single box that's half the size of the competition.

Key Features

- **HDCP With Simplicity of Analog** – Hassle free plug and play operation eliminates the need for time consuming cumbersome work around tools to deal with HDCP key constraints and resolution incompatibilities

- **All-In-One Control and Distribution Solution** – Powerful combination of modular matrix switcher, built-in controller, embedded Ethernet switch and video scaling on every output simplifies the end-to-end distribution and management of audio, video and control throughout multiple rooms

- **Fast Easy Installation** – Easily incorporate HDCP into system designs - No tools, no delays, and no key constraints – it just works

Quick Facts Enova DGX 8 System

Control	Max I/O	AIE Board Slots	Video	Audio	Integrated Technologies	Enclosure Size (HWD)
Integrated NetLinx Central Controller	8 x 8	1 in 1 out	HDMI, DVI, DisplayPort++, RGBHV, Component, S-Video, Composite	Dolby TrueHD, Dolby Digital, DTS-HD Master Audio, DTS, 2 CH though 8 CH L-PCM, Dolby Digital and DTS support up to 48kHz, 5.1 channels	DXLink Twisted Pair Distribution, Embedded Ethernet Switch, HDCP Compliance	6 13/16" x 19" x 15" (4 RU)

Quick Facts Enova DGX 16 System

Control	Max I/O	AIE Board Slots	Video	Audio	Integrated Technologies	Enclosure Size (HWD)
Integrated NetLinx Central Controller	16 x 16	1 in 1 out	HDMI, DVI, DisplayPort++, RGBHV, Component, S-Video, Composite	Dolby TrueHD, Dolby Digital, DTS-HD Master Audio, DTS, 2 CH though 8 CH L-PCM, Dolby Digital and DTS support up to 48kHz, 5.1 channels	DXLink Twisted Pair Distribution, Embedded Ethernet Switch, HDCP Compliance	6 13/16" x 19" x 15" (4 RU)

Quick Facts Enova DGX 32 System

Control	Max I/O	AIE Board Slots	Video	Audio	Integrated Technologies	Enclosure Size (HWD)
Integrated NetLinx Central Controller	32 x 32	1 in 1 out	HDMI, DVI, DisplayPort++, RGBHV, Component, S-Video, Composite	Dolby TrueHD, Dolby Digital, DTS-HD Master Audio, DTS, 2 CH though 8 CH L-PCM, Dolby Digital and DTS support up to 48kHz, 5.1 channels	DXLink Twisted Pair Distribution, Embedded Ethernet Switch, HDCP Compliance	10 1/2" x 19" x 20 1/8" (6 RU)

enova DGX

Any Board Any Enclosure

ALL Enova DGX, DXLink and DXLink Fiber boards fit in any Enova DGX Enclosure. Visit AMX.com and use the Enova DGX Configuration Tool to design your next digital media switcher, complete with compatible DXLink Twisted Pair and Fiber Transmitters/Receivers.

Enova DGX Enclosures

All Enova DGX Enclosures are also equipped with Integrated NetLinx Controll, Redundant Power Supplies, SmartScale, InstaGate Pro and Built-In Ethernet Switch

	ENOVA DGX 8	ENOVA DGX 16	ENOVA DGX 32	ENOVA DGX 64
Input / Output Board Slots (4 Connections / Board)	2 / 2	4 / 4	8 / 8	16 / 16
Audio Insert / Extract Board Input / Output Slots	1 / 1	1 / 1	1 / 1	4 / 4

BOARD	MODEL	CONNECTIONS	HDCP	DISTANCE	TRANSMISSION DATA RATE	TRANSMITTED EMBEDDED IR / RS-232 / NETLINX CONTROL	SMARTSCALE
Local							
HDMI Input Board	AVS-ENOVADGX32-VI-HDMI	4 HDMI	Yes	30.5 m / 100 ft*	n/a	n/a	n/a
DVI Input Board	AVS-ENOVADGX32-VI-DVI	4 DVI-D	Yes	30.5 m / 100 ft**	n/a	n/a	n/a
HDMI Output Board	AVS-ENOVADGX32-VO-HDMI	4 HDMI	Yes	15 m / 49 ft***	n/a	n/a	Yes
DVI Output Board	AVS-ENOVADGX32-VO-DVI	4 DVI-D	Yes	15 m / 49 ft***	n/a	n/a	Yes
Audio Insert / Extract Board	AVS-ENOVADGX32-AUD-INS-EXT	8 pluggable, dual three-position, terminal blocks each containing two single-ended stereo contacts	n/a	n/a	n/a	n/a	n/a
DXLink Twisted Pair							
Twisted Pair Input Board	AVS-ENOVADGX32-VI-DXLINK	4 RJ-45	Yes	100 m / 328 ft****	10.2 Gbps	Yes	n/a
Twisted Pair Output Board	AVS-ENOVADGX32-VO-DXLINK	4 RJ-45	Yes	100 m / 328 ft****	10.2 Gbps	Yes	Yes, at DXLink RX
DXLink Fiber, Multimode Fiber featuring Field Serviceable SFP Modules							
Multimode Fiber Input Board (Duplex)	ENOVADGX-VI-DXLINK-MMF-D	4 LC Duplex	Yes	300 m / 984 ft	10 Gbps	Yes	n/a
Multimode Fiber Input Board (Simplex)	ENOVADGX-VI-DXLINK-MMF-S	4 LC Simplex	Yes	300 m / 984 ft	10 Gbps	n/a	n/a
Multimode Fiber Output Board (Duplex)	ENOVADGX-VO-DX-LINK-MMF-D	4 LC Duplex	Yes	300 m / 984 ft	10 Gbps	Yes	Yes, at DXLink Fiber RX
Multimode Fiber Output Board (Simplex)	ENOVADGX-VO-DX-LINK-MMF-S	4 LC Simplex	Yes	300 m / 984 ft	10 Gbps	n/a	Yes, at DXLink Fiber RX
DXLink Fiber, Single Mode Fiber featuring Field Serviceable SFP Modules							
Single Mode Fiber Input Board (Duplex)	ENOVADGX-VI-DXLINK-SMF-D	4 LC Duplex	Yes	10 Km / 32,808 ft / 6.21 miles	10 Gbps	Yes	n/a
Single Mode Fiber Input Board (Simplex)	ENOVADGX-VI-DXLINK-SMF-S	4 LC Simplex	Yes	10 Km / 32,808 ft / 6.21 miles	10 Gbps	n/a	n/a
Single Mode Fiber Output Board (Duplex)	ENOVADGX-VO-DX-LINK-SMF-D	4 LC Duplex	Yes	10 Km / 32,808 ft / 6.21 miles	10 Gbps	Yes	Yes, at DXLink Fiber RX
Single Mode Fiber Output Board (Simplex)	ENOVADGX-VO-DX-LINK-SMF-S	4 LC Simplex	Yes	10 Km / 32,808 ft / 6.21 miles	10 Gbps	n/a	Yes, at DXLink Fiber RX

*Features Input Equalization, adaptive up to 100ft (30m) at 225 MHz (cable distance support dependent on cable type and signal format)
**Features Input Equalization, adaptive up to 100ft (30m) at 165 MHz (cable distance support dependent on cable type and signal format)
***Dependent on cable quality and display
****For more details and helpful cabling information, please reference the AMX white paper titled "Cabling for Success with DXLink"

Field Serviceable Fiber Modules
Easily remove and replace SFP modules in the field

HDCP Compliant
Distribute, convert, and scale HDMI signals with full HDCP compliance without interruption

Fiber Your Way
DXLink Fiber TX/RX and I/O Boards are available in single mode or multimode; simplex or duplex to meet the needs of any installation

Secure and Isolated
Fiber inherently provides extra security and electrical isolation making it the transport method of choice for many mission-critical secure environments

InstaGate Pro® Technology
Easily integrate HDCP into system designs and enjoy hassle-free matrix switching to allcompliant displays. No tools, no delays, and no key constraints – it just works

SmartScale® Technology
Automatically outputs video that is perfectly scaled for each connected display, preventing inferior video quality which occurs when sources and displays have different supported resolutions

FIBER | Great Distances at High Speeds

Use the Enova DGX DXLink Fiber Input and Output boards in conjunction with DXLink Fiber Transmitters and Receivers to send audio, video, control and Ethernet over fiber up to 10 Km at 10 Gpbs that's the fastest optical transport data rate in the industry. These DXLink Fiber solutions are available in single mode or multimode and simplex or duplex to provide exactly what any facility requires.

Compatible with all Enova DGX Enclosures including the 8, 16, 32 and 64 it's easier than ever to design and expand any system. The Enova DGX system provides end-to-end distribution of analog and digital AV (including pure, uncompressed HDMI with HDCP compliance) throughout any corporate or mission-critical campus. The compatible Enova DGX Digital Media Enclosures have integrated NetLinx, and the duplex versions of DXLink Fiber extend that native NetLinx to control end-point devices.

Key Features

- **HDCP With Simplicity of Analog** – Hassle free plug and play operation eliminates the need for time consuming cumbersome work around tools to deal with HDCP key constraints and resolution incompatibilities
- **Campus-Wide Signal Distribution** – Distribute video between buildings without constraints or quality loss
- **Maximum Security** – Attract customers who demand the enhanced security transport of fiber

Quick Facts DXLink Fiber Transmitters

DXLink Transport Connector	Video Connectors	Audio Connectors	Control Connectors	Video	Audio	Integrated Technologies
4 LC DUPLEX OR 4 LC SIMPLEX	HD-15, 2 HDMI (1 Input, 1 Local Out that Mirrors Transmitted Output)	3.5mm Stereo, RCA	2 Phoenix-style, 3.5mm Stereo, USB B, RJ-45	HDMI, DVI, DisplayPort++, RGBHV, Component, S-Video, Composite	Dolby TrueHD, Dolby Digital, DTS-HD Master Audio, DTS, L-PCM, Analog Stereo	HDCP Compliance, Embedded Ethernet Distribution, Embedded NetLinx Control

Quick Facts DXLink Fiber Receivers

DXLink Transport Connector	Video Connectors	Audio Connectors	Control Connectors	Video	Audio	Integrated Technologies
4 LC DUPLEX OR 4 LC SIMPLEX	HDMI	3.5mm Stereo	2 Phoenix-style, 3.5mm Stereo, USB B, RJ-45	HDMI, DVI	Dolby TrueHD, Dolby Digital, DTS-HD Master Audio, DTS, L-PCM, Analog Stereo	SmartScale, Embedded Ethernet Distribution, Embedded NetLinx Control, HDCP Compliance

Quick Facts DXLink Fiber Input Boards

DXLink Transport Connector	Video Connectors	Audio Connectors
4 LC DUPLEX OR 4 LC SIMPLEX	Video from DXLink Fiber Transmitters	Audio from DXLink Fiber Transmitters

Quick Facts DXLink Fiber Output Boards

DXLink Transport Connector	Video Connectors	Audio Connectors
4 LC DUPLEX OR 4 LC SIMPLEX	Video to DXLink Fiber Receivers	Audio to DXLink Fiber Receivers

ENOVA DXLINK FIBER

Send HDMI signals up to 100 meters

Extend the reach of uncompressed HDMI signals far beyond the capabilities of typical HDMI cabling

Standard Twisted Pair

Save time and effort in installation by leveraging pre-existing cost effective twisted pair cable

Hot Swappable Video Input / Output Boards

Easily add or replace I/O boards at any time after deployment - the system automatically recognizes the new configuration and activates the boards

USB Support

Pass keyboard and mouse USB signals to control a remote computer

Built-in Control Ports in the Transmitters and Receivers

Control the connected source or display using the built-in IR or RS-232 control ports

SmartScale® Technology

Automatically outputs video that is perfectly scaled for each connected display, preventing inferior video quality which occurs when sources and displays have different supported resolutions

Only One Twisted Pair Cable

Use the Enova DGX DXLink Input and Output boards in conjunction with the DXLink Transmitters and Receivers to send audio, video, control, Ethernet and power over a single twisted pair cable up to 200m — 100m to the matrix switcher and 100m after the matrix switcher. Expand the Enova DGX input and output size by increments of 4 using the DXLink Input and Output boards. The Enova DGX system provides end-to-end distribution of analog, digital and HDMI/HDCP signals plus control signals throughout a residence or commercial facility. Ideal for environments that demand the highest quality video be shared between rooms or even buildings.

Key Features

- **HDCP With Simplicity of Analog** — Hassle free plug and play operation eliminates the need for time consuming cumbersome work around tools to deal with HDCP key constraints and resolution incompatibilities

- **All-In-One Control and Distribution Solution** — Power combination of modular matrix switcher, built-in controller, embedded Ethernet switch and video scaling on every output simplifies the end-to-end distribution and management of audio, video and control throughout multiple rooms

- **Fast Easy Installation** — When used with the DGX DXLink Input/Output boards, the DXLink Transmitters and Receivers are powered over the single category cable connection eliminating additional wiring hassles and need for additional power outlets.

Quick Facts DXLink HDMI Receiver

DXLink Transport Connector	Video Connectors	Audio Connectors	Control Connectors	Video	Audio	Integrated Technologies
DXLINK RJ-45	HDMI	3.5mm Stereo	2 Phoenix-style, 3.5mm Stereo, USB A, RJ-45 Ethernet	HDMI, DVI	Dolby TrueHD, Dolby Digital, DTS-HD Master Audio, DTS, L-PCM, 2 CH though 8 CH L-PCM, Dolby Digital and DTS support up to 48kHz, 5.1 channels	SmartScale®, DXLink Twisted Pair Distribution, Power over DXLink, Embedded Ethernet Distribution, Embedded NetLinx Control, HDCP Compliance

Quick Facts DXLink Multi-Format Transmitters

Video Connectors	Audio Connectors	Control Connectors	DXLink Transport Connector	Video	Audio	Integrated Technologies
HDMI, HD-15	3.5mm Stereo (TX Module also has RCA)	2 Phoenix-style, 3.5mm Stereo, USB B (TX Module also has RJ-45 Ethernet)	DXLink RJ-45	HDMI, DVI, DisplayPort++, RGBHV, Component, S-Video, Composite	Dolby TrueHD, Dolby Digital, DTS-HD Master Audio, DTS, L-PCM, 2 CH though 8 CH L-PCM, Dolby Digital and DTS support up to 48kHz, 5.1 channels	DXLink Twisted Pair Distribution, Power over DXLink, HDCP Compliance (TX Module also has Embedded Ethernet Distribution, Embedded NetLinx Control)

ENOVADXLINK

30 Watts Per Output
Each powered output can distribute up to 30 watts of power, over 300 feet of twisted pair cable

Remote Power On/Off
Individual power on/off control capability for each remotely connected device

4 x RJ45
Four RJ45 ports are built into the enclosure

Decor Style DXLink
Multi-Format Wallplate Transmitters = More Install Options

The DXLink Multi-Format Decor Style Wallplate Transmitter sends analog or digital video including HDMI/HDCP, along with embedded audio or supplemental analog audio up to 100 meters to an Enova DGX Digital Media Switcher, Enova DVX All-In-One Presentation Switcher (DVX-3155/3156HD/DVX-2155HD), or directly to a DXLink Receiver. It receives power over twisted pair cable from the Enova DGX, compatible Enova DVX (3155/3156HD or 2155HD), PS-POE-AT-TC High Power over Ethernet (PoE) Injector, or the new Dual Power Over DXLink Controller (PDXL-2). These wallplates feature a multi-format analog port to support legacy devices and an HDMI port to support newer digital devices.

A single DXLink device can also be powered by the new DXLink-compatible PoE injector or up to 2 DXLink devices by the Dual Power over DXLink Controller. Note that, other third party PoE injectors are not supported for use with DXLink.

Key Features

• **Only One Cable** — Send audio and video, while passing power over one twisted pair cable
• **Multi-Format Analog Port and HDMI Port** — Supports legacy analog signals - RGBHV, Component, S-Video, and Composite, and digital HDMI/HDCP, DisplayPort++ and DVI signals
• **Send HDMI signals up to 100 meters** — Extend the reach of HDMI signals far beyond the capabilities of typical HDMI cabling

Electrifying Double Feature
Introducing the Dual Power over DXLink™ Controller

The Dual Power over DXLink Controller (PDXL-2) allows for remote powering of any two DXLink twisted pair devices. It provides DC power for PoE-equipped devices by "injecting" DC power through a twisted pair cable. It also allows for I/O control from a NetLinx controller to power down any connected DXLink devices allowing them to be included in an overall room power savings mode.

The PDXL-2 allows for DXLink twisted pair devices to be powered over DXLink from a centralized location and eliminates the need for an AC outlet at each transmitter or receiver location. This enables a stand-alone point-to-point DXLink Transmitter to DXLink Receiver installation in a single room application.

Up to two DXLink twisted pair devices can be powered by the PDXL-2. Note that other third party PoE injectors are not supported for use with DXLink.

Key Features

• **Simplifies Installation** - Perfect for situations where a local power supply at the DXLink device would not be viable
• **Provides Flexibility** - Enables DXLink Wallplates to be used in a point-to-point solution
• **Saves Energy** - By allowing DXLink twisted pair devices to be powered down when environments are not in use

ENOVADXLINK

Bringing Enova to

Every Space

There are often cost and installation challenges that can make implementation of a traditional Enova system challenging. To bring Enova to every space, here is a simple, cost-effective solution that offers all the benefits of a full Enova system. Using the Enova DXLink transmitter and receiver in this configuration means that a simple Novara ControlPad can be configured to control the display. The serial commands are passed from the DXLink transmitter to the receiver without the requirement for any additional control. Using DXLink technology, all the connections required for a typical laptop are connected between the table and the display using a single low-cost cable which means a much simpler, trouble-free installation. For an even better user experience, a Modero S

Series Touch Panel such as the MST-431 could be used in conjunction with a NetLinx processor.

To switch the system on, simply select the 'ON' button from the ControlPad. The ControlPad also provides the ability to adjust display volume and switch source inputs on the display. The DXLink Transmitter will conveniently auto switch between digital and analogue inputs, with the digital input always having priority. Thanks to AMX exclusive SmartScale technology, the image on the display will always look its best, regardless of the input type or resolution. And using our Rapid Project Maker configuration tool, there's never been an easier way to bring Enova to every space.

| DXLink |
| Ethernet |
| HDMI |
| VGA |
| AUDIO |
| RS-232 |

Display

LAN

AMX AVB-RX-DXLINK-HDMI
DXLink HDMI Receiver Module

AMX PDXL-2
Dual Power over DXLink Controller

AMX AVB-TX-MULTI-DXLINK
DXLink Multi-Format Transmitter Module

AMX HPX-900
Module Connection Ports
with
HPX-U400-CP-1008
Novara 8-Button ControlPad Module

Laptop

enova

28

29