DATA SHEET

Enova® DGX DXLink™ Multimode Fiber Output Board, Duplex

DGX-O-DXF-MMD (FG1058-632)

Overview

The DGX-O-DXF-MMD is a DXLink Fiber output board with field serviceable SFP modules designed for use with multimode fiber, and is compatible with the Enova DGX 8, 16, 32 and 64 Digital Media Switcher Enclosures. Use it as part of an integrated system to transmit audio, video, control and Ethernet over multimode fiber from up to 300 meters to a DXLink Receiver. Fiber uses light to send data, rather than electric signals making it both the highest quality and most secure way to transmit video as it is not susceptible to electronic noise or non-intrusive physical wiretapping.

Common Applications

The Enova DGX DXLink Output Board is ideal for applications where the demands of high-resolution video clarity, long distance transmission and maximum security need to be met without compromise including campus-wide distribution of sources that are shared between classrooms, secure military applications, casinos, arenas and museums.

Features

- **HDCP Compliance Over Fiber** – Transmit HDCP compliant video including HDMI up to 300 m
- **Industry Leading Data Rate** – DXLink is leading the way with an optical transport rate of 10 Gbps
- **Secure and Isolated** – Fiber inherently provides extra security and electrical isolation making it the transport method of choice for many mission-critical secure environments

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

Specifications

GENERAL	
Compatible AMX Products	Must be used in conjunction with an Enova DGX 8, 16, 32 or 64 Digital Media Enclosure and a DXLink HDMI Multimode Fiber Receiver, Duplex (FG1010-562)
Regulatory Compliance	See Enova DGX Digital Media Switcher Enclosure for regulatory compliance
Safety Certification	Class 1 Eye safe per requirements of IEC 60825-1 / CDRH
Recommended Accessories	DXF-RX-MMD, DXLink HDMI Multimode Fiber Receiver, Duplex (FG1010-562)

Signal Transport – DXLink w/Multimode Fiber, Duplex	
Compatible Formats	HDMI Video / Audio / Ethernet / USB(HID) /Control
Signal Type Support	DXLink Multimode Fiber, Duplex
Connectors	(4) Duplex LC Fiber Ports, conforming to ANSI TIA/EIA 604-10 (FOCIS 10A)
Transport Layer Throughput (Max)	10.3125 Gbps
Fiber Transceiver Type	10G SFP+
Fiber Cable Type	OM3 50/125µm
Fiber Cable Length	Up to 984 ft (300 m)
Optical Wavelength	850 nm
Multimode Optical Budget	•6.8 dB (typ), 3.2 dB (stressed) between DXLink Fiber Transceivers •Optical Modulation Amplitude (OMA): -4.3 dBm (min) •Optical Modulation Amplitude (OMA) Sensitivity: -11.1 dBm (typ), -7.5 dBm (stressed)
Multimode Optical Transceiver Mean Output Power	-1 dBm (average power)
DXLink Fiber Output Board Propagation Delay	5 us
Video Data Rate (Max)	4.95 Gbps / 5.568 Gbps 5.568 Gbps supported when the HDMI Output Board scaler or DXLink RX scaler is in Bypass mode using CEA-861 formats and resolution is 1080p60 or less
Video Pixel Clock (Max)	165 MHz/185.625 MHz 185.625 MHz supported when the HDMI Output Board scaler or DXLink RX scaler is in Bypass mode using CEA-861 formats and resolution is 1080p60 or less
Progressive Resolution Support	480p up to 1920x1200 @ 60 Hz
Interlaced Resolution Support	480i, 576i, 1080i
Deep Color Support	24-bit, 30-bit 30-bit supported when the HDMI Output Board scaler or DXLink RX scaler is in Bypass mode using CEA-861 formats and resolution is 1080p60 or less
Color Space Support	RGB 4:4:4 YCbCr 4:4:4 and 4:2:2 Input signal support for YCbCr 4:4:4 and 4:2:2, output color-space is converted to RGB 4:4:4
3D Format Support	Yes (scaler on corresponding output board or RX must be set to bypass mode) Frame Packing 1080p up to 24 Hz Frame Packing 720p up to 50/60 Hz Frame Packing 1080i up to 50/60 Hz

	Top-Bottom 1080p up to 24 Hz Top-Bottom 720p up to 50/60 Hz Side-by-Side Half 1080i up to 50/60 Hz
Audio Format Support	Dolby TrueHD, Dolby Digital, DTS-HD Master Audio, DTS, 2 CH through 8 CH L-PCM Dolby Digital and DTS support up to 48 kHz, 5.1 channels
Audio Resolution	16 bit to 24 bit
Audio Sample Rate	32 kHz, 44.1 kHz, 48 kHz, 96 kHz, 192 kHz
Local Audio Support	Yes, Insertion and/or Extraction of 2 CH L-PCM selectable by channel when used in conjunction with Enova DGX Audio Insert / Extract Board
HDCP Support	Yes, full matrix HDCP support (includes any input to any or all outputs) Key Management System AMX HDCP InstaGate Pro Technology Key support up to 16 sinks per output, independent of source device
CEC Support	None
ICSP, TCP/IP, IR, Control Management	Control distribution is managed by the Enova DGX 8/16/32/64 Digital Media Switcher on-board NetLinx Master and Ethernet Switch
EDID Support	EDID provided by the Enova DGX 8/16/32/64 Digital Media Switcher to the connected DXLink TX, EDID is user re-programmable See “Instruction Manual Enova DGX Digital Media Switchers” for supported EDID list

USB (HID)	
USB (HID)	Use the Enova DGX Digital Media Switcher in conjunction with DXLink Transmitters and Receivers (twisted pair and/or fiber), connect a DXLink Transmitter to a PC and a DXLink Receiver to a keyboard and mouse, the system then emulates commands from the receiver back to the PC For a list of HID devices which have been tested and found to be working well with the latest firmware please visit: http://www.amx.com/products/AVB-RX-DXLINK-HDMI.asp and view the document “DXLink HID Keyboard and Mouse Supported Devices”.

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