

# Enova® DGX DXLink™ Single Mode Fiber Input Board, Duplex

DGX-I-DXF-SMD (FG1058-620)



## Overview

The DGX-I-DXF-SMD is a DXLink Fiber input board with field serviceable SFP modules designed for use with single mode 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 receive audio, video, control and Ethernet over single mode fiber from up to 10 Km from a DXLink Transmitter. 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 Input 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 10 km
- **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

<b>GENERAL</b>	
Compatible AMX Products	Must be used in conjunction with an Enova DGX 8, 16, 32 or 64 Digital Media Enclosure and a DXLink Multi-Format Single Mode Fiber Transmitter, Duplex (FG1010-360)
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-TX-SMD, DXLink Multi-Format SM Fiber TX, Duplex (FG1010-360)

<b>Signal Transport – DXLink w/Single Mode Fiber, Duplex</b>	
Compatible Formats	HDMI Video / Audio / Ethernet / USB(HID) /Control
Signal Type Support	DXLink Single Mode 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	9/125µm
Fiber Cable Length	Up to 10 km (6.21 miles)
Optical Wavelength	1310 nm
Single Mode Optical Budget	<ul style="list-style-type: none"> <li>•7.4 dB (typ), 5.1 dB (stressed) between DXLink Fiber Transceivers</li> <li>•Optical Modulation Amplitude (OMA): -5.2 dBm (min)</li> <li>•Optical Modulation Amplitude (OMA) Sensitivity: -12.6 dBm (typ), -10.3 dBm (stressed)</li> </ul>
Single Mode Optical Transceiver Mean Output Power	-8.2 dBm to 0.5 dBm (average power)
DXLink Fiber Input 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

	<p>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</p>
Audio Format Support	<p>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</p>
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	<p>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</p>
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
DDC/EDID Support	<p>EDID provided by the Enova DGX 8/16/32/64 Digital Media Switcher to the connected DXLink TX, EDID is user re-programmable</p> <p>See "Instruction Manual Enova DGX Digital Media Switchers" for supported EDID list</p>
<b>USB (HID)</b>	
USB (HID)	<p>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</p> <p>For a list of HID devices which have been tested and found to be working well with the latest firmware please visit: <a href="http://www.amx.com/products/AVB-RX-DXLINK-HDMI.asp">http://www.amx.com/products/AVB-RX-DXLINK-HDMI.asp</a> and view the document "DXLink HID Keyboard and Mouse Supported Devices".</p>

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AMX hardware and software solutions simplify the implementation, maintenance, and use of technology to create effective environments. With the increasing number of technologies and operating platforms at work and home, AMX solves the complexity of managing this technology with reliable, consistent and scalable systems. Our award-winning products span control and automation, system-wide switching and audio/video signal distribution, digital signage and technology management. They are implemented worldwide in conference rooms, homes, classrooms, network operation / command centers, hotels, entertainment venues, broadcast facilities, and more. ©2014 AMX. All rights reserved.

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