Overview

DG (Digital Generation) DVI MTP® Fiber Transmitter (TX) and Receiver (RX) Modules work together (FIG. 2) or in conjunction with MTP Fiber boards on an AMX AutoPatch Distribution Matrix. This guide contains complete information for standalone use. For use with a distribution matrix, see the distribution matrix's instruction manual on the *AMX AutoPatch CD* or at **www.amx.com**.
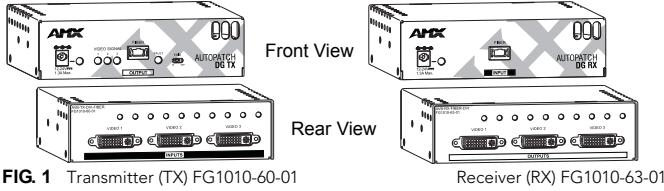A table containing supported EDID resolutions is included on the reverse.

FIG. 1 Transmitter (TX) FG1010-60-01   Receiver (RX) FG1010-63-01

Product Specifications	
Approvals	CE, UL

Power Consumption
  Max.
  Typical
	+12 VDC to +24 VDC @1.3 A, 31 W
	+12 VDC to +24 VDC, 14 W

Power Connector*	2.1 mm DC power jack
Thermal Dissipation (max.)	48 BTU/hr.
Humidity	0 to 90% non-condensing
Operational Temperature	32° to 110° F (0° to 43° C)
Dimensions	5.15 in. (13.08 cm) depth 5.80 in. (14.73 cm) width 1.66 in. (4.22 cm) height
Weight	Approximately 1.5 lbs (0.7 kg)
Compatible AMX AutoPatch Fiber Equipment	RGBHV – MTP Fiber Modules; other AMX AutoPatch MTP Fiber products
Resolution Support	Up to 1920x1200 @ 60 Hz refresh rate w/ reduced blanking
DDC/EDID Support	EDID provided by TX Module (EDID resolutions list on reverse)
Pixel Bandwidth (bit rate)	1.65 Gbps
Specification Compliant	DVI 1.0, DVI-D (single link DVI)
HDCP Support	No
Input Cable Equalization	Up to 50 ft. (15.24 m)
Output Reclocking	Yes
Fiber Cable Types	12 Fiber Multimode MTP, 50/125 μm or 62.5/125 μm
Fiber Cable Length	Up to 3000 ft. (914.4 m) cable requires low loss, controlled skew fiber cable, such as, Alcoa 50/125 μm Laser-Link 550
Fiber Cable Termination	Female MTP
Fiber Connector on Module	Male MTP (guide pins define it as a male)
DVI Connectors	DVI-I (DVI-D is supported signal type)

* DG DVI MTP® Fiber Modules use power supplies that are provided with each unit.

Mounting Options

Rack Trays & Mounting Brackets – contact your AMX representative for details.

Installation

Typical System Setup

The TX receives DVI-D signals from 3 source devices and sends them over one fiber cable. The RX accepts the signals from the fiber cable, converts the signals back to DVI-D, and sends each signal to its corresponding destination device.
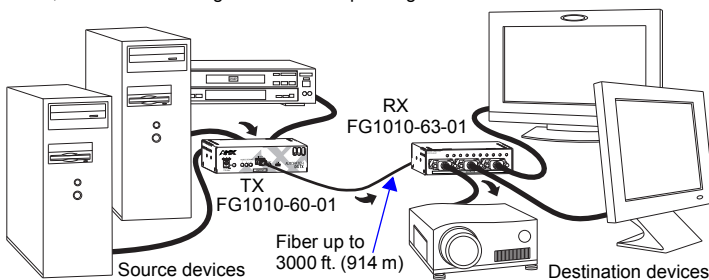

FIG. 2 Typical system setup

Attaching Connectors

Note: *The DVI connector numbers on the TX and RX correspond to the Video Signal indicators on the front of the TX.*

To attach connectors:

1. Check EDID switch on front of TX to be sure that it remains set to the right (WP).
2. For each source device, insert the DVI connector into the DVI jack on the rear of the TX (FIG. 3). For the DVI-I pinout, see FIG. 5.
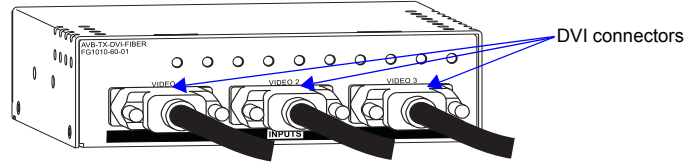

FIG. 3 Attach DVI connectors

Caution: Do not severely bend or kink the fiber cable. These actions can cause irreversible damage to the cable.

3. Insert the MTP/MPO plug on one end of the fiber cable into the Fiber (MTP/MPO) jack on the front of the TX (FIG. 4).

> **Warning**: LASER RADIATION
> Do not view directly with optical instruments.
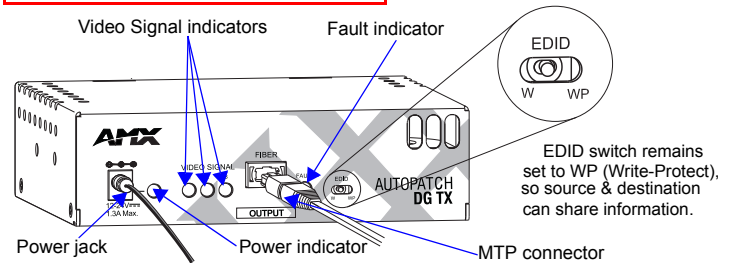> Class 1M laser product.

FIG. 4 Attach fiber cable & power cable

4. Insert the other end of the fiber cable into the Fiber jack on the front of the RX.
5. For each destination device, insert its DVI plug into a DVI jack on rear of the RX.
6. Plug the desktop power supplies into the power jacks on the TX and RX modules (FIG. 4) and into an AC external power source.
   If you are providing the power supply – Plug the power cord from a UL (or equivalent) listed power supply into the power jack on the TX and RX modules (FIG. 4). The electrical ratings must meet those indicated in the specifications table.

DVI-I TX & RX Module Connector Pinouts

Input pinout applies to the DVI connectors on the TX Module
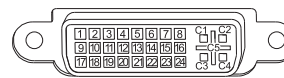
Output pinout applies to the DVI connectors on the RX Module

Input

1. Data 2-	9. Data 1-	17. Data 0-	C1. No connect
2. Data 2+	10. Data 1+	18. Data 0+	C2. No connect
3. Ground	11. Ground	19. Ground	C3. No connect
4. No connect	12. No connect	20. No connect	C4. No connect
5. No connect	13. No connect	21. No connect	C5. No connect
6. DDC-CLK	14. +5 VDC in	22. Ground	
7. DDC-Data	15. Ground	23. CLK+	
8. No connect	16. Hot-Detect	24. CLK-	

Output

1. Data 2-	9. Data 1-	17. Data 0-	C1. No connect
2. Data 2+	10. Data 1+	18. Data 0+	C2. No connect
3. Ground	11. Ground	19. Ground	C3. No connect
4. No connect	12. No connect	20. No connect	C4. No connect
5. No connect	13. No connect	21. No connect	C5. No connect
6. DDC-CLK	14. +5 VDC out*	22. Ground	
7. DDC-Data	15. Ground	23. CLK+	
8. No connect	16. Hot-Detect	24. CLK-	

FIG. 5 TX & RX DVI-I input & output pinouts

* The +5 VDC on pin 14 on the RX Module supplies a maximum of 55 mA.

TX LED Indicators

Video Signal Indicators

Numbering corresponds to the numbering for DVI connectors on the rear of the TX.
- Green – DVI signal path has a valid signal
- Red – DVI signal path has lost its signal

Fault Indicator (Optical)
- OFF – Optical converter is functioning normally
- Red – Optical converter has a fault condition

Troubleshooting

If an indicator on the TX is red, check its corresponding connector and the corresponding connector on the source device and then cycle power on the TX.

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EDID Supported Resolutions (provided by the TX Module)

EDID (Extended Display Identification Data) is a data structure established by the Video Electronics Standards Association (VESA) to enable plug-and-play support by enabling easy configuration of a computer's graphics subsystem based on the capabilities of the attached display device.

The TX Module provides this information using a pre-loaded AMX AutoPatch EDID set consisting of eleven of the most common resolutions in use. The destination device attached to the receiver must be able to display the resolution format that the source device(s) provide to the TX Module.

Resolutions supported by the TX Modules are provided in the table below.

EDID Supported Resolutions	
Resolution	**Refresh Rate**
1920x1200	60 Hz reduced sync blanking only
1920x1080	60 Hz reduced sync blanking only
1680x1050	60 Hz
1600x1200	60 Hz
1280x1024	60 Hz - 75 Hz
1280x768	60 Hz - 85 Hz
1280x720	60 Hz - 85 Hz
1152x864	60 Hz - 85 Hz
1024x768	60 Hz - 85 Hz
800x600	60 Hz - 85 Hz
640x480	60 Hz - 85 Hz