



FiberLink 7250 Series



**Hi-Res RGB with Stereo Audio
Over Two Fibers**

**Installation and Operations
Manual**

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Welcome

The FiberLink 7250 Series is a transmitter/receiver pair that transmits a single channel of RGBHV video (up to WUXGA) and two audio channels over two single mode or multimode fibers. It is available as a free-standing box unit or as a card version for use in the rackmountable 6000A card cage.

The system's all digital encoding delivers noise-free transmissions that retain all of their initial parameters, regardless of fiber optic cable attenuation. System operation may be easily monitored using integral indicator LEDs on each unit that continuously signify the presence of baseband video and audio signals.

Features

- Supports VGA, SVGA, XGA, WXGA, SXGA, SXGA+, UXGA and WUXGA (640 x 480 up to 1920 x 1200)
- Supports HDTV resolutions of 480p, 720p, 1080i and 1080p (RGBHV format only)
- Uses all digital processing with no compression for crystal clear signals and no color pixel skewing
- Requires no adjustments, equalization or de-skewing during installation
- Low audio/video skew, <300 uSec
- Small, lightweight, uses low power
- Unique feature allows the two fibers to be cross connected without affecting operation
- Fiber cables can be up to 20 meters different in length
- Complete, ready-to-install kits are available
- Available in box and card versions
- RoHS Compliant

Package Contents

- One FiberLink 7250 (Transceiver) and 7251 (Receiver)
- This User's Manual

Technical Specifications

Model Part Number Specification

Unit Type	Part Number
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Transmitter Box	7250-B7S
Transmitter Rack Card	7250-C7S
Receiver Box	7251-B7S
Receiver Rack Card	7251-C7S

Video Specifications

Input Impedance	RGB: 75 Ohms; H&V: Hi-Z
Input Level	RGB: 714 mV p-p; H&V: 3 to 5 V p-p
H Sync Frequency Range	15 to 75 kHz
V Sync Frequency Range	30 to 85 Hz
Number of Video Channels Supported	1 RGBHV
RGB Format Supported	RGB with separate H and V
Signal Connectors	HD-15F
RGB Processing	24 bits, no compression or scaling

Audio Specifications

Number of Audio Channels	2, unbalanced
Frequency Response	+0/-0.5 dB, 20 Hz to 20 kHz
Input Impedance	>24 k Ohms
Output Impedance	<1 Ohm
Maximum Audio Level	+10 dBu
THD+N	0.005%; 20 Hz - 20 kHz
SNR (A-Weighted)	95 dB
Channel Phase Differential	+/-0.1°
Crosstalk Min.	Min. 95 dB (1 kHz)
Signal Connectors	3.5mm Stereo jack
Audio to Video Diff. Delay (skew)	<300 uS

Technical Specifications

Optical

Operating Wavelength	1310nm; MM or SM
Optical Fiber	62.5/125 microns MM, 50/125 microns MM or 8-10/125 microns SM
Optical Connector	ST
Allowable Diff. Fiber Length	20 meters

Class I Laser Product complies with FDA performance standard for laser products, Title 21, Code of Federal Regulations, Sub-Chapter J

Loss Budget and Maximum Transmission Distance

Wavelength	Loss Budget (in dB)	Distance (in km)
1310 MM	0-15	0.75
1310 SM	0-15	30

**Distance specifications are only approximate and are not guaranteed. Operating loss budget must not be exceeded.*

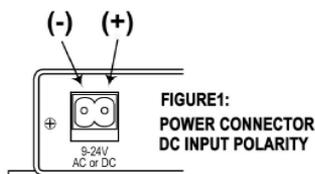
General Specifications

Operating Temp. Range	-20 to +50 degrees C
Operating Power	9-24 Volts AC or DC@7.4watts (max.)

Installation Instructions

The FiberLink 7250 Series transmission system is ready for immediate use. There are indicator LEDs on the units for monitoring purposes. The following instructions describe the typical installation procedure and the function of the LED indicators.

1. Connect the video source to the video input HD-15F connector on the transmitter unit.
2. Connect the video output on the receiver unit to the HD-15F connector.
3. Connect the fiber optic cables between the two FiberLink units. Each fiber may be connected to either Optical 1 or Optical 2 on the receiver, regardless of which output (1 or 2) each one is connected to on the transmitter. The system will still operate properly if the fibers are cross-connected. However, please note that any difference in length between the two fibers must not exceed 20 meters.
4. Connect the audio input signals to the transmitter stereo jack and the audio output to the receiver stereo jack.
5. Apply power to both FiberLink units. For box versions using DC power connections, refer to Figure 1.
6. When power is applied, the green POWER LED will light, indicating the presence of operating power. The VIDEO LED will give an indication as described on page 7.
7. The green AUDIO LED will give an indication as stated on page 7.
8. The system should now be operational.



Note that the rack card version has an additional red LED for indicating the presence of an alarm condition (loss of signal). Refer to the table on the following page for alarm enables.

DANGER!

The transmitting element in the FiberLink 7240 and 7241 transmitter unit contains a solid state Laser Diode located in the optical connector. This device emits invisible infrared electromagnetic radiation which can be harmful to human eyes. The radiation from this optical connector, if viewed at close range with no fiber optic cable connected to the optical connector, may be sufficient intensity to cause instantaneous damage to the retina of the eye. Direct viewing of this radiation should be avoided at all times!

System Connections

The input and output connections for the FiberLink 7250 and 7251 units are as follows:

Audio Connector Transmitter & Receiver: 3.5mm stereo jack

Video Connector Transmitter & Receiver: HD-15F connector

Video Pin Out		
Video Pin Out	Transmitter	Receiver
1	Red	Red
2	Green	Green
3	Blue	Blue
4	N/C	N/C
5	Ground	Ground
6	Ground	Ground
7	Ground	Ground
8	Ground	Ground
9	N/C	N/C
10	Ground	Ground
11	N/C	N/C
12	N/C	N/C
13	Hor. Sync. Out	Hor. Sync Out
14	Vert. Sync Out	Vert. Sync Out
15	N/C	N/C

Alarm Switch Settings

Transmitter, Card Version Only

Switch Position	Alarm Indication	On	Off
1	Loss of Video	Enabled	Disabled
2	N/A	N/A	N/A

Receiver, Card Version Only

Switch Position	Alarm Indication	On	Off
1	Loss of Signal	Enabled	Disabled
2	Loss of Video	Enabled	Disabled

Indicator LEDs

The stand-alone box versions of the FiberLink 7250 and 7251 units have three integral indicator LEDs that are used to monitor the state of the units.

The rack card versions of these products have an additional red indicator LED that lights when an alarm condition exists. The rack card unit also provides an output to drive a model 6020A Alarm Sensing Module which provides an audible tone and activates a set of contacts for external signaling purposes.

The status of the LEDs are as follows:

Transmitter LEDs

LED	Status	Definition
Power	On (Green)	Indicates that correct power has been applied
Video	Off	Indicates no video detected on the input.
	Blinking Green	Indicates either H or V sync detected at the input, but not both
	Steady Green	Indicates both H and V sync detected on the input
Audio	Off	Indicates no audio detected by the transmitter unit
Alarm	On (Red)	Loss of video (rack card only)

Receiver LEDs

LED	Status	Definition
Power	On (Green)	Indicates that correct power has been applied
Video	Off	Indicates no video detected over fiber and, as a result, no video present on the output.
	Blinking Green	Indicates either H or V sync detected at the input, but not both
	Steady Green	Indicates both H and V sync detected over the fiber and, as a result, video present on the output
Audio	Off	Indicates no audio detected over fiber and, as a result, no active audio detected by the receiver unit.
	Blinking Green	Indicates audio detected over fiber and, as a result, active audio detected by the receiver unit.
Data	Off Blinking	No data detected to or from the receiver unit Indicates active data detected to or from the receiver unit
Alarm	On (Red)	Loss of video or optical signal (rack card only)

Optical Fiber

The 7250 Series operates with most multimode (MM) and single mode (SM) optical fibers. However, be aware that the type of fiber you use will affect the system's loss budget and the maximum transmission distance that it can support.

Troubleshooting

Multimode fiber optic cable contains an optical fiber with a light carrying "core" that is only .0025 inches (62.5 microns) in diameter. Single mode fiber optic cable has an even smaller "core," only .00032 to .0004 inches (8-10 microns). This is smaller than a human hair! Therefore, any minute particles of dirt or dust can easily block the fiber from accepting or radiating light. To prevent this from happening, always use the provided dust caps whenever optical connectors are exposed to air. It is also a good idea to gently clean the tip of an optical connector with a lint-free cloth moistened with alcohol whenever dust is suspected.

The status of the VIDEO and AUDIO indicator LEDs should provide the first clue as to the origin of an operational failure. If these are off, it usually means that the fiber is broken or has too much attenuation. Next, be certain that the input and output signal connections are correct.

Maintenance and Repairs

The FiberLink 7250 Series transmission system has been manufactured using the latest semiconductor devices and techniques that electronic technology has to offer. It has been designed for long, reliable and trouble-free service and are not normally field repairable. Should difficulty be encountered, Artel Video Systems maintains a complete service facility to render accurate, timely and reliable service of all products.

The only maintenance that can be provided by the user is to ascertain that the optical connectors are free of dust or dirt that could interfere with light transmission and that electrical connections are secure and accurate. **DANGER!** Always turn off the transmitter's power before removing the optical fiber from either the transmitter or receiver unit.

All other questions or comments should be directed to our Customer Service Department. It should be noted that many "problems" can easily be solved by a simple phone call.

Proven Products, Unrivaled Service, and Great Support



- High performance plug and play products
- Stand alone and card cage versions available
- Solutions for most video, audio, and data formats
- Multimode and single mode versions
- Designed and manufactured in the USA
- Training and installation support available
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