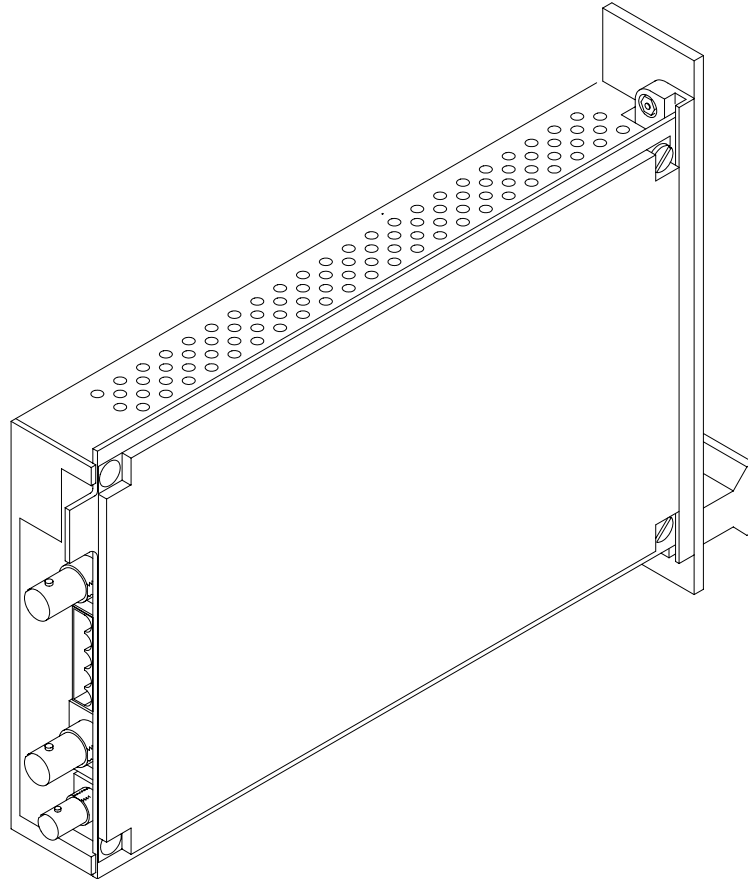




120 Belmont Drive  
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**American Fibertek**

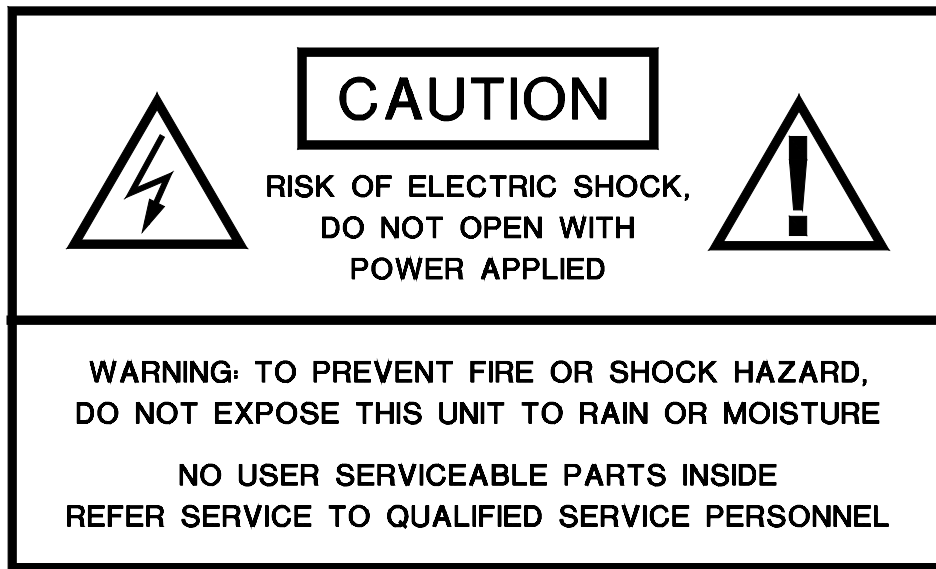
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## Instruction Manual

RT-2400

Bi-directional Video Transceiver  
With Bi-directional RS422 Data



## INSTALLATION AND OPERATION INSTRUCTIONS

### INTRODUCTION

Thank you for purchasing your American Fibertek RT-2400 multimode video / RS422 data transceiver. Please take a few minutes to read these installation instructions in order to obtain the maximum performance from this product.

### FUNCTIONAL DESCRIPTION

The RT-2400 operates as half of a transceiver pair for the transmission of bi-directional baseband NTSC, PAL, RS170, or RS343 video signals with bi-directional RS422 data. It is designed to operate with the MR-2400 or RR-2400 video / RS422 data transceiver over a single multimode fiber optic cable.

The RT-2400 converts a single video input and a single RS422 data input into an optical output using a 1300 nm wavelength source. The RT-2400 also converts an optical input signal returning on the same fiber into a single video output and a single RS422 data output using an 850 nm wavelength detector. The 2400 Series product is designed to operate over an optical loss budget range of 0 to 12 dB when used on 62.5 um multimode fiber. The RT-2400 operates on 50 um or 62.5 um multimode fiber. Refer to the data sheets for detailed performance specifications.

This unit is designed for rack mounting in any of the three American Fibertek subracks available. The subrack model numbers are SR-20/1, SR-20R/1, and SR-20/2. Slide in rack mounting and LED indicators provide for easy installation and monitoring of video, data, and dc power.

The RT-2400 is designed for rack mounting only. For a modular stand alone version please see the MT-2400.

### INSTALLATION

**THIS INSTALLATION SHOULD BE MADE BY A QUALIFIED SERVICE PERSON AND SHOULD CONFORM TO THE NATIONAL ELECTRICAL CODE, ANSI/NFPA 70 AND LOCAL CODES.**

The unit slides into any open slot in the SR-20 subrack. Use a small screwdriver to push and lock the two ¼ turn fasteners into place.

## POWER SOURCE

Power to the unit is supplied by the subrack. Please refer to the SR-20 and PSR instructions for further details.

## POWER CONNECTION

Power is supplied to the unit via a four finger backplane connector. The RT-2400 can be inserted into the subrack or removed from the subrack with power applied to the backplane.

## FIBER CONNECTION

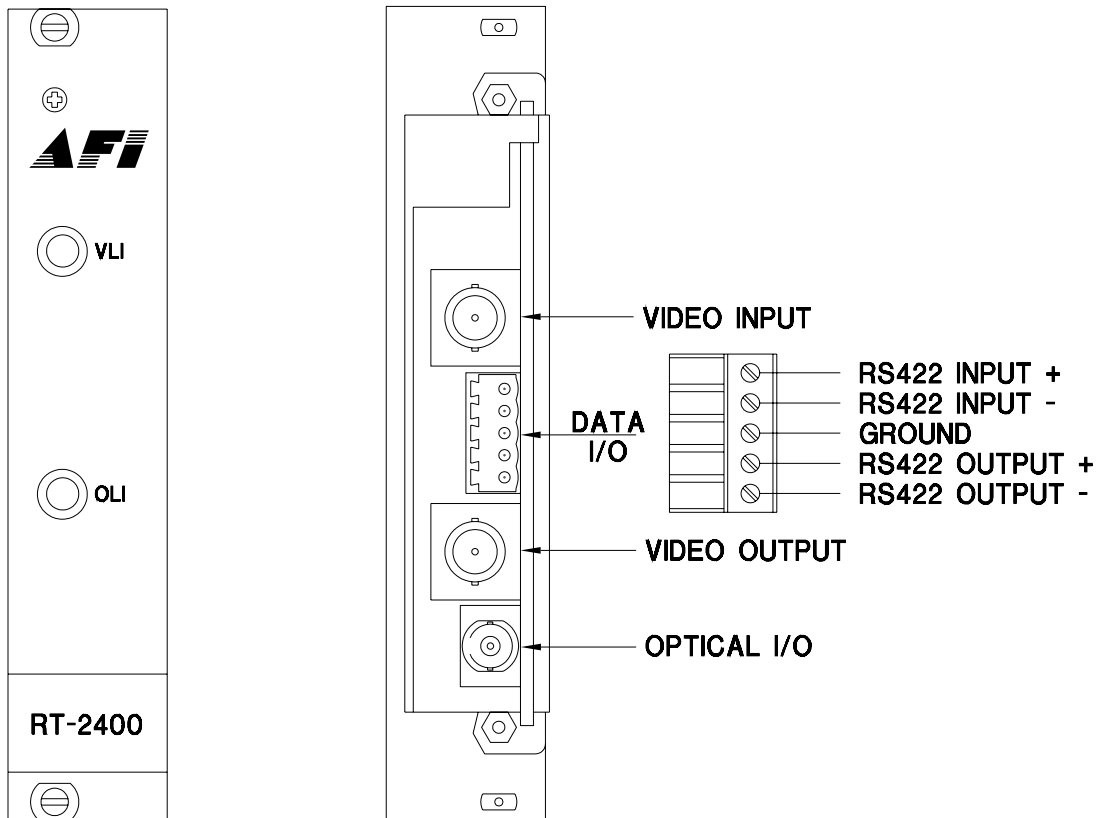
The fiber optic connection is made via a ST connector located on the back of the unit. Be sure to allow sufficient room for the required minimum bend radius of the fiber cable used.

## VIDEO INPUT / OUTPUT CONNECTIONS

The video input and output connections are made via BNC connectors on the back of the unit. See the drawing below for proper location of the video input and output cables. The video input should be connected to an appropriate 75Ω baseband video source such as a camera or a video recorder output. The 75Ω video output can be looped through typical baseband video inputs of switchers, recorders and other equipment. For proper operation, the output must be terminated with 75Ω. For optimum performance the video cables should be the shortest length of coax practical.

## RS422 DATA INPUT / OUTPUT CONNECTIONS

RS422 data input and output connections are made via a terminal block on the back of the unit. See the drawing below for the proper location of data connections. These connections are based on industry standard EIA terminology for the transmission of electronic data signals. Using this terminology, the driver of an electronic signal is labeled TX or data output. Correspondingly, the receiver of an electronic signal is labeled RX or data input. Not all manufactures follow standard EIA terminology. Consult the installation instructions for your copper device if you are unsure which two wires are the drive (data output) wires and which two wires are the receive (data input) wires.



## RT-2400 STATUS INDICATORS

The RT-2400 provides the following LED status indicators to aid in installation and troubleshooting:

### VLI

A bi-color LED indicator is provided for the video input to the RT-2400. Internal DC power and video status associated with this LED is summarized below.

Video Presence LED	DC Power Status	Video Status
Green	On	Proper Input Video Present
Red	On	Input Video Not Detected
Off	Off	Check Power Supply Input

### OLI

A bi-color LED indicator monitors the optical input power of the video / RS422 data signal that is being received at the RT-2400 from the MR-2400 or the RR-2400. Internal DC power and optical input status associated with this LED are summarized below.

Optical Level Indicator	DC Power Status	Optical Status
Green	On	Proper Optical Input Power Present
Red	On	Optical Input Not Detected
Off	Off	Check Power Supply

## LIFETIME WARRANTY INFORMATION

American Fibertek, Inc warrants that at the time of delivery the products delivered will be free of defects in materials and workmanship. Defective products will be repaired or replaced at the exclusive option of American Fibertek. A Return Material Authorization (RMA) number is required to send the products back in case of return. All returns must be shipped prepaid. This warranty is void if the products have been tampered with. This warranty shall be construed in accordance with New Jersey law and the courts of New Jersey shall have exclusive jurisdiction over this contract. **EXCEPT FOR THE FOREGOING WARRANTY, THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, EXPRESSED OR IMPLIED, WHICH EXTENDS BEYOND THE WARRANTY SET FORTH IN THIS AGREEMENT.** In any event, American Fibertek will not be responsible or liable for contingent, consequential, or incidental damages. No agreement or understanding, expressed or implied, except as set forth in this warranty, will be binding upon American Fibertek unless in writing, signed by a duly authorized officer of American Fibertek.

## SERVICE INFORMATION

There are no user serviceable parts inside the unit.

In the event that service is required to this unit, please direct all inquiries to:

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120 Belmont Drive  
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