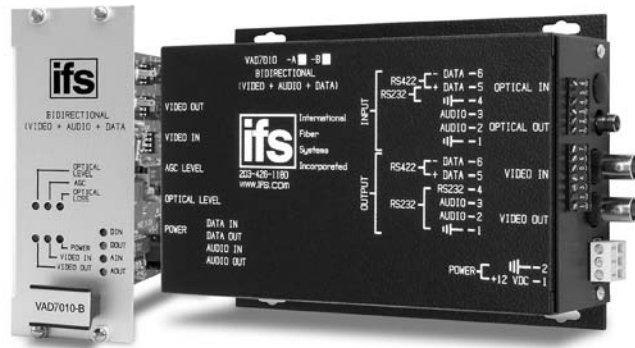




PRODUCT SPECIFICATION

BI-DIRECTIONAL VIDEO AUDIO AND DATA

VAD7000 SERIES



DESCRIPTION

The IFS VAD7000 series video, audio and data transceiver supports the simultaneous bi-directional transmission of video, audio and data over one or two multimode fiber optic cables. The modules use frequency modulation (FM) for superior transmission of video, data, and balanced or unbalanced line-level audio (2.2 V pk-pk). The modules are universally compatible with major CCTV camera manufacturers and support RS-232 and RS-422. Plug-and-play design ensures ease of installation requiring no electrical or optical adjustments. The modules incorporate power data transmit, data receive, audio transmit and audio receive status indicating LED's to monitor proper system operation. The modules are available in either stand-alone or rack mount versions.

APPLICATION EXAMPLES

- CCTV with Bi-Directional Audio and PTZ Camera Control
- Remote Court Arraignment
- Distance Learning
- Video Conferencing

FEATURES

- FM Video Transmission reduces ghosting, jitter and cross-talk between channels, providing superior video transmission
- NTSC, PAL, SECAM Compatible
- Automatic Resettable Fuses on all Power Lines
- 600 Ohms Audio Input Impedance
- Transmits Bi-directional Balanced or Unbalanced Line-Level Audio (2.2 Volts Peak-to-Peak)
- Transmits Bi-directional RS-232 and RS-422 Data Interfaces
- Data rates up to 100 kbps
- Transparent to Data Encoding/Compatible with Major CCTV Camera Manufacturers
- NTCIP Compatible
- Tested and Certified by an Independent Testing Laboratory for Full Compliance with the Environmental Requirements (Ambient Operating Temperature, Mechanical Shock, Vibration, Humidity with Condensation, High-Line/Low-Line Voltage Conditions and Transient Voltage Protection) of NEMA TS-1/TS-2 and the Caltrans Specification for Traffic Signal Control Equipment.
- No In-field Electrical or Optical Adjustments Required
- Power Status Indicating LED to Monitor System Performance
- Hot-Swappable Rack Modules
- Full Color Compatibility
- Distances up to 2.5 miles (4 km) Without Repeaters
- Comprehensive Lifetime Warranty



Available at:
www.ifs.com

- A & E Specifications, (CSI)
- AutoCAD Drawings
- Operation Manuals
- Technical Bulletins

ORDERING INFORMATION

	PART NUMBER	DESCRIPTION	FIBERS REQUIRED	OPTICAL PWR BUDGET	MAX. DISTANCE*
MULTIMODE 62.5/125µm**	VAD7010A	FM Video, Audio and Data Transceiver (850 nm)	2	14 dB	2.5 miles (4 km)
	VAD7010B				
	VAD7010WDMA VAD7010WDMB	FM Video, Audio and Data Transceiver (850/1310 nm) FM Video, Audio and Data Transceiver (1310/850 nm)	1	14 dB	2.5 miles (4 km)
ACCESSORIES♦	PS-24VACCT 24 volt AC Center Tap Power Supply				
	PS-24VACCT-230 24 Volt AC Center Tap Power Supply 230 VAC Input (Included if specified at time of order)				
OPTIONS	Add '-R3' to Model Number for R3 Rack Mount - No Charge (Requires R3 Rack purchased separately)				
	Add '-C' for Conformally Coated Printed Circuit Boards (Extra charge, consult factory)				

* Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels. Distance can also be limited by fiber bandwidth. ** For 50/125 Fiber, subtract 4 dB from Optical Power Budget.

♦ All accessories are third party manufactured.

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With Offices in Asia Pacific ■ Australia ■ Europe ■ Latin America

SPECIFICATIONS

VIDEO

Video Bandwidth: 5 Hz - 6.5 MHz
 Differential Gain: <5%
 Differential Phase: <5°
 Tilt: <1%
 Signal-to-Noise Ratio (SNR): >60 dB
 Video Output: 1 Volt Peak-to-Peak

DATA

Data Interface: RS-232, RS-422
 Data Format: NRZ, NRZI, Manchester, Bi-phase
 Data Rate: DC-100 kbps (NRZ)

AUDIO

Max. Input/Output Signal: 2.2 volt pk-pk
 Bandwidth: 20 Hz - 20 KHz
 Input/Output Impedance: 600 ohm (Single ended or differential)
 Total Harmonic Distortion: <1.0%

WAVELENGTH

Multimode: 850 nm
 850/1310 nm, Multimode

NUMBER OF FIBERS

VAD7000: 2
 VAD7010WDM: 1

CONNECTORS

Optical: ST
 Power, Audio and Data: Terminal Block with Screw Clamps
 Video: BNC (Gold Plated Center-Pin)

ELECTRICAL & MECHANICAL

Power: 24 VAC - CT @ 800 mA
 Surface Mount: From Rack
 Rack: 2
 Number of Rack Slots: Automatic Resettable Solid-State Current Limiters
 Current Protection: Meets IPC Standard
 Circuit Board: 7.0 x 4.9 x 2.0 in., 17.8 x 12.5 x 5.1 cm
 Size (in./cm.) (LxWxH): 7.0 x 4.9 x 2.0 in., 17.8 x 12.5 x 5.1 cm
 Surface Mount: < 2 lbs./0.9 kg
 Rack Mount:
 Shipping Weight:

ENVIRONMENTAL

MTBF: > 100,000 hours
 Operating Temp: -40° C to +74° C
 Storage Temp: -40° C to +85° C
 Relative Humidity: 0% to 95% (non-condensing)†

† May be extended to condensation conditions by adding suffix '-C' to model number for conformal coating.

AGENCY COMPLIANCE

FCC PART 15 COMPLIANT



MADE IN THE USA

Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J

OPTICAL POWER BUDGET

FIBER	WAVELENGTH	TRANSMITTER		RECEIVER		OPTICAL PWR BUDGET	MAX. DISTANCE*
		MODEL	OUTPUT	MODEL	SENSITIVITY		
Multimode 62.5/125µm**	850 nm	VAD7010A	25 µw (-16 dBm)	VAD7010B	1 µw (-30 dBm)	14 dB	2.5 miles (4 km)
	850/1310 nm	VAD7010WDM		VAD7010WDMB			

* Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels. Distance can also be limited by fiber bandwidth. ** For 50/125 Fiber, subtract 4 dB from Optical Power Budget.

SYSTEM DESIGN

