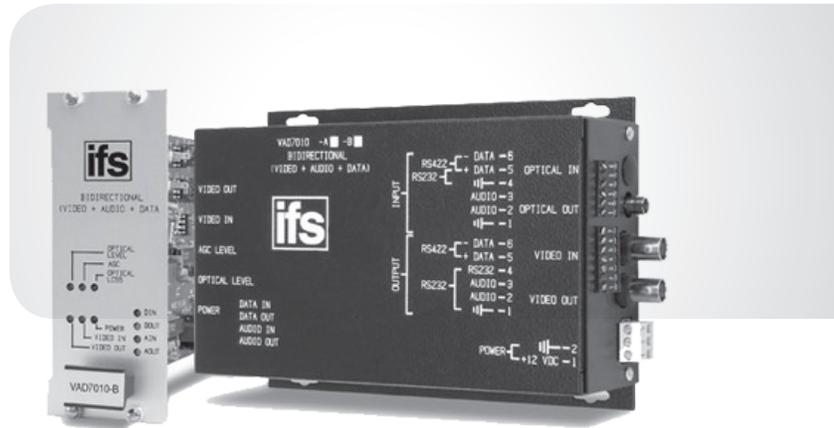


# VAD7000 Series

IFS Bi-Directional Video, Audio and Data



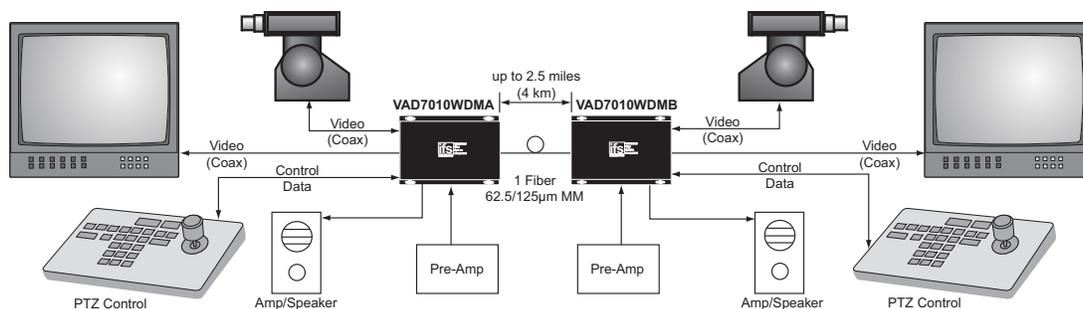
## OVERVIEW

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 Arrangement
- Distance Learning
- Video Conferencing

## SYSTEM DESIGN



## STANDARD 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

# VAD7000 Series

IFS Bi-Directional Video, Audio and Data

North America  
T 855-286-8889

Latin America  
T 561-998-6114

## 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	FM Video, Audio and Data Transceiver (850 nm)	2	14 dB	2.5 miles (4 km)
	VAD7010WDMA	FM Video, Audio and Data Transceiver (850/1310 nm)	1	14 dB	2.5 miles (4 km)
	VAD7010WDMB	FM Video, Audio and Data Transceiver (850/1310 nm)	1	14 dB	2.5 miles (4 km)
Accessories ♦	PS12VDC1.5A-U	12VDC, 1.5A Plug-in Power supply (110/220VAC) with Universal power plug adapter kit (Included)			
Options	Add '-R3' to Model Number for R3 Rack Mount - No Charge (Requires R3 Rack purchased separately)				

\*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.

## Specifications

### Video

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

### 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-to-Pk
Bandwidth:	20 HZ - 20 kHz

### Wavelength

	850 nm and 850/1310 nm, Multimode
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### Number Of Fibers

	VAD7000: 2, VAD7000WDM: 1
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### Connectors

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

### Electrical & Mechanical

Power:	
Surface Mount:	12 VDC @ 1.5A
Rack:	From Rack
Number of Rack Slots:	2
Current Protection:	Automatic Resettable Solid-State Current Limiters
Max. RG59 Cable Length:	750 ft.
Circuit Board:	Meets IPC Standard
Size (in./cm.) (LxWxH)	
Surface Mount:	7.0 x 4.9 x 2.0 in., 17.8 x 12.5 x 5.1 cm
Rack Mount:	7.0 x 5.0 x 1.0 in., 17.8 x 12.7 x 5.1 cm
Shipping Weight:	< 2 lbs./0.9 kg

### 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)

## Agency Compliance

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



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Specifications subject to change without notice.

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VAD7000 Series