

## **DESCRIPTION**

The IFS VAT/VAR1200 video and audio transmitter/receiver supports the simultaneous transmission of video and audio over one multimode fiber optic cable. Plug-and-play design ensures ease of installation requiring no electrical or optical adjustments. The modules incorporate power and AGC status indicating LED's to monitor proper system operation. The modules are available in either standalone or rack mount versions.

# **APPLICATION EXAMPLES**

- Fixed Video with One-Way Audio
- CCTV and Paging (Public Address) Systems
- One-Way Teleconferencing Link
- Distance Learning

## **FEATURES**

- AM Video Transmission
- NTSC, PAL, SECAM Compatible
- Full Color Compatibility
- 600 Ohms Audio Input Impedance
- Transmits Balanced or Unbalanced Line-Level Audio (2.2 Volts Peak-to-Peak)



- Full Range Peak-to-Peak Automatic Gain Control (AGC)
- No In-field Electrical or Optical Adjustments Required
- Power and AGC Status Indicating LED's to Monitor System Performance
- Automatic Resettable Fuses on all Power Lines
- Hot-Swappable Rack Modules Available at:
  - Available at: ifs.com
- Distances up to 2.5 miles (4 km) without Repeaters
- Comprehensive Lifetime Warranty
- A & E Specifications, (CSI)
- AutoCAD Drawings
- Operation Manuals
- Technical Bulletins

# **ORDERING INFORMATION**

|                        | PART<br>NUMBER   | DESCRIPTION  | FIBERS<br>REQUIRED | OPTICAL<br>PWR BUDGET | MAX.<br>DISTANCE* |  |  |  |  |
|------------------------|--|--|--------------------|-----------------------|-------------------|--|--|--|--|
| MULTIMODE 62.5/125μm** | VAT1200<br>VAR1200   | Video Transmitter/Audio Transmitter (850 nm)<br>Video Receiver/Audio Receiver (850 nm) | 1                  | 1 14 dB               |                   |  |  |  |  |
| ACCESSORIES*           | PS-24VACCT 24 volt AC Center Tap Power Supply (Included) 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) |  |                    |                       |                   |  |  |  |  |

<sup>\*</sup> 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.

<sup>♦</sup> All accessories are third party manufactured.

## **SPECIFICATIONS**

#### **VIDEO**

Video Input/Output: 1 volt pk-pk (75 ohms)

Bandwidth: 5 Hz - 10 MHzDifferential Gain: 5% typical Differential Phase:  $5^\circ$  typical Tilt: <1%

Signal-to-Noise Ratio (SNR): 60 dB (typical)

**AUDIO** 

Input/Output: 2.2 Volts Peak-to-Peak

Bandwidth: 300 Hz-5 Khz

Input Impedance: 600 ohms (single ended or differential)

WAVELENGTH 850 nm, Multimode

NUMBER OF FIBERS 1

**CONNECTORS** 

Optical: ST

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

## **ELECTRICAL & MECHANICAL**

Power:

Surface Mount: 21 - 24 VAC C.T. @ 150 mA

Rack: From Rack

Number of Rack Slots: 1

Current Protection: Automatic Resettable Solid-State Current

Limiters

Circuit Board: Meets IPC Standard

Size (in./cm.) (LxWxH)

Surface Mount: 7.0 x 4.9 x 1.0 in., 17.8 x 12.5 x 5.1 cm Rack Mount: 7.7 x 5.0 x 1.0 in., 19.6 x 12.7 x 5.1 cm

Shipping Weight: < 2 lbs./0.9 kg

#### **ENVIRONMENTAL**

MTBF: > 100,000 hours Operating Temp:  $-40^{\circ}$  C to  $+74^{\circ}$  C Storage Temp:  $-40^{\circ}$  C to  $+85^{\circ}$  C

Relative Humidity: 0% to 95% (non-condensing)†

 $\dagger$  May be extended to condensation conditions by adding suffix '–C' to model number for conformal coating.

#### **AGENCY COMPLIANCE**



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    | MAX.             |
|---------------------------|--------------|-------------|-------------------|----------|-------------------|------------|------------------|
|                           |              | MODEL       | OUTPUT            | MODEL    | SENSITIVITY       | PWR BUDGET | DISTANCE*        |
| Multimode<br>62.5/125µm** | 850 nm       | VAT1200     | 25μw<br>(-16 dBm) | VAR1200  | 1 μw<br>(-30 dBm) | 14 dB      | 2.5 miles (4 km) |

<sup>\*</sup> 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**



