Overview
The IFS AT/AR1000 series audio transmitter and receiver provide one-way transmission of an audio signal on one optical fiber. The IFS AR2000 series audio transceiver provides bi-directional transmission of one audio signal on one or two optical fibers. The modules use frequency modulation (FM) for superior transmission of balanced or unbalanced line-level audio (2.2 V peak-to-peak). Models within this series are available for use with multimode or single mode optical fiber. Plug-and-play design ensures ease of installation requiring no electrical or optical adjustments. The modules incorporate power and carrier detect status indicating LED’s for monitoring proper system operation. The modules are available in either stand-alone or rack mount versions.

Application Examples
- Transmission of Stage Mics from Pre-amp to Amplifier
- Recording Studios and Post-Production Facilities
- Transmission of Broadcast Audio Feeds
- Elimination of EMI/RFI Interference in Audio Cables
- Optical Isolation for Elimination of Ground Loop Noise

Audio Transmitter/Receiver and Transceiver
The ATAR1000 provides one-way transmission of an audio signal on one optical fiber, while the AR2000 provides bi-directional audio transmission signals on one or two optical fibers.
Specifications

Audio
Input/Output Signal: 2.2 volts pk-pk
Input/Output Impedance: 600 ohms (Single ended or differential)
Bandwidth: 20 Hz - 20 KHz
Total Harmonic Distortion: <1.0%
Signal-to-Noise Ratio (SNR): 60 dB min.

Wavelength
ATAR1000,2000: 850 nm, MM AR2010WDMA: 850/1310, MM
All Others Models: 1310 nm

Number of fibers
1 or 2

Connectors
Optical: ST
Power and Audio: Terminal Block with Screw Clamps

Electrical & Mechanical
Power:
Surface Mount: 12 VDC @ 200 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 2.5 cm
Rack Mount: 7.7 x 5.0 x 1.0 in., 19.6 x 12.7 x 2.5 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)
†May be extended to condensation conditions by adding suffix ‘-C’ to model number for conformal coating.

Part Number Optical Pwr. Budget Max. Distance*

Multimode
62.5/125μm**

AT1000 Audio Transmitter (850 nm) 1 2.8 miles (4.5 km)
AR1000 Audio Receiver (850 nm) 1 2.8 miles (4.5 km)
AR2000 Audio Transceiver (850 nm) 2 2.8 miles (4.5 km)
AR2010WDMA Audio Transceiver (850/1310 nm) 1 2.8 miles (4.5 km)
AR2010WDMB Audio Transceiver (1310/850 nm) 1 2.8 miles (4.5 km)
AT1020 Audio Transmitter (1131 nm) 1 10 miles (16 km)
AR1030 Audio Receiver (1131 nm) 1 10 miles (16 km)

Single Mode
9/125μm

AT1025 Audio Transmitter (1131 nm) 16 dB 17 dB 30 miles (49 km)
AR1030 Audio Receiver (1131 nm) 17 dB
AR1025 Audio Transceiver (1131 nm) 17 dB

Accessories©
PS-24VACCT 24 Volt AC Center Tap Power Supply
PS-24VACCT-230 24 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.