



PRODUCT SPECIFICATION AUDIO REPEATER

A2100 SERIES



DESCRIPTION

The IFS A2100 series audio repeater provides distribution of audio on a common bus (daisy-chain) configuration on two optical fibers. The system operates in a typical 'party line' configuration. By utilizing several modules, multiple nodes can be set up to broadcast on a common audio line. Only one audio node has control of the line at any time for broadcast to the other nodes on the line. Once the line is released, any other audio node on the line can capture the line and use the line for broadcast. The modules use frequency modulation (FM) for superior transmission of balanced line-level audio (2.2 V pk-pk). 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 as well as support for push to call. The modules are available in either standalone or rack mount versions.

APPLICATION EXAMPLES

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

FEATURES

- FM Audio Transmission
- Up to 40 Repeaters
- 20 Hz – 20kHz Bandwidth
- 600 Ohms Audio Input Impedance
- No In-field Electrical or Optical Adjustments Required
- Power and Carrier Detect Status Indicating LED to Monitor System Performance
- Transmits Balanced Line-Level Audio (2.2 Volts Peak-to-Peak)
- Hot-Swappable Rack Modules
- Automatic Resettable Fuses on all Power Lines
- Distances up to 30 miles (49 km) Without Repeaters
- Lifetime Warranty



Available at: **ifs.com**
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**	A2100	Audio Repeater (850 nm)	2 In/2 Out	16 dB	2.8 miles (4.5 km)
	A2120	Audio Repeater (1310 nm)	2 In/2 Out	16 dB	10 miles (16 km)
SINGLE-MODE 9/125µm	A2125	Audio Repeater (1310 nm)	2 In/2 Out	17 dB	30 miles (49 km)
OPTIONS	PS-12VDC 12 Volt DC Plug-in Power Supply (Included) PS-12VDC-230 12 Volt DC Plug-in Power Supply, 230 VAC Input (Included if specified at time of order) 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.

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TECHNICAL SPECIFICATION AUDIO REPEATER

A2100 SERIES

SPECIFICATIONS

AUDIO

Audio: Balanced, simplex or full duplex
 Audio Bandwidth: 20 Hz - 20 kHz
 Input/Output: 2.2 volts pk-pk
 Impedance: 600 ohms
 Signal-to-Noise Ratio (SNR): 60 dB

WAVELENGTH

850 or 1310 nm, Multimode
 1310 nm, Single-mode

NUMBER OF FIBERS

2 In/2 Out

CONNECTORS

Power and Audio: Terminal block with screw terminals
 Optical: ST

ELECTRICAL & MECHANICAL

Power: 10-45 VDC @ 200 mA
 Surface Mount: From Rack
 Rack: 1
 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)
 Surface Mount: < 2 lbs./0.9 kg
 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.

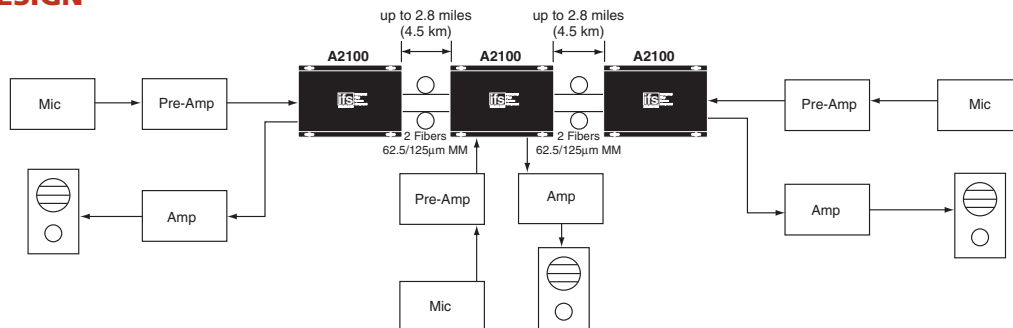


OPTICAL POWER BUDGET

FIBER	WAVELENGTH	TRANSMITTER		RECEIVER		OPTICAL PWR BUDGET	MAX. DISTANCE*
		MODEL	OUTPUT	MODEL	SENSITIVITY		
Multimode 62.5/125µm**	850 nm	A2100	20µw (-17 dBm)	A2100	0.5 µw (-33 dBm)	16 dB	2.8 miles (4.5 km)
	1310 nm	A2120		A2120			10 miles (16 km)
Single-mode 9/125µm			25µw (-16 dBm)	A2125		17 dB	30 miles (49 km)

* 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



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Due to our continued effort to advance technology, product specifications are subject to change without notice.

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