

IAR02-500C INDOOR ACTIVE REPEATER (500 Watts)

- **Broadband High Power Repeater**
- **31 Analog Channels or 150 Digital TV Programs**
- **Redundant Power Amplifier and Power Supply**
- **Built In Diagnostics**
- **Reliable, Modular Design and Construction**



PRODUCT APPLICATION:

The IAR02-500 is a broadband active repeater designed to receive, amplify, and retransmit (at the same frequency) up to 31 analog television channels or 150 digital channels (64QAM, 256 QAM or OFDM modulations).

It is designed to provide cost-effective coverage over a wide area. With an omnidirectional transmit antenna it can cover an area of approximately 35 Kilometer radius when loaded with 31 channels, or a 50 Km radius when loaded with 15 channels. A larger area can be covered if the desired coverage is less than 360 degrees in azimuth.

The output power per channel depends on the channel loading. For a 12 channel load, the repeater delivers 2 Watts per channel with a C/CTB of 50 dB (measured with CW carriers) or approximately 4 Watts per channel peak power.

The IAR02-500 features a redundant power amplifier assembly (two amplifiers in parallel) for increased reliability. The repeater will operate with only one power amplifier at a slightly reduced power level.

To facilitate repeater monitoring with a field strength meter or a TV monitor, the IAR02-500 includes VHF input/output monitors.

Repeater diagnostic voltages can be monitored locally or remotely via serial port interface to a standard Windows equipped PC.

The repeater features a modular design consisting of a Low Noise Amplifier (LNA), Automatic Gain Controller (AGC), Dual Power Amplifier assembly and dual power supplies.

Repeater			
Input Frequency ² :	2.500 to 2.686 GHz		
Output Frequency ² :	2.500 to 2.686 GHz		
Output Level for 50 dB C/CTB: (measured with CW carriers) ³	Channels	Average Power dBm/Channel	Peak Power dBm/Channel
	9	34.5	37.0
	12	33.0	35.5
	18	31.0	33.5
	24	29.0	31.5
	30	28.0	30.5
Frequency Response:	±1 dB		
Gain:	75 dB Minimum		
Noise Figure:	4.5 dB		
Input Return Loss:	15 dB		
Input Connector:	Type “N” Female		
Output Return Loss:	18 dB		
Output Connector:	Type “N” Female		
Temperature Range:	60° to 100°F (16° to 38°C)		
Humidity:	95% max.		
Primary Power:	120/240 VAC, 50/60Hz (per customer specification)		
Power Consumption:	1200 VA RMS		
Mounting:	Enclosed Equipment Rack		
Weight:	250 lb. (113.4 kg)		
Dimensions:	22” W x 48” H x 27” D (55.9cm W x 122cm H x 68.6cm D)		

¹ Specifications subject to change without prior notice.

² Other frequencies available.

³ The C/CTB with modulated carriers are approximately 6 dB better than with CW carriers.