

## IAR02-1000 INDOOR BROADBAND HIGH POWER ACTIVE REPEATER (1000 Watts)

- **Broadband High Power Repeater with 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 IAR02-1000 is a broadband active repeater designed to receive, amplify, and retransmit (at the same frequency) up to 31 analog or 150 digital TV channels (64QAM, 256QAM or OFDM modulation).

The repeater incorporates traditional Cable AML reliability and design features which include advanced linearization techniques.

The IAR02-1000 is designed to provide cost-effective coverage over a wide area. With an omnidirectional transmit antenna, it can cover an area of approximately 48 Kilometer radius when loaded with 31 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 a total of 4 Watts per channel with a C/CTB of 50 dB (measured with CW carriers), or approximately 7 Watts per channel (peak power).

The IAR02-1000 features redundant power amplifiers (four amplifiers in parallel) and redundant power supplies for increased reliability.

The IAR02-1000 includes VHF input and output monitor ports to facilitate signal monitoring with a field strength meter or a TV monitor. Diagnostic voltages can be monitored locally or remotely by a serial port interface to a standard Windows-equipped PC.

The repeater features a modular design consisting of a Low Noise Amplifier (LNA), Automatic Gain Control amplifiers (AGC), redundant power amplifier assembly and redundant power supply assembly.

<b>Repeater</b>			
Input Frequency <sup>2</sup> :	2.5 to 2.7 GHz		
Nominal Input Level for 12 TV:	- 45 dBm		
Output Frequency <sup>2</sup> :	2.5 to 2.7 GHz		
Output Level for 50 dB C/CTB: (measured with CW carriers) <sup>3</sup>	Channels	Average Power dBm/Channel	Peak Power dBm/Channel
	9	37.5	40.0
	12	36.0	38.5
	18	34.0	36.5
	24	32.0	34.5
	30	31.0	33.5
Frequency Response:	±1 dB		
Gain:	80 dB		
Noise Figure:	4.5 dB		
Input Return Loss:	15 dB		
Input Connector:	Type "N"		
Output Return Loss:	18 dB		
Output Connector:	Type "N"		
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:	2300 VA RMS		
Mounting:	Enclosed Equipment Rack		
Weight:	560 lb. (354.5 kg)		
Dimensions:	22" W x 84" H x 27" D (55.9cm W x 213.4cm H x 68.6cm D)		

<sup>1</sup> Specifications subject to change without prior notice.

<sup>2</sup> Other frequencies available.

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