

# Features and Benefits

# ANTRONIX®

## VRA500B VoIP Integrated Residential Amplifier 4+1P

The Antronix VoIP Residential Amplifier provides a passive VoIP port for reliable voice service, even when power is disrupted to the amplifier. The 5 output port amplifier has 4 amplified output ports with unity gain in the forward and return band plus one passive VoIP output port. This amplifier utilizes the Antronix patented CamPort®. This auto-seizing F-port ensures maximum contact area and reliability for multimedia applications. The all-ports-down configuration allows for ease of installation in a NID enclosure.

- **Passive VoIP Port**  
The passive VoIP port provides a passive 4.0dB loss, even when power is disrupted to maintain critical voice service.
- **Unity Gain Forward and Return**  
Active gain in the forward and return band provides unity gain in both directions for ease of installation.
- **CamPort® Auto-Seizing F-Port**  
Patented auto-seizing brass F-port features a “Cam Activated Mechanism” to provide full contact pressure (> 2000 grams) on the center conductor for maximum reliability.
- **All-Ports-Down Configuration for NID Enclosures**  
The all ports facing down configuration provides clean wiring within a NID enclosure.
- **6 kV Surge Protection**  
Unique surge protection on all RF ports without the use of arc gaps which may cause high impulse noise during discharge.
- **Low Intermodulation Ferrites**  
Proprietary ferrite blend inhibits re-magnetization of the core due to voltage spikes from impulse noise or lightning. This prevents high-level return carriers from affecting forward path video signals.
- **Powder Coated Aluminum Housing**  
Provides the most corrosion resistant protection against salt fog and rust.
- **Optional Power Inserter for Remote Powering**  
The amplifier can be powered remotely with a dual isolation compartment power inserter for high AC to RF isolation to prevent ingress.
- **PTC Short-Circuit Protected UL Listed Adaptor**  
Self-resetting circuit protection provides safe protection against short-circuits to minimize maintenance costs.



# Electrical Specifications

## VoIP Integrated Residential Amplifier

### VRA500B

#### 4+1P

Forward Specifications	Frequency (MHz)	Specifications
<b>Gain (Outputs 1 – 4)</b> (dB nom)	52-1002	0 ± 1.0
<b>Return Loss</b> (dB min)	52-1002	18
<b>Port to Port Isolation</b> (dB min)	52-1002	22
<b>Noise Figure</b> (dB max)	52-1002	7.0
<b>RFI Isolation</b> (dB)	5-1002	-120
<b>Group Delay</b> (ns/3.58 MHz)	Ch. 2	30.0
	Ch. 3	10.0
	CH. 4	5.0
	CH. 5 & up	3.0
<b>Distortions<sup>1</sup></b>		
Composite Triple Beat (dBc)		-75
Composite Second Order (dBc)		-62
Cross Modulation (dBc)		-75
Hum Modulation (dBc)		-80
Return Specifications	Frequency (MHz)	Specifications
<b>Gain (Outputs 1 – 4)</b> (dB nom)	5-42	0 ± 1.0
<b>Return Loss</b> (dB min)	5-42	18
<b>Port to Port Isolation</b> (dB min)	5-42	24
<b>Noise Figure</b> (dB max)	5-42	14.0
<b>Group Delay</b> (ns/1.0 MHz)	5.0-6.5	20.0
	6.5-8.0	15.0
	8.0-34	5.0
	34-42	20.0
VoIP Port Specifications	Frequency (MHz)	Specifications
<b>Insertion Loss</b> (dB nom)	5-1002	4.0 ± 1.0
<b>Return Loss</b> (dB min)	5-1002	18

**Notes:**

1. +12 dBmV flat input, 79 analog channels from 55 MHz to 550 MHz. Digital channels from 555 MHz to 1002 MHz at 6 dB below the analog channels.

## VRA500B VoIP Integrated Residential Amplifier VRA500B 4+1P

General	
Nominal Impedance	75 Ω
F-Connector Type	ANSI/SCTE 01 Brass Compliant Sealed CamPort®
Power Adaptor	12 VDC/500 mA Output, UL, PTC Short-Circuit Protected
Dimensions/Weight	6.0" W x 3.8" H x 1.4" D / 0.71 lb.
Environmental	
Pressure Seal	15 psi
Surge Withstand	6 kV Combo Wave (IEEE C62.41-1991 Cat. B3) on Input Port 6 kV Ring Wave (IEEE C62.41-1991 Cat. A3) on Output Ports and VoIP Port
Operating Temperature	-40 °C to +60 °C
Corrosion Resistance	Meets ANSI/SCTE Specification

### Ordering Guide

<b>VRA500B/AC</b>	4 Amplified Unity Gain Outputs + 1 VoIP Port. AC Power Adaptor Included
<b>ARPI-2000</b>	Power Inserter for Remote Powering
<b>ARAC-12N-5</b>	AC Power Adaptor, 120 VAC/60 Hz Input, 12 VDC Output, 500 mA

