

Features and Benefits

ANTRONIX®

VRA501-G2 1.2 GHz VoIP Residential Amplifier

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 and can be powered with a power inserter (included).



- **Passive VoIP Port**

The passive VoIP port provides continual service, 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 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.

- **Zinc Diecast Housing with Soldered Back Plate**

Provides corrosion resistance for both indoor and outdoor applications and repeatable 120 dB RFI shielding.

- **Power Inserter Included for Remote Powering**

The amplifier is optionally 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.

- **Extended Forward Bandwidth to 1.2 GHz**

- **Self-Terminating Internal Switch**

An internal self-terminating switch provides excellent bi-directional RF performance between the input port and VoIP port even when power is disrupted.

Electrical Specifications VoIP Residential Amplifier VRA501-G2

Forward Specifications		Freq (MHz)	Spec
Gain (Outputs 1–4) (dB max)		54-1218	0±1.5
Return Loss (dB)		54-1218	20 ¹
Port to Port Isolation (dB)		54-1218	22
Noise Figure (dB)		54-1218	4.0 ²
RFI Isolation (dB)		54-1218	-110
Group Delay (ns/3.58 MHz)	Ch. 2		30.0
	Ch. 3		10.0
	Ch. 4		5.0
	Ch. 5 & up		5.0
Distortions ²			
Composite Triple Beat (-dBc)			73
Composite Second Order (-dBc)			62
Cross Modulation (-dBc)			70
Return Specifications			
Gain (Outputs 1–4) (dB max)		5-42	0±1.0
Return Loss (dB)		5-42	20 ¹
Port to Port Isolation (dB)		5-42	25
Noise Figure (dB)		5-42	5.0 ²
Group Delay (ns/1.0 MHz)	5.0-6.5		20.0
	6.5-8.0		15.0
	8.0-36		5.0
	36-42		20.0
VoIP Port Specifications			
Insertion Loss (dB max)	5-1002		5.5
	1002-1218		6.0
Return Loss (dB)	5-1218		20

Notes:

1. Maintains input return loss specification, even when unpowered
2. Noise figure of gain block at room temperature.
3. +12 dBmV flat input, 79 analog channels from 54 MHz to 552 MHz. Digital channels from 552 MHz to 1218 MHz at 6 dB below the analog channels.

Specifications

VoIP Residential Amplifier

VRA501-G2

General	
Nominal Impedance	75 Ω
F-connector Type	ANSI/SCTE 01 Compliant Sealed Camport
Power Adaptor	15 VDC/500 mA output, UL, PTC short-circuit protected, self-resetting
Dimensions, Weight	4.9"W x 2.9"H x 1.35"D / 0.63 lb.
Environmental	
Pressure Seal	15 psi
Surge withstand	6 kV Combo Wave (IEEE C62.41-1991 Cat. B3) on all RF Ports 6 kV Wave (IEEE C62.41-1991 Cat. A3) on all RF Ports
Operating Temperature	-40 °C to 60 °C
Corrosion Resistance	Meets SCTE/ANSI Specification

Ordering Guide

VRA501-G2/ACP	4 amplified unity gain outputs + 1 VoIP port. AC power adaptor & power inserter included.
ARPI-2000M	Power inserter for remote powering
ARAC-15N-50E6	AC power adaptor, 120 VAC/60 Hz input, 15 VDC output, 500 mA, efficiency Level VI