

Features and Benefits

ANTRONIX®

MVRA501B MoCA Enhanced VoIP Residential Amplifier

With MoCA (Multimedia over Coax Alliance) having widespread deployment for high speed in-home networking, this amplifier has enhanced performance in the MoCA band to optimize the data rates for video sharing, multi-room DVR service, video conferencing and other MoCA applications. The amplifier has four amplified output ports and a reliable passive VoIP port. This amplifier utilizes the Antronix patented CamPort®. This auto-seizing F-port ensures maximum contact area and reliability for multimedia applications. The amplifier can be mounted in an all-ports-down configuration which allows for ease of installation in a NID enclosure. The integrated MoCA point of entry filter prevents MoCA signals from the output ports from interfering with an adjacent subscriber.



- **MoCA Enhanced**
Optimized RF performance in the MoCA band ensures maximum data rates for MoCA enabled devices. Integrated MoCA point of entry filter prevents MoCA signals from interfering with adjacent subscribers.
- **Passive VoIP Port for Critical Voice Service**
The passive VoIP port provides a passive 4.5 dB 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**
Amplifier can be mounted with all ports facing down configuration to provide clean wiring within a NID enclosure.
- **6 kV Surge Protection**
Unique 6kV surge protection without the use of arc gaps which may cause high impulse noise during discharge.
- **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 provides safe protection against short-circuits to minimize maintenance costs.

Electrical Specifications

MoCA Enhanced VoIP Residential Amplifier

Forward Specifications	Frequency (MHz)	Specifications
Gain (Outputs 1–4) (dB nom)	54-1002	+0
Return Loss (dB min)	54-1002	18
Port to Port Isolation (dB min)	54-1002	23
Noise Figure (dB max)	54-1002	7
Group Delay (ns/3.58 MHz)	Ch. 2	30
	Ch. 3	10
	Ch. 4 & up	5
Distortions¹		
Composite Triple Beat (dBc)		-75
Composite Second Order (dBc)		-63
Cross Modulation (dBc)		-77
Hum Modulation (dBc)		-80
Return Specifications	Frequency (MHz)	Specifications
Gain (Outputs 1–4) (dB nom)	5-42	+0
Return Loss (dB min)	5-42	18
Port to Port Isolation (dB min)	5-42	25
Noise Figure (dB max)	5-42	14
Group Delay (ns/1.5 MHz)	5.0-6.5	20
	6.5-40	10
	40-42	30
Distortions²		
Discrete Second Order (dBc)		-55
Discrete Third Order (dBc)		-55
Cross Modulation (dBc)		-65
MoCA Specifications	Frequency (MHz)	Specifications
Insertion Loss		
Output Port to Output Port (dB max)	1125-1525	35
Isolation		
Output Port to Input Port (dB min)	1125-1525	36
Input Port to Output Port (dB min)	1125-1525	26
VoIP Port Specifications	Frequency (MHz)	Specifications
Insertion Loss (dB nom)	5-1002	4.5
Return Loss (dB min)	5-1218	18

Notes:

1. +12 dBmV flat input, 79 analog channels from 55 MHz to 550 MHz. Digital channels from 550 MHz to 1000 MHz at 6 dB below the analog channels.
2. Two +55 dBmV carriers at 13 MHz and 19 MHz.

Specifications

MoCA Enhanced VoIP Residential Amplifier

General	
Nominal Impedance	75 Ω
F-Connector Type	ANSI/SCTE 01 Brass Compliant Sealed CamPort®
Power Adaptor	15 VDC/500 mA output, UL, PTC short-circuit protected
Dimensions/Weight	4.9" W x 3.0" H x 1.5" D/0.70 lb.
Environmental	
Pressure Seal	15 psi
Surge Withstand	6 kV/3 kA Combo Wave (IEEE C62.41-1991 Cat. B3) on RF input port 6 kV/200 A Ring Wave (IEEE C62.41-1991 Cat. A3) on all ports
RFI Screening Effectiveness	-100 dB
Operating Temperature	-40 °C to +60 °C
Corrosion Resistance	Meets ANSI/SCTE specification

Ordering Guide

MVRA501B/AC	4 amplified outputs + 1 VoIP port amplifier. Active return. AC power adaptor included.
ARPI-2000	Optional power inserter for remote powering
ARA-15N-50E6	AC power adaptor, 120 VAC/60 Hz Input, 15 VDC output, 500 mA, Efficiency Level VI