

# Features and Benefits

**ANTRONIX®**

**MVRA566EQ**

## 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, which maintains RF integrity even when power is disrupted to the amplifier. The passive VoIP port provides a MoCA path to the amplified output ports to ensure full MoCA compatibility. 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 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. The VoIP port also supports MoCA band communications to the amplified output ports.

- **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.

- **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.

- **Internal Cable Equalizer**

An internal cable equalizer provides 4.5 dB of tilt compensation associated with standard cable loss.

- **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 Combination Wave Surge Protection**

Unique 6 kV surge protection on all RF ports without the use of arc gaps which may cause high impulse noise during discharge.

- **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 provides safe protection against short-circuits to minimize maintenance costs.

## Electrical Specifications

### MVRA566EQ

Forward Specifications	Frequency (MHz)	Specifications
<b>Gain (Outputs 1–4)</b> (dB nom)	54-1002	
	54	+2.0
	1002	+6.0
<b>Forward Equalization Tilt</b>	54-1002	4.5
<b>Return Loss</b> (dB min)	54-1002	18 <sup>1</sup>
<b>Port to Port Isolation</b> (dB min)	54-1002	25
<b>Noise Figure</b> (dB max)	54-1002	8.0
<b>Group Delay</b> (ns/3.58 MHz)	Ch. 2	30
	Ch. 3	10
	CH. 4 & up	5
<b>Distortions<sup>2</sup></b>		
Composite Triple Beat (dBc)		-75
Composite Second Order (dBc)		-63
Cross Modulation (dBc)		-77
Hum Modulation (dBc)		-80
Return Specifications	Frequency (MHz)	Specifications
<b>Gain (Outputs 1–4)</b> (dB nom)	5-42	-6
	5-15, 40-42	18
<b>Return Loss</b> (dB min)	15-40	25
	5-15, 40-42	25
<b>Port to Port Isolation</b> (dB min)	15-42	28
	5-42	16
<b>Noise Figure</b> (dB max)	5.0-6.5	20
	6.5-40	10
<b>Group Delay</b> (ns/1.5 MHz)	40-42	30
	(ns/2.0 MHz)	
<b>Distortions<sup>3</sup></b>		
Discrete Second Order (dBc)		-55
Discrete Third Order (dBc)		-55
Cross Modulation (dBc)		-65
MoCA Specifications	Frequency (MHz)	Specifications
<b>Insertion Loss</b>		
Output Port to Output Port (dB max)	1125-1525	30
<b>Isolation</b>		
Output Port to Input Port (dB min)	1125-1525	36
Input Port to VoIP Port, Bi-directional (dB min)	1125-1525	30
Input Port to Output Port	1125-1225	23
	1225-1525	26
VoIP Port Specifications	Frequency (MHz)	Specifications
<b>Insertion Loss</b> (dB nom)	5-1002	4.5
<b>Return Loss</b> (dB min)	5-1002	18 <sup>1</sup>

**Notes:**

1. Input port and VoIP port return loss remains at 18 dB even upon power failure.
2. 12 dBmV flat input, 79 analog channels from 55 MHz to 550 MHz. Digital channels from 550 MHz to 1002 MHz at 6 dB below the analog channels.
3. Two +55 dBmV carriers at 13 MHz and 19 MHz.

## Specifications MVRA566EQ

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 1.5" D/0.72 lb.
Environmental	
Pressure Seal	15 psi
Surge Withstand	6 kV/3 kA Combo Wave (IEEE C62.41-1991 Cat. B3) on all 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

<b>MVRA566EQ/AC</b>	4 Amplified Outputs + 1 VoIP Port Amplifier Active Return. AC Power Adaptor Included
<b>ARPI-2000</b>	Optional Power Inserter for Remote Powering
<b>ARAC-15N-50E6</b>	AC Power Adaptor, 120 VAC/60 Hz Input, 15 VDC Output, 500 mA, Efficiency Level VI

