

# **ProSeries™ High Performance Dual/Quad 1x2 Composite Video Distribution Amplifiers**

*Rev B*

<u>Quad 1x2</u>	<u>Dual 1x2</u>	<u>Description</u>
11-111-125	11-111-124	Unity Gain, BNC, 12VAC/P5
11-111-225	11-111-224	Unit Gain, RCA, 12VAC/P5
11-113-125	11-113-124	Global Variable Gain, BNC, 12VAC/P5
11-113-225	11-113-224	Global Variable Gain, RCA, 12VAC/P5
11-114-125	11-114-124	Individual Variable Gain, BNC, 12VAC/P5
11-114-225	11-114-224	Individual Variable Gain, RCA, 12VAC/P5
11-511-125	11-511-124	Unity Gain, BNC, FlexPwr
11-511-225	11-511-224	Unit Gain, RCA, FlexPwr
11-513-125	11-513-124	Global Variable Gain, BNC, FlexPwr
11-513-225	11-513-224	Global Variable Gain, RCA, FlexPwr
11-514-125	11-514-124	Individual Variable Gain, BNC, FlexPwr
11-514-225	11-514-224	Individual Variable Gain, RCA, FlexPwr

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All Video Accessory Corporation (VAC) products have a full two year limited warranty. Exclusions to the warranty include but are not limited to damage to external components, power LED failure where the product continues to function, and electrical damage due to lightning. The warranty shall be void if any alteration or repair of a VAC product is attempted by anyone not authorized by VAC. This warranty is expressly in lieu of all other warranties express or implied, including warranties of merchantability and fitness for use, and of all other obligations or liabilities on the part of VAC, and it neither assumes nor authorizes any other person to assume for it any liability in connection with the sale of this product. This warranty shall not apply to the product or any part thereof subjected to accident, negligence, alteration, abuse, or misuse. No warranty whatsoever is made with respect to accessories or parts supplied by anyone other than VAC, and this warranty shall extend only to the original purchaser of this product. The warranty provided in this article is exclusive and in lieu of, and buyer hereby waives, all other remedies, express or implied, arising by law or otherwise, including consequential damages, whether or not occasioned by negligence of VAC. This warranty shall not be extended, altered or varied except by written instrument signed by VAC and buyer, and shall only apply within the boundaries of the continental United States. Liability of VAC is limited to repair or replacement at the option of VAC. Warranty work is to be sent to VAC. Freight charges will be the responsibility of the purchaser.



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## *Document History*

<u>REV</u>	<u>Date</u>	<u>Action</u>
B	May 26, 2014	Document update. Addition of Dual 1x2 to product family.
A	Nov 15, 2005	Initial release

## 1 Overview

The 11 Series Dual and Quad 1x2 Distribution Amplifier (DA's) provide two and four composite video 1x2 distribution amplifiers into one rugged and low-cost package. It is the ideal solution where a small number of video channels are required. Each of the four video channels within these products is a separate circuit, and each output is individually buffered. The units may be configured to have either BNC or RCA connectors. Unused outputs are not required to be terminated; nor will a short or open circuit condition on any output affect any other output.

## 2 Power Requirements

Two power formats are available supporting 12-13VAC (P5) or 10-28VAC/12-32VDC (FlexPwr). All ProSeries units are shipped with a 120VAC to 12VAC@600mA (P5 or Flex) power wall transformer adapter. The wall transformer provides a floating power supply and ground-loop isolation through the power supply connection. Be sure to specify the power configuration (P5 or FlexPwr) when ordering.

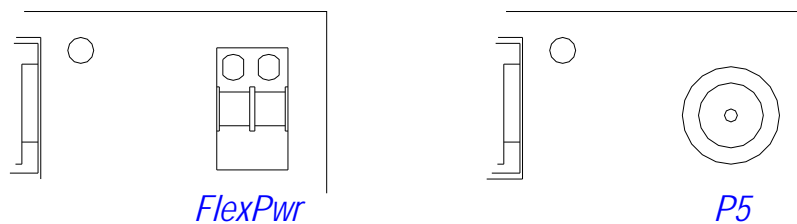


Figure 1: Power Configuration

**12V AC “P5”** – The 12VAC “P5” powered Brick™ is designed to function properly with an input power source of 11-13Volts AC. It's important to note that P5 bricks will not operate from a DC voltage. A 2.1mm round barrel/P5 style connector is used for the power input. If the input voltage is a grounded system, the center pin of the P5 connector is the power connection and the barrel is referenced to the common/ground.

**FlexPwr** – The FlexPwr powered Brick™ is designed to function properly with an input power of 10-28Volts AC (ungrounded) or 12-32Volts DC (grounded or ungrounded). Phoenix Contact #1881448 connector is used for the power input.

## 3 Video Inputs

Each input is internally terminated to 75Ω. Short or open circuit on any input has no effect on any other input. Video signals with excessive DC component (or offset) such as those generated by many computer video boards should be avoided or may require the input to be AC coupled to block the DC component and prevent clipping of the signal. The 1Vpp video signal should be within ±1V. Ideally the video signals blanking level should be clamped to 0 Volts, although an AC coupled signal is also acceptable.

### NOTE:

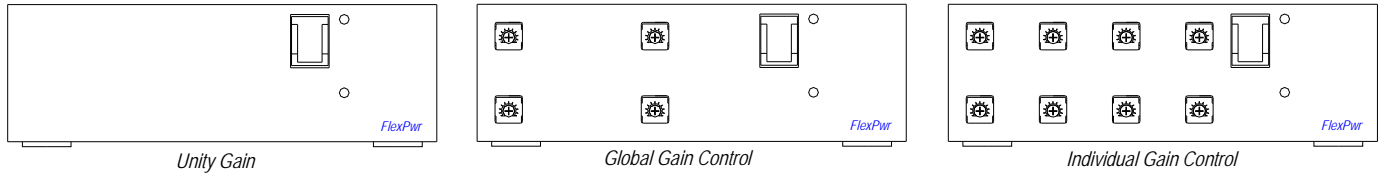
Please note that all DA circuits in the product share a common ground;  
VAC does not recommend Quad DA products for applications requiring ground isolation for each channel.

## 4 Video Outputs

Each output has a series impedance of 75Ω. Unused outputs are not required to be terminated for proper operation; nor will a short or open circuit condition on any output affect any other output. Use of terminators on unused outputs provides additional protection from Electro-Static Discharge (ESD) events.

## 5 Gain Control

There are three gain configurations; Unity, Global, and Individual.



**Figure 2: Gain Configurations**

As shown in Figure 2: Unity/1X gain does not require any controls. Global Gain uses one trim pot to adjust gain (0.75X-1.75X) of each output group. Individual gain further expands control permitting (0.75X-1.75X) adjustment for each output.

## 6 Specifications:

Video:  $Z_{in/out}$  75 $\Omega$  - DC coupled  
Bandwidth DC-200MHz  
Format NTSC/PAL (1V<sub>p-p</sub>, 0V DC offset)  
 $V_{in}$  0.5-2V<sub>p-p</sub> (within  $\pm 1V$  range from ground)  
Gain *Unity – Unity/1X*  
*Global Variable – 0.75X - 1.75X*  
*Individual – 0.75X - 1.75X*

Connectors: BNC or RCA

Power LED: Green (Power Status)

Operating Temperature: -40°C to +85°C

Power: P5: 10-28V AC  
Flex<sub>AC</sub>: 10-32V AC  
Flex<sub>DC</sub>: 12-32V DC

Supply Current:

Part Number:	Pwr	12VAC	12VDC	28VDC
11-1xx-x25	4.2W	<350mA		
11-5xx-x25	2.7W		<230mA	

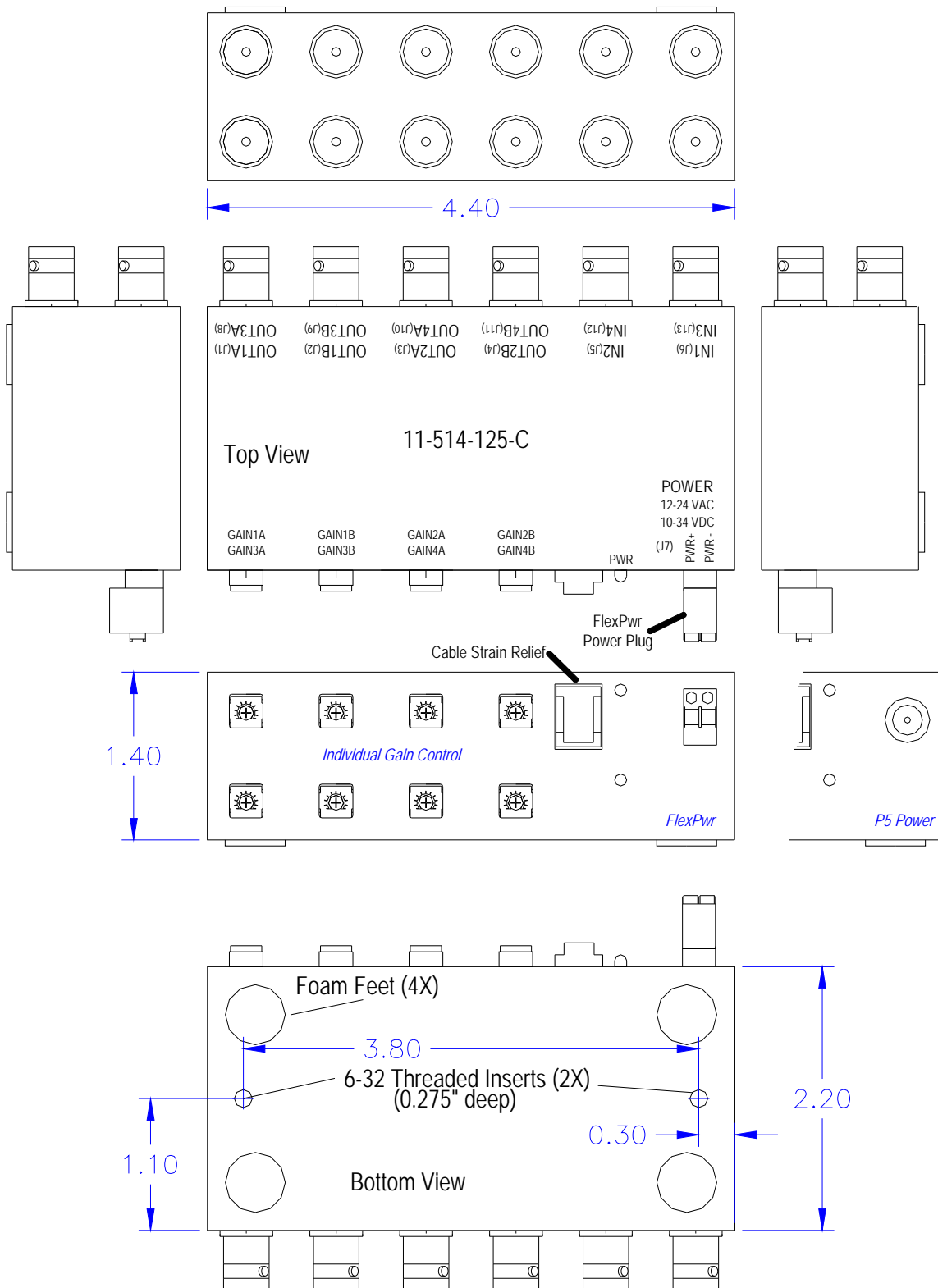
Power Connector: 3.2mm 2 pin Mating plug (Phoenix Contact #1881448)

Package Dimensions:

Part Number:	Dimensions	Weight
11-xxx-x24	4.4" x 2.2" x 0.650"	8oz
11-xxx-x25	4.4" x 2.2" x 1.40"	17oz

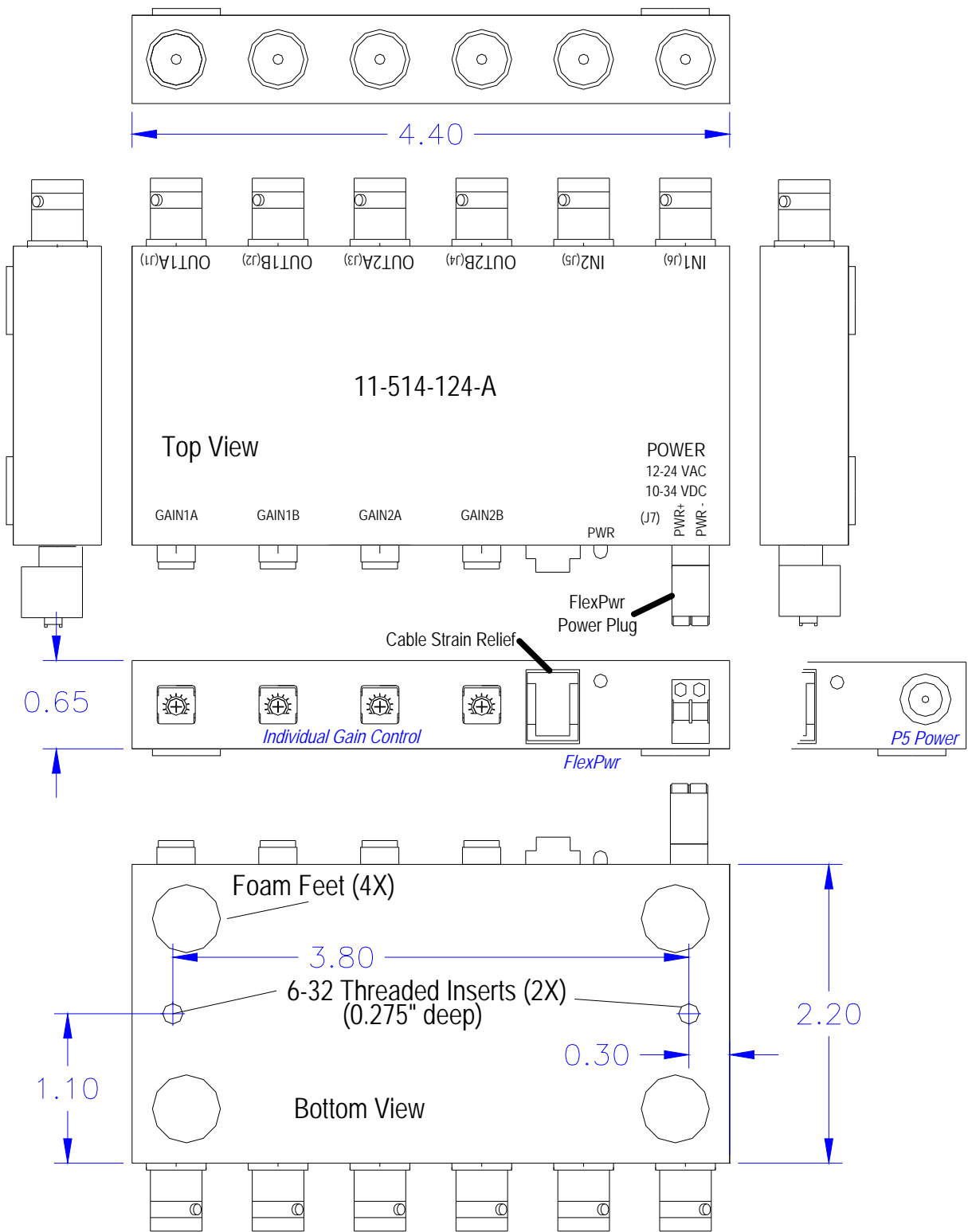
Mounting: 6-32 threaded inserts (2)

## 7 Mechanical



**Figure 3: 11-514-125  
(Quad 1x2 DA, FlexPwr, Individual Gain, & BNC)**





**Figure 4: 11-514-124  
(Dual 1x2 DA, FlexPwr, Individual Gain, & BNC)**