# Signal Vision®
# Subscriber Drop Products NAR Catalog


Drop Passives
Subscriber Amplifiers
Power Adapters
Interconnect & Ground Block Products
Intelligent Taps
Inline Accessories
Technical Information

NORTH AMERICA

CommScope®

CommScope® Signal Vision® Subscriber Drop Products NAR Catalog

CommScope®

## We Thank You...

for your interest in CommScope® Signal Vision® products. You are the reason we are a world leader in broadband products. Our catalog includes the products which you request most often. However, if you do not see the product that you need listed in this catalog, contact the sales representative in your area or contact our Customer Service Department.

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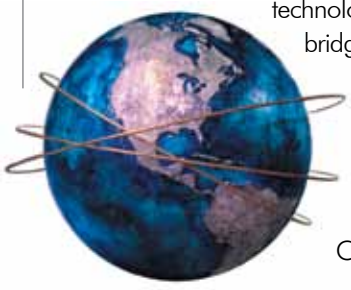
# CommScope Overview

## Our Strategy Is Simple - Quality Products At Competitive Prices Delivered With Attentive, Personal Service

Advanced coax connections. Blazing fiber pipes. Reliable subscriber drop products. No wonder more broadband operators count on CommScope for quality HFC products than any other supplier. They share a common belief that when you make us your supplier you get a suite of services and products offered by only one company– the industry's technology leader – CommScope. We bridge the gap between yesterday's analog systems and next generation digital networks with products engineered specifically for each access point within a Hybrid Fiber Coax (HFC) topology.



## Known for Exceptional Customer Service

CommScope is a solid business partner with an impressive service track record. Our professional account teams are aligned to respond quickly and efficiently. Our vast network of trained sales associates and distributors embody experience and professionalism combined with a commitment to finding the right solution for every customer.

## Research & Development

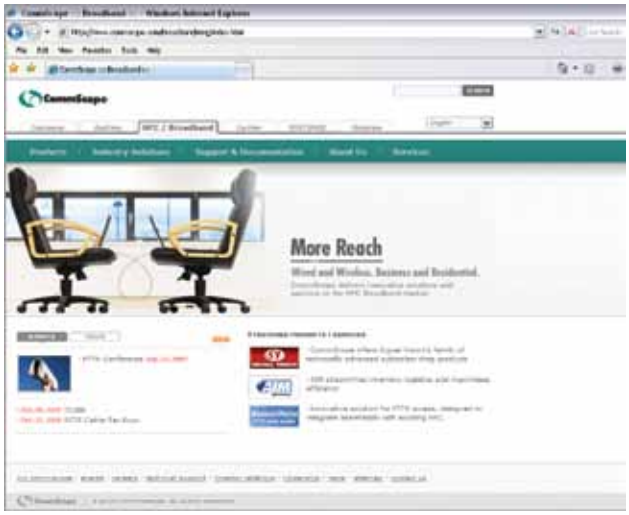
CommScope is dedicated to innovation. Our engineers participate in industry standards groups and critical committees. Bringing to market the most comprehensive choice of quality solutions remains a primary focus. Our products meet the requirements of existing electronics, yet empower service providers like you to push the limits of services offered by means of scalable architecture and optimal throughput.

## Unparalleled Quality and Innovation

With over 1,300 patents, we offer thousands of cable, conduit, components and connectivity options. With more than 30 years experience, every product features details manufactured to exacting standards. Only high quality materials and products manufactured within tight tolerances are worthy of bearing the CommScope name. Production operations located on 5 continents produce high performance solutions selling into more than 130 countries.

## Experienced Technical Staff

Our customer commitment extends to strong field and lab support coupled with installation training materials offered in both English and Spanish. Tap into CommScope's deep knowledge base and support provided at no additional cost. You will also find a wide array of technical documents, white papers and software online at www.commscope.com




## Strong Industry Involvement

CommScope has long been a supporter of broadband industry trade associations. We exhibit in many industry-tradeshows which demonstrates our commitment to educating our customer base and bring to market new product enhancements and solutions that complement our core product portfolio.

### Cable Transport® – The Cable Industry's Truck Fleet

CommScope efficiently and affordably delivers or moves inventory with impressive on-time delivery performance and reliable 24-hour disaster recovery response.


### Key Customer Service Contact Numbers

| | |
|---|---|
| Toll Free Telephone Number | 1-800-982-1708 |
| Telephone | 828-324-2200 |
| Domestic Fax | 828-328-3400 |
| International Fax | 828-323-4989 |
| Email | custserv@commscope.com |

### AIM® – Advantage Inventory Management

This collaborative planning, forecasting and supply replenishment tool adds value and helps manage inventory more effectively. A customized solution, which is easy to implement, AIM improves inventory turns and reduces costs through the use of simple bar-coding technology. This unique program further enhances CommScope's reputation for offering the highest standards of customer service.


**Please Note:** The products mentioned within this catalog are by no means comprehensive. To request more information on any CommScope product or service, please contact your sales representative or call CommScope's Customer Service Center at 1-800-982-1708.

# Signal Vision® Product Overview

## Premium Subscriber Drop Products

CommScope proudly offers Signal Vision's family of technically advanced subscriber amplifiers, splitters, direction couplers, intelligent taps, grounding products and locking terminators.

Signal Vision products are a natural complement to our core cable and conduit products as well as BrightPath® products. This portfolio honors CommScope's ongoing commitment to superior HFC performance and reliability. Signal Vision's high quality products are engineered to SCTE standards and are backed by a 5-year warranty and a 30-year history of reliability. A generous stocking program ensures immediate delivery of most products.

## Subscriber Amplifiers – Including NEW VoIP Amplifier

- Excellent performance and reliability with ultra low-noise signal amplification and 6kV surge protection
- Space saving miniature package
- Unique positive tilt compensates for higher attenuation at higher frequencies
- Patent pending VoIP bypass amplifier preserves lifeline telephony service in the event of power failure
- Amplifiers are available in 1, 2, 4 and 8-port configurations

## Drop Passives – Superior Performance to 1 GHz

- Innovative four-sided center conductor contact provides superior retention and electrical performance
- Flat-end ports for proper ground plane match
- Better than 120 dB RFI
- Two layers of protection against corrosion

## Intelligent Taps – A New Approach, A Better Solution

- Execute services immediately without generating a truck roll
- Select filtering options to manage reverse path noise
- Compatible with industry standard billing systems
- Telephone filter for 911 service
- Favorable payback

## Interconnect Products - Locking Terminators, Ground Blocks and F-81s

- Nickel plated brass locking terminator with 35 dB return loss, compatible with GTT-type tools
- Industry-leading F-81s and ground blocks with unique, patented ground clamp

## Inline Products - Equalizers, Cable Simulataors and Attenuators

- Inline body constructed from brass with bright tin plating
- Innovative four-sided center conductor contact provides superior retention and electrical performance
- Flat-end ports for proper ground plane match

The idea and concept of a 360° contact is appealing, but is not feasible in the cable telecommunications world where feed-thru 75Ω connectors are utilized.

The first problem to overcome is the size variations of center conductors.

- Between series 59 coaxial cable and series 6 coaxial cable, center conductor sizes could vary from .031" to .042". Providing even contact pressure becomes extremely challenging when this size variation is involved in fitting a round tube-type contact over a round center conductor.

Add to this the effect of cutting the center conductor, which can be solid copper or copper clad steel.

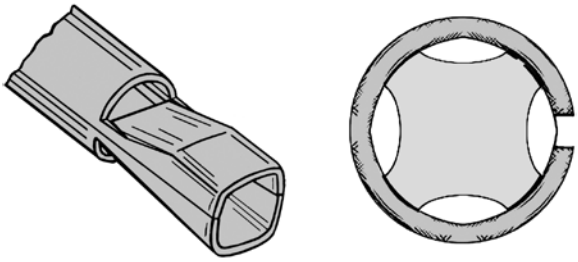
- This cutting always destroys the conical end (see photo). The two outcroppings on each side become the contact points within the round contact. This also diminishes the electrical performance of the contact.

**(Effects on center conductor when cut by a pair of diagonals)**

**Tests have shown two things:**

1. A conical contact when tested using a machined mating contact showed a Return Loss of 31 dB. The same contact when using first type 6 cable then F59 cable showed results ranging from 23 to 28 dB.

2. The pullout (contact pressure) changes dramatically when series 6 coaxial cable is followed by a series 59 coaxial cable center conductor. The change seen in testing can be as much as 50%. While many manufacturers claim to use conical contacts (360°), with closer inspection what is usually found to be true is that on the inside of the round contact is a spring that is used to vary conductor size. These springs vary in design for 2 to 4 points or dimples in the contact wall to wave springs offering less contact and more impedance transfer than necessary (see example drawing).



It is recommended that when offered a 360° contact, the utilization of a good, high-powered magnifying glass and a Return Loss test using field-prepped center conductors will yield a true picture of how the product actually functions, and the electrical parameters that will be available in field use.

# Signal Vision® 1 GHz Digital Splitters, Horizontal

## Features

- Innovative four-sided center conductor contact provides superior retention and electrical performance
- Utilizes surface mount technology
- 6kV ring wave surge protection on all ports
- Intermod protected
- 40 dB port-to-port isolation in the return band
- Flat-end "F" ports for proper ground plane match
- Better than 120 dB RFI protection
- Moisture sealed housing (15psi) with three layers of protection against corrosion
- Solder sealed proprietary backplate
- No casting lines on ports
- Also available in vertical, power passing, mini and wall mount versions

## Ordering Information

| | |
|---|---|
| **SV-2G** | Splitter, 2-Way |
| **SV-3G** | Splitter, 3-Way |
| **SV-3BG** | Splitter, 3-Way Balanced |
| **SV-4G** | Splitter, 4-Way |
| **SV-8G** | Splitter, 8-Way |
| **SV-2GAPD** | Splitter, 2-Way, All Ports Down |


**SV-2G**
2-Way Splitter


**SV-3G**
3-Way Splitter


**SV-3BG**
3-Way Balanced Splitter


**SV-4G**
4-Way Splitter


**SV-2GAPD**
2-Way Splitter


**SV-8G**
8-Way Splitter

*Meets or exceeds: ANSI SCTE 153/IEEE C 62-41 A3 (Ring Wave)*

| Universal Specifications | |
|---|---|
| **Bandwidth** | 5-1002 MHz |
| **Operating Temperature Range** | -40° F to +140° F (-40° C to +60° C) |
| **Frequency Response** | ± 0.3 dB (8-way: ± 0.4 dB) |
| **RFI** | 120 dB min. |
| **Surge Protection** | IEEE Category A3<br>(6000V, 200Amp, Ring Wave) |
| **Spurious Signals and 2nd Order Harmonics** | <-60 dBmV |

**Product Line Specifications**

| | SV-2G<br>SV-2GAPD | SV-3G | SV-3BG | SV-4G | SV-8G |
|---|---|---|---|---|---|
| **Insertion Loss** (maximum) | | | | | |
| **5-450 MHz** | 3.5 dB | 3.5/7.0 dB | 5.4 dB | 6.9 dB | 10.5 dB |
| **450-1002 MHz** | 3.9 dB | 3.9/7.8 dB | 6.1 dB | 7.8 dB | 11.5 dB |
| **Return Loss** (minimum) | | | | | |
| **5-45 MHz** | 25 dB | 25 dB | 25 dB | 25 dB | 25 dB |
| **50-1002 MHz** | 22 dB | 22 dB | 22 dB | 22 dB | 22 dB |
| **Isolation** (minimum) | | | | | |
| **15-45 MHz** | 40 dB | 40 dB | 40 dB | 40 dB | 35 dB |
| **50-300 MHz** | 35 dB | 35 dB | 35 dB | 35 dB | 30 dB |
| **300-1002 MHz** | 30 dB | 30 dB | 30 dB | 30 dB | 30 dB |

*Specifications subject to change without notice*

# Signal Vision® 1 GHz Digital Splitters, Vertical

## Features

- Innovative four-sided center conductor contact provides superior retention and electrical performance
- Utilizes surface mount technology
- 6kV ring wave surge protection on all ports
- Intermod protected
- 40 dB port-to-port isolation in the return band
- Flat-end "F" ports for proper ground plane match
- Better than 120 dB RFI protection
- Moisture sealed housing (15psi) with three layers of protection against corrosion
- Solder sealed proprietary backplate
- No casting lines on ports
- Also available in horizontal, power passing, mini and wall mount versions

## Ordering Information

| | |
|---|---|
| **SV-V2G** | Vertical Splitter, 2-Way |
| **SV-V3G** | Vertical Splitter, 3-Way |
| **SV-V4G** | Vertical Splitter, 4-Way |
| **SV-V6G** | Vertical Splitter, 6-Way |


**SV-V2G**
2-Way Splitter


**SV-V3G**
3-Way Splitter


**SV-V4G**
4-Way Splitter


**SV-V6G**
6-Way Splitter

*Meets or exceeds: ANSI SCTE 153/IEEE C 62-41 A3 (Ring Wave)*

| Universal Specifications | |
|---|---|
| **Bandwidth** | 5-1002 MHz |
| **Operating Temperature Range** | -40° F to +140° F (-40° C to +60° C) |
| **Frequency Response** | ±0.3 dB |
| **RFI** | 120 dB minimum |
| **Surge Protection** | IEEE Category A3<br>(6000V, 200Amp, Ring Wave) |
| **Spurious Signals and 2nd Order Harmonics** | <-60 dBmV |

**Product Line Specifications**

| | SV-V2G | SV-V3G | SV-V4G | SV-V6G |
|---|---|---|---|---|
| **Insertion Loss (maximum)** | | | | |
| **5-550 MHz (1 port)** | 3.6 dB | 3.6/7.2 dB | 7.2 dB | 8.9 dB |
| **550-1002 MHz (1 port)** | 4.0 dB | 4.0/8.0 dB | 8.0 dB | 9.3 dB |
| **Return Loss (minimum)** | | | | |
| **5-45 MHz** | 22 dB | 22 dB | 22 dB | 22 dB |
| **50-1002 MHz** | 22 dB | 22 dB | 22 dB | 22 dB |
| **Isolation* (minimum)** | | | | |
| **15-45 MHz** | 40 dB | 40 dB | 40 dB | 35 dB |
| **50-300 MHz** | 35 dB | 35 dB | 35 dB | 30 dB |
| **300-1002 MHz** | 30 dB | 30 dB | 30 dB | 30 dB |

**Utility Isolation - All ports meet same specifications*

*Specifications subject to change without notice*

# Signal Vision® 1 GHz Indoor/Outdoor Power Passing Splitters

## Features

- Innovative four-sided center conductor contact provides superior retention and electrical performance
- Utilizes surface mount technology
- Capacitor protected ports
- Intermod protected
- 40 dB port-to-port isolation in the return band
- Flat-end "F" ports for proper ground plane match
- Better than 120 dB RFI protection
- Moisture sealed housing (15psi) with three layers of protection against corrosion
- Solder sealed proprietary backplate
- No casting lines on ports

## Ordering Information

| | |
|---|---|
| **SV-2GPA** | Power Passing Splitter, 2-Way |
| **SV-3GPA** | Power Passing Splitter, 3-Way |
| **SV-4GPA** | Power Passing Splitter, 4-Way |


**SV-2GPA**
2-Way Power Passing Splitter


**SV-3GPA**
3-Way Power Passing Splitter


**SV-4GPA**
4-Way Power Passing Splitter

*Meets or exceeds: ANSI SCTE 153/IEEE C 62-41 A3 (Ring Wave)*

| Universal Specifications | |
|---|---|
| **Bandwidth** | 5-1002 MHz |
| **Operating Temperature Range** | -40° F to +140° F (-40° C to +60° C) |
| **Frequency Response** | ±0.3 dB |
| **RFI** | 120 dB minimum |
| **Spurious Signals and 2nd Order Harmonics** | <-60 dBmV |

**Product Line Specifications**

| | SV-2GPA | | SV-3GPA | | SV-4GPA | |
|---|---|---|---|---|---|---|
| | Non-Powered | Powered | Non-Powered | Powered | Non-Powered | Powered |
| **Insertion Loss** (maximum) | | | | | | |
| **5-550 MHz** (1 port) | 3.6 dB | 3.7 dB | — | 3.7 dB | 6.9 dB | 7.1 dB |
| **550-1002 MHz** (1 port) | 3.9 dB | 4.1.dB | — | 4.1 dB | 7.8 dB | 8.2 dB |
| **5-550 MHz** (2 ports) | — | — | 7.0 dB | — | — | — |
| **550-1002 MHz** (2 ports) | — | — | 7.9 dB | — | — | — |
| **Return Loss** (minimum) | | | | | | |
| **5-45 MHz** | 25 dB | | 25 dB | | 25 dB | |
| **50-1002 MHz** | 22 dB | | 22 dB | | 22 dB | |
| **Isolation*** (minimum) | | | | | | |
| **15-45 MHz** | 40 dB | | 40 dB | | 40 dB | |
| **50-300 MHz** | 35 dB | | 35 dB | | 35 dB | |
| **300-1002 MHz** | 30 dB | | 30 dB | | 30 dB | |

**Utility Isolation - All ports meet same specifications*

*Specifications subject to change without notice*

# Signal Vision® 1 GHz Indoor/Outdoor Splitters

## Features

- Innovative four-sided center conductor contact provides superior retention and electrical performance
- Utilizes surface mount technology
- 6kV ring wave surge protection on all ports
- Intermod protected
- 40 dB port-to-port isolation in the return band
- Flat-end "F" ports for proper ground plane match
- Better than 120 dB RFI protection
- Moisture sealed housing (15psi) with three layers of protection against corrosion
- Solder sealed proprietary backplate
- No casting lines on ports
- Also available in horizontal, vertical and power passing, versions


**SV-2MG**
Two Way Mini Splitter

## Ordering Information

| | |
|---|---|
| **SV-2MG** | Splitter, 2-Way, Mini |
| **SV-2WG** | Splitter, 2-Way, Wall-Mount |


**SV-2WG**
Two Way Wall-Mount Splitter

## Universal Specifications

| | |
|---|---|
| **Bandwidth** | 5-1002 MHz |
| **Insertion Loss** (maximum) | |
| **5-450 MHz** | 3.5 dB |
| **450-1002 MHz** | 3.9 dB |
| **Frequency Response** | ±0.3 dB |
| **Return Loss** (minimum) | |
| **5-45 MHz** | 25 dB |
| **50-1002 MHz** | 22 dB |
| **Isolation*** | |
| **15-45 MHz** | 35 dB minimum |
| **50-750 MHz** | 30 dB minimum |
| **750-1002 MHz** | 25 dB minimum |
| **RFI** | 120 dB minimum |
| **Spurious Signals and 2nd Order Harmonics** | <-60 dBmV |

**Utility Isolation - All ports meet same specifications*

*Specifications subject to change without notice*

*Meets or exceeds: ANSI SCTE 153/IEEE C 62-41 A3 (Ring Wave)*

## Features

- Innovative four-sided center conductor contact provides superior retention and electrical performance
- Utilizes surface mount technology
- 6kV ring wave surge protection on all ports
- Intermod protected
- Flat-end "F" ports for proper ground plane match
- Better than 120 dB RFI protection
- Moisture sealed housing (15psi) with three layers of protection against corrosion
- Solder sealed proprietary backplate
- No casting lines on ports


**SV-DCxxG**
T-Type Directional Coupler

## Ordering Information

| | |
|---|---|
| **SV-DCxxG** | Horizontal Directional Coupler |
| **SV-DCWxxG** | Vertical Directional Coupler |

*xx represents dB value*

*Options include 6, 9, 12, 16, 20, 23, 26 dB values for SV-DCxxG*

*Options include 6, 9, 12, 16, 20, 23 26, 30 dB values for SV-DCWxxG*

*Options also include 4 dB value, use part number SV-2MG for T-Type Directional Coupler and SV-2WG for Wall-Mount Directional Coupler for ordering*


**SV-DCWxxG**
Wall-Mount Directional Coupler

## Universal Specifications

| | |
|---|---|
| **Bandwidth** | 5-1002 MHz |
| **Operating Temperature Range** | -40° F to +140° F (-40° C to +60° C) |
| **Return Loss** | 22 dB minimum |
| **RFI** | 120 dB minimum |
| **Surge Protection** | IEEE Category A3<br>(6000V, 200Amp, Ring Wave) |
| **Spurious Signals and 2nd Order Harmonics** | <-60 dBmV |

## Product Line Specifications

| | **4 dB | 6 dB | 9 dB | 12 dB | 16 dB | 20 dB | 23 dB | 26 dB | ***30 dB |
|---|---|---|---|---|---|---|---|---|---|
| **Insertion Loss (maximum)** | 3.9 dB | 2.5 dB | 2.2 dB | 1.2 dB | 1.0 dB | 1.0 dB | .85 dB | .85 dB | .85 dB |
| **Isolation (minimum)** | | | | | | | | | |
| **15-40 MHz** | 35 dB | 35 dB | 35 dB | 35 dB | 40 dB | 40 dB | 40 dB | 40 dB | 40 dB |
| **50-300 MHz** | 30 dB | 30 dB | 30 dB | 35 dB | 35 dB | 35 dB | 35 dB | 35 dB | 35 dB |
| **300-1002 MHz** | 25 dB | 28 dB | 30 dB | 28 dB | 30 dB | 30 dB | 30 dB | 30 dB | 30 dB |
| **Tap Response** | ±0.3 dB | ±0.75 dB | ±0.75 dB | ±0.75 dB | ±0.75 dB | ±0.75 dB | ±1.0 dB | ±1.0 dB | ±1.0 dB |

***Options also include 4 dB value, use part number SV-2MG for T-Type Directional Coupler and SV-2WG for Wall-Mount Directional Coupler for ordering*

****Only for SV-DCW 30 dB*

*Specifications subject to change without notice*

*Meets or exceeds: ANSI SCTE 153/IEEE C 62-41 A3 (Ring Wave)*

# Signal Vision® Subscriber Amplifiers

## Features

- Available in 42/53 (NTSC) mid split
- 6 kV protection (IEEE C-62-41-B3 on input, A3 on output)
- Flat-end brass "F" ports with four-sided center conductor contact
- Unique positive tilt compensates for greater attenuation at higher frequencies
- LED Power Indicator
- Aluminum die-cast Nano housing with three layers of plating protection
- Aluminum die-cast housing with baked enamel finish
- Neoprene moisture and mesh RFI gasket
- Space saving miniature package
- All amps can be powered through a designated output port with optional power inserter
- Available with 1, 2, 4 and 8 Outputs

## Ordering Information

| | |
|---|---|
| **SVA-10PRS*** | Subscriber Amp, 10 dB, Forward Gain, 1-Output |
| **SVA-15PRSN*** | Subscriber Amp, 15 dB, Forward Gain, Nano, 1-Output |
| **SVA-15PRSMS*** | Subscriber Amp, 15 dB, Forward Gain, Mini, All Ports Down, 1-Output |
| **SVA-152PRSM*** | Subscriber Amp, 15 dB Forward Gain, Mini, 2-Output |
| **SVA-104PRS*** | Subscriber Amp, 10 dB, Forward Gain, 4-Output |
| **SVA-154PRS*** | Subscriber Amp, 15 dB, Forward Gain, 4-Output |
| **SVA-158PRS*** | Subscriber Amp, 15 dB, Forward Gain, 8-Output |
| **SVA-10RPFS*** | Subscriber Amp, 10 dB, Reverse Gain, 1-Output |
| **SV-PI** | Power Inserter |

**Add "I" to include Power Inserter*


**SVA-15PRSN**
1-Port Nano Subscriber Amplifier


**SVA-15PRSMS**
1-Port Mini Subscriber Amplifier


**SVA-152PRSM**
2-Port Mini Subscriber Amplifier


**SVA-154PRS**
4-Port Subscriber Amplifier

**SV-PI**
Power Inserter


**SVA-10RPFS**
1-Port Reverse Subscriber Amplifier


**SVA-158PRS**
8-Port Subscriber Amplifier

| Universal Specifications | |
|---|---|
| **Bandwidth** | NTSC 5-42 MHz Reverse, 53-1002 MHz Forward |
| **Operating Temperature Range** | -40° F to +140° F (-40° C to +60° C) |
| **RFI** | 100 dB minimum |
| **Surge Protection** | IEEE C-62-41-B3 on input,<br>A3 on outputs |
| **Response Flatness** | Forward: ± 0.75 dB<br>Reverse: ± 0.5 dB |
| **Distortion Performance** | 77 analog, 124 digital - 256 QAM ch. loading<br>C/N: 70 dB minimum<br>CSO: -65 dB mininum<br>CTB: -80 dB minimum<br>X-Mod: -75 dB minimum |
| **Hum Modulation** | -75 dB minimum |
| **Group Delay** | 20 nSec maximum @ ch. 2 (3.58 MHz span)<br>5 nSec maximum @ ch. 4-6 (3.58 MHz span) |
| **Isolation** | Power/RF Out: 60 dB minimum (5-1002 MHz)<br>Out/Out: 25 dB minimum (5-1002 MHz) |
| **Powering Requirements** | 12 VDC/200 mA<br>18 VDC/300 mA |
| **AC/DC Power Supply** | UL certified, surge protected |

| Product Line Specifications | SVA-10PRS | SVA-15PRSN<br>SVA-15PRSMS | SVA-152PRSM | SVA-104PRS | SVA-154PRS | SVA-158PRS | SVA-10RPFS |
|---|---|---|---|---|---|---|---|
| **Number of Ports** | 1 | 1 | 2 | 4 | 4 | 8 | 1 |
| **Gain** | | | | | | | |
| **Forward** | 10 dB | 15 dB | 11 dB | 2 dB | 7 dB | 3 dB | N/A |
| **Reverse** | N/A | N/A | N/A | N/A | N/A | N/A | 10 dB |
| **Forward Path Insertion Loss** (max) | N/A | N/A | N/A | N/A | N/A | N/A | 1.5dB |
| **Return Path Insertion Loss** (max) | 1.2 dB | 1.2 dB | 4.5 dB | 8 dB | 8 dB | 11.5 dB | N/A |
| **Return Loss** | | | | | | | |
| **Forward** | 20 dB | 22 dB | 22 dB | 20 dB | 22 dB | 22 dB | 22 dB |
| **Reverse** | 20 dB | 21 dB | 21 dB | 20 dB | 21 dB | 21 dB | 22 dB |
| **Noise Figure** (maximum at 1 GHz) | 3.5 dB | 3.5 dB | 4.5 dB | 5.0 dB | 5.0 dB | 5.0 dB | 6.0 dB |

| SV-PI Drop Power Inserter Specifications | |
|---|---|
| **Frequency Range** | 5-1002 MHz |
| **Port-to-Port Isolation** | 25 dB minimum |
| **Insertion Loss** | 0.5 dB maximum |
| **Return Loss** | 20 dB minimum |
| **Voltage Pass** | 8-18 VDC |

*Specifications subject to change without notice*

# Signal Vision® 2-Way Subscriber Amplifiers

## Features

- 15 dB forward and 10 dB reverse gain
- Available in 42/53 (NTSC) mid split
- 6 kV protection (IEEE C-62-41-B3 on input, A3 on output)
- Flat-end brass "F" ports with four-sided center conductor contact
- Unique positive tilt compensates for greater attenuation at higher frequencies
- LED Power Indicator
- Aluminum die-cast housing with baked enamel finish
- Neoprene moisture and mesh RFI gasket
- Space saving miniature package
- All amps can be powered through a designated output port with optional power inserter
- Available with 1, 2, 4 and 8 Outputs

## Ordering Information

| | |
|---|---|
| **SVA-1510AFRSM*** | Subscriber Amp, 15dB Forward Gain, 10 dB Reverse Gain, Mini, 1-Output |
| **SVA-15102AFRSS*** | Subscriber Amp, 15dB Forward Gain, 10 dB Reverse Gain, All Ports Down, 2-Output |
| **SVA-15104AFRS*** | Subscriber Amp, 15dB Forward Gain, 10 dB Reverse Gain, 4-Output |
| **SVA-15108AFRS*** | Subscriber Amp, 15dB Forward Gain, 10 dB Reverse Gain, 8-Output |
| **SV-PI** | Power Inserter |

**Add "I" to include Power Inserter*


**SVA-1510AFRSM**
Subscriber Amplifier


**SVA-15102AFRSS**
Subscriber Amplifier


**SVA-15108AFRS**
Subscriber Amplifier


**SVA-15104AFRS**
Subscriber Amplifier

**SV-PI**
Power Inserter

| Universal Specifications | |
|---|---|
| **Bandwidth** | NTSC 5-42 MHz Reverse, 53-1002 MHz Forward |
| **Operating Temperature Range** | -40° F to +140° F (-40° C to +60° C) |
| **RFI** | 100 dB minimum |
| **Surge Protection** | IEEE C-62-41-B3 on input,<br>A3 on outputs |
| **Response Flatness** | Forward: ± 0.75 dB<br>Reverse: ± 0.5 dB |
| **Return Loss** | Forward 20 dB minimum<br>Reverse 20 dB minimum |
| **Distortion Performance** | 77 analog, 124 digital - 256 QAM ch. loading<br>C/N: 70 dB minimum<br>CSO: -62 dB minimum<br>CTB: -75 dB minimum<br>X-Mod: -73 dB minimum |
| **Hum Modulation** | -75 dB minimum |
| **Group Delay** | 20 nSec maximum @ ch. 2 (3.58 MHz span)<br>5 nSec maximum @ ch. 4-6 (3.58 MHz span) |
| **Isolation** | Power/RF Out: 55 dB minimum (5-1002 MHz)<br>Out/Out: 25 dB minimum (5-1002 MHz) |
| **Powering Requirements** | 15 VDC/300 mA |
| **AC/DC Power Supply** | UL certified, surge protected |

| Product Specifications | SVA-1510AFRSM | SVA-15102AFRSS | SVA-15104AFRS | SVA-15108AFRS |
|---|---|---|---|---|
| **Number of Ports** | 1 | 2 | 4 | 8 |
| **Gain** | | | | |
| **Forward** | 15 dB | 11 dB | 7 dB | 3 dB |
| **Reverse** | 10 dB | 6 dB | 4 dB | 0 dB |
| **Noise Figure (maximum)** measured at amplifier output | 4.5 dB (52-1002 MHz) | 4.5 dB (52-1002 MHz) | 5.0 dB (52-1002 MHz) | 5.0 dB (52-1002 MHz) |
| | 10.5 dB (5-42 MHz) | 13.5 dB (5-42 MHz) | 16.5 dB (5-42 MHz) | 22.5 dB (5-42 MHz) |

*Specifications subject to change without notice*

# Signal Vision® Subscriber Amplifiers with Passive VoIP Port

## Features

- Non-interruptible Passive VoIP port preserves lifeline telephony service in the event of a power failure
- Available in 42/53 (NTSC) mid splits
- 6 kV protection (IEEE C-62-41-B3 on input, A3 on output)
- Flat-end brass "F" ports with four-sided center conductor contact
- LED Power Indicator
- Aluminum die-cast housing with baked enamel finish
- Neoprene moisture and mesh RFI gasket
- All amps can be powered through a designated output port with optional power inserter
- Available with 2, 4 and 8 Outputs
- ISO Certified Production Facility

## Ordering Information

| | |
|---|---|
| **SVA-152PRSVPM** | Passive VoIP Amplifier, 15dB Forward Gain, Mini 2-Output |
| **SVA-154PRSVPM** | Passive VoIP Amplifier, 15dB Forward Gain, Mini 4-Output |
| **SVA-15158AFRSVP** | Passive VoIP Amplifier, 15dB Forward Gain,15dB Reverse Gain, 8-Output |

**Add "I" to include Power Inserter*


**SVA-152PRSVPM**
2-Port Mini Subscriber Amplifier with Passive VoIP Port


**SVA-154PRSVPM**
4-Port Mini Subscriber Amplifier with Passive VoIP Port


**SVA-15158AFRSVP**
8-Port Subscriber Amplifier with Passive VoIP Port


**SV-PI**
Power Inserter

**Patent Pending*

| Universal Specifications | |
|---|---|
| **Bandwidth** | NTSC 5-42 MHz Reverse, 53-1002 MHz Forward |
| **Operating Temperature Range** | -40° F to +140° F (-40° C to +60° C) |
| **RFI** | 100 dB Minimum |
| **Surge Protection** | IEEE C-62-41-B3 on input,<br>A3 on outputs |
| **Response Flatness** | Forward ± 1.0 dB<br>Reverse ± 1.0 dB |
| **Return Loss** | Forward 22 dB minimum<br>Reverse 25 dB minimum<br>VoIP Port 20 dB minimum |
| **Distortion Performance** | 77 analog, 124 digital - 256 QAM ch. loading<br>C/N: 70 dB minimum<br>CSO: -65 dB minimum<br>CTB: -75 dB minimum<br>X-Mod: -75 dB minimum |
| **Hum Modulation** | -75 dB min. |
| **Group Delay** | 20 nSec max @ Ch. 2 (3.58 MHz span)<br>5 nSec max @ Ch. 4-6+ (3.58 MHz span) |
| **Isolation** | Power / RF Out 60 dB min (5-1002 MHz)<br>Out / Out 22 dB min (53-1002 MHz) 25 dB min (5-42 MHz) |
| **Powering Requirements** | 12 VDC / 200 mA (2/4 out)<br>15 VDC / 400 mA (8 out) |
| **AC/DC Power Supply** | UL Certified, Surge Protected |

| Product Line Specifications | SVA-152PRSVPM | SVA-154PRSVPM | SVA-15158AFRSVP |
|---|---|---|---|
| **Number of Video Ports** | 1 | 3 | 7 |
| **Number of VoIP Bypass Ports** | 1 | 1 | 1 |
| **Gain (Video Ports)** | | | |
| **Forward** | 10 dB | 5 dB | 1 dB |
| **Return Path Insertion Loss, Video Ports (maximum)** | 5 dB | 12.5 dB | 2 dB |
| **Forward / Return Path Insertion Loss VoIP Port (maximum)** | 4 dB | 4 dB | 4 dB |
| **Noise Figure (device noise contribution)** | 5.5 dB Max @1002 MHz 2 output<br>5.5 dB Max @1002 MHz 4 output<br>5.5 dB Max @1002 MHz 8 output | | |

*Specifications subject to change without notice*

In a traditional cable television plant, when a subscriber's home power went down the home's television sets also went down, making it of little consequence if the home's cable service remained operational. However, in today's high bandwidth multiple services environment, this has changed. Cable systems have evolved from a video only service to today's video, voice and data services. Most cable systems have launched or are in the process of launching telephone service over their networks using Voice Over Internet Protocol (VOIP), which is a particular concern. The addition of VOIP telephone service brings with it the added responsibility of providing customers with 911 lifeline service 24 hours a day, even during power outages.

To insure that telephone service remains operational during power outages, cable customers with VOIP telephone service are provided with stand-by power for their cable modems. However, for this to work properly there can be no active devices in the coaxial cable line between the tap and the modem. As long as the tap-to-modem line remains passive, free of active devices, the power backup for the modem will insure that the home's telephone service remains operational during power outages. However, should an active device, such as a drop amplifier, be placed inline between the tap and the modem, then, as the home's power fails so does the device and along with it the home's telephone service.

Why then would anyone place an AC activated device inline between the tap and the modem with telephone service present? The reality is that there are some homes that necessitate the installation of a drop amplifier in order to boost the signal entering the home sufficiently for the homes' multiple devices and distant outlets. In these homes some method of preventing telephone service interruption due to power outages must be provided.

A great deal of thought has been given to this problem and attempts have been made to "fix" it, but as can be seen the "fix" has problems of its own.

Because it was the amplifier that caused the failure of the telephone service, it was thought that the simplest way to "fix" it would be to split off the telephony leg before it went through the amplifier, (as shown in Figure 1) thereby making it immune to amplifier failure during a power outage. However, when the power is interrupted and the amplifier shuts down, it simulates an open condition at the splitter output port attached to the amplifier. This has the same effect as having one leg of the splitter un-terminated which reduces the return loss of the splitter to approximately 7 dB. The same is true when directional couplers are used.

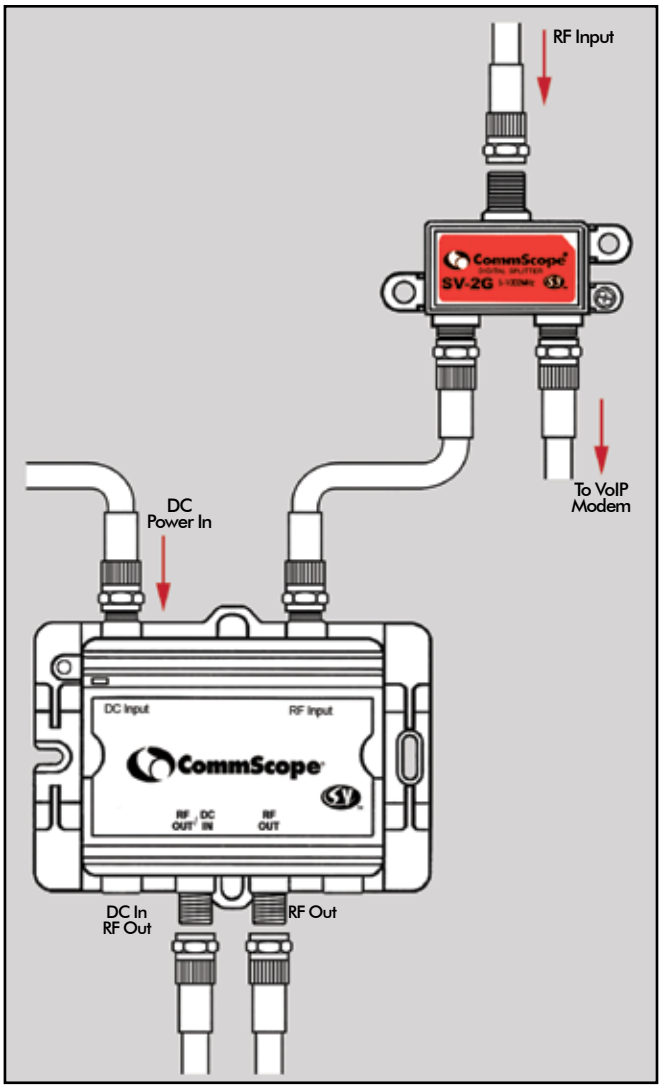



Figure 1 – The "Fix"

The solution is to install a Signal Vision Passive VOIP Amplifier (as shown in Figure 2) replacing the standard drop amplifier with its loss of telephone service during power outages. Installation of a Signal Vision Passive VOIP Amplifier solves both the return loss and improves the noise problems associated with the "fix". This simple solution utilizes power held switches within the amplifier that terminate the amplifier circuit should a power failure occur thus maintaining a passive path between the tap and the modem for the home's telephone service. The installation of a Passive VOIP Amplifier also eliminates the extra jumpers, unnecessary connectors, clutter, and potential installation mistakes of the "fix".

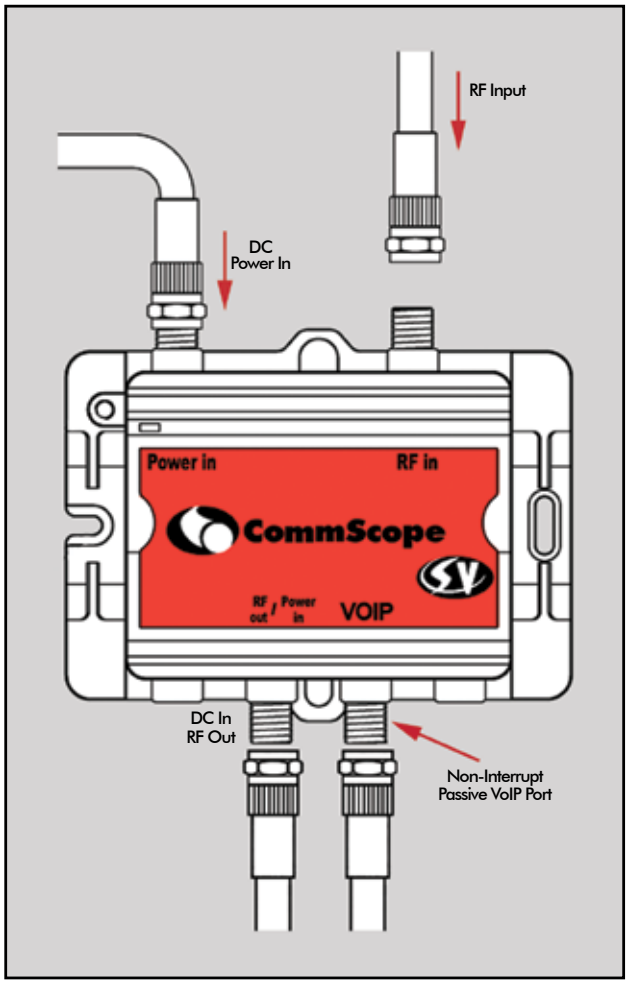



Figure 2 – The Solution

# Signal Vision® 1 GHz Ground Blocks

## Features

- Pressure forged from brass with nickel plating. Brass is a material recommended by the N.E.C. that is galvanically compatible to interface with ground wire (copper) and "F" connectors (brass)
- Superior one-piece design integrates premium barrel splice with body
- Unique split bolt type ground (bond) clamp, which seizes without damaging the ground wire
- Increased ground surface contact of greater than .500"
- Patented 4-sided, diamond shaped contact that has 250 grams of pressure that can accommodate all types of cable from F59 through F7 without damaging the center conductor
- Improved ground plane with flat "F" port interface surfaces
- Sealing surfaces accommodate "F" boots, sealing rings and shrink tubing
- Return Loss specification 35 dB minimum
- c-UL-us approved
- Also available in dual configuration

**SV-GB-1G**
1 GHz Ground Block

**SV-GB-1GD**
1 GHz Dual Ground Block

**SV-GB-1GA**
1 GHz Ground Block
(2 Piece Design)

## Electrical Specifications

| | |
|---|---|
| **Bandwidth** | DC-1002 MHz |
| **Return Loss** | 35 dB minimum |
| **Insertion Loss** | 0.2 dB maximum |
| **Ingress Shielding** | 120 dB |

RoHS compliant

c UL us LISTED

*Specifications subject to change without notice*

*Patented US 5,700,160, US 6,709,301.B2, US 150259*

## Features

- Pressure forged from brass with nickel plating. Brass is a material recommended by the N.E.C. that is galvanically compatible to interface with ground wire (copper) and "F" connectors (brass)
- Unique split bolt type ground (bond) clamp, which seizes without damaging the ground wire
- Increased ground surface contact of greater than .500"
- Patented multi-sided radial contact with 250 grams of pressure that can accommodate all types of cable from F59 through F7 without damaging the center conductor
- Meets IEEE C62-41-B3 combination wave surge protection
- Certified to meet ANSI/SCTE 81 specifications
- Ground plane with flat "F" port interface surfaces
- c-UL-us Approved

**SV-GB-SP**
1 GHz Surge Protected Ground Block

| Electrical Specifications | |
|---|---|
| **Bandwidth** | DC-1002 MHz |
| **Return Loss** | 30 dB minimum |
| **Insertion Loss** | 0.3 dB maximum |
| **Ingress Shielding** | 120 dB |

| Surge Suppression Specifications | |
|---|---|
| **Current Suppression** | 3000 amps. |
| **Voltage Resistance** | 6000 volts |
| **Insulation Resistance** | >100 megohms |
| **Operating Temperature** | -40°F to +150°F |

RoHS compliant

c UL us LISTED

*Specifications subject to change without notice*

*Meets or exceeds: ANSI SCTE 81/IEEE C 62-41 B3 (Combination Wave)*

*Patented 150259, 6067441, 193418*

# Signal Vision® 1 GHz Barrel Splices and Wall Plates

## Features

- Constructed from solid brass with nickel plating. This combination provides the optimum interface between male and female "F" type fittings
- Patented 4-sided, diamond shaped contact that has 250 grams of pressure that can accommodate all types of cable from F59 through F7 without damaging the center conductor
- Ground plane with flat "F" port interface surfaces
- Sealing surfaces to accommodate "F" boots, sealing rings and shrink tubing
- Enhanced return loss specification of 35 dB
- Available pre-installed in a wall plate or with nut and washer

**SV-F81-GA**
Barrel Splice
(for use with boots or ring seals)

**SV-F81-GAC**
Barrel Splice

## Electrical Specifications

| | | |
|---|---|---|
| **Bandwidth** | DC - 1002 MHz | |
| **Return Loss** | 35 dB minimum | |
| **Insertion Loss** | 0.02 dB maximum | |
| **Ingress Shielding** | 120 dB | |
| **Length** | SV-F81-GA | 1.11" |
| | SV-F81-GAC | 1.04" |

## Wall Plates

### Features

- Single port wall plate with or without F-81 splice barrel attached
- Single gang, flush mount
- High impact ABS plastic
- Available in ivory or white

**SV-WPIH**
(ivory)

**SV-WPWH**
(white)

**SV-WPI-F81GA**
(ivory)

**SV-WPW-F81GA**
(white)

RoHS compliant

*Specifications subject to change without notice*

## Features

- Constructed from solid brass with nickel plating
- Secure – capacitor added to handle any AC/DC currents that might be in the circuit (model SV-LT)
- Enhanced return loss specification of 35 dB minimum due to the use of high carbon film resisters and a tuned cylinder
- Improved, ground is hard soldered, which eliminates the loss of ground plane (ingress) and common path distortion problems
- Simple to use, installed with SV-GTT type tool

**SV-LT**
1 GHz Locking Terminator

| Electrical Specifications | |
|---|---|
| **Bandwidth** | 5-1002 MHz |
| **Return Loss** | 35 dB minimum |
| **Contact Pin Size** | 0.032" ± .002" |

**SV-PL**
1 GHz Port Lock

### Features

- Same features as the SV-LT without capacitor or resistor

**SV-LTA**
1 GHz Locking Terminator

### Features

- Space saving, new compact size
- Same features as the SV-LT without the capacitor

## Tools

### Features

- Use with all Signal Vision locking terminators
- Features solid spring steel ears
- Available in 4" (SV-GTT4) and 6" (SV-GTT7-1)
- Durable, long lasting, and easy to use

**SV-GTT4**

**SV-GTT7-1**

RoHS compliant

*Specifications subject to change without notice*

The vast majority of locking terminators manufactured prior to 1994 had the same problems. The ground used was a constant tension spring, which was typically manufactured using a material not galvanically matched to the device to which it was grounded. With the presence of an electrolyte and a power source, these springs would become isolated which caused two problems:

1. The contact area of the ground would be breached by loss of spring tension or constant vibration causing the resistor lead to become a receive/transmit antenna, which would allow the device to become an ingress/egress potential

2. The contact area of the ground-spring created a non-linear junction, formed by two dissimilar metal conductors that do not make intimate metal-to-metal contact. This would result in a layer of oxide or corrosion between the two contacts. This corrosion forms a mixing diode and creates a beat product on 6 MHz centers on the forward plant Common Path Distortion (CPD).

In 1990, Signal Vision designed a family of products specifically addressing these two problems. First, we chose brass as our base metal to eliminate dissimilar metal problems within the tap port interface. Second, we used high carbon film resistors and a tuned cylinder to enhance the return loss of this product. We raised the Return Loss specification from an industry average of 16 dB to a minimum of 30 dB. Third, we added a capacitor to handle any AC/DC currents that might be in the circuit, and hard soldered the ground, which eliminated both the loss of ground plane, or ingress, and CPD problems.

**Model SV-LT and SV-LTA Locking Terminator**

## Why Use Locking Terminators?

1. Security of service and protection against theft.

2. All products are manufactured to be either terminated or under load when the Radio Frequency (RF) parameters are designed. An electrical device left with an un-terminated port will have an internal electrical mismatch (Return Loss). This mismatch will reduce Return Loss by as much as 75% depending on the design of the components, and isolation characteristics.

3. Response flatness of the through line will vary depending on the isolation limits of the individual circuits, i.e., an 11 dB 4-port tap will vary from 2 to 4 dB peak-to-valley when unused ports are left open.

4. Tap Port Flatness (Drop Response)
   If tap ports are left un-terminated on low value taps, the individual drop will have a degraded response (peak-to-valley), i.e., an 11 dB tap without terminators will have a 2 dB peak-to-valley on drop response vs. .07 dB if unused ports are terminated.

5. Ingress/Egress
   Although difficult to determine via testing, common engineering theory says that all metals expand and contract and that all springs change with age and conditions. If this axiom is true, an un-terminated "F"-port will eventually become an RF leakage problem.

## 1 GHz Chassis Adapter

**Features**

- Constructed from anodized aluminum body
- Brass contact pin (bright tin plated)
- Patented 4-sided, diamond shaped contact that has 250 grams of pressure that can accommodate all types of cable from RG-59 through Type 7 without damaging the center conductor

SV-F625CH

| Electrical Specifications | |
|---|---|
| **Bandwidth** | DC - 1002 MHz |
| **Return Loss** | 20 dB minimum |

## 1 GHz 'F' Port Terminator

**Features**

- Constructed from brass with bright tin plating
- High quality carbon film resistor
- Completely sealed construction to prevent leakage

SV-F59TG

| Electrical Specifications | |
|---|---|
| **Bandwidth** | 5-1002 MHz |
| **Return Loss** | 35 dB minimum |
| **RFI** | 100 dB minimum |
| **Impedance** | 75 ohms |
| **Center Pin** | .030" |

## 1 GHz Right Angle Adapter

**Features**

- Constructed from brass with bright tin plating
- Patented 4-sided, diamond shaped contact that has 250 grams of pressure that can accommodate all types of cable from RG-59 through Type 7 without damaging the center conductor
- .030 contact pin
- Right angle female to male fittings

SV-F90G

| Electrical Specifications | |
|---|---|
| **Bandwidth** | DC - 1002 MHz |
| **Return Loss** | 30 dB minimum |
| **Insertion Loss** | 0.5 dB maximum |

RoHS compliant

*Specifications subject to change without notice*

# Signal Vision® 4 and 8 Port Intelligent Taps

## Stop driving your costs up when the answer is just a click away

Signal Vision's advanced Intelligent Tap allows operators to service customers instantaneously. No more expensive truck rolls, frustrating ingress troubleshooting or lost revenue. Tiering options allow minimum noise funneling in the return path and help manage potential ingress in 2-way systems, all at the click of a button. Reversible plug-in directional couplers allow flexibility in your system designs, and minimize inventory costs.


**SV-4ADT**
Versatile Intelligent Tap System-4 Port

### Features

- The intelligent addressable solution
  Remote:
  RF on/off
  High pass filtering (ingress control)
  Reverse window filtering
  (ingress control in systems with STB)
- Telephony capable power passing "F" ports
- Non-interruptible design
- Compatible with industry standard billing systems
- Extended 9" housing for cost effective installations/upgrades *(No need for extension connectors)*
- Flexible and upgradeable design
- Reversible plug-in directional couplers
- Full 1 GHz performance

### Available Models

| | |
|---|---|
| **SV-4ADT** | 4-Port Basic Intelligent Tap |
| **SV-8ADT** | 8-Port Basic Intelligent Tap |
| **SV-4ADT-F** | 4-Port Intelligent Tap with Return Filter |
| **SV-8ADT-F** | 8-Port Intelligent Tap with Return Filter |
| **SV-4ADT-T** | 4-Port Intelligent Tap with Telephony Faceplate |
| **SV-8ADT-T** | 8-Port Intelligent Tap with Telephony Faceplate |
| **SV-4ADT-FT** | 4-Port Intelligent Tap with Telephony Faceplate and Return Filter |
| **SV-8ADT-FT** | 8-Port Intelligent Tap with Telephony Faceplate and Return Filter |

*Patent Pending*

## Specifications

### 4-W Insertion Loss Table

| Tap Value | 40 MHz | 750 MHz | 860 MHz | 1002MHz | Plug-In DC Value |
|---|---|---|---|---|---|
| 11 dB | – | – | – | – | 0 dB |
| 14 dB | 3.2 | 4.9 | 5.2 | 5.4 | 4 dB |
| 17 dB | 2.3 | 3.2 | 3.6 | 3.9 | 7 dB |
| 20 dB | 1.5 | 2.4 | 2.6 | 2.8 | 10 dB |
| 23 dB | 1.1 | 2.0 | 2.2 | 2.4 | 13 dB |
| 26 dB | 1.0 | 1.7 | 1.9 | 2.2 | 16 dB |

### 8-W Insertion Loss Table

| Tap Value | 40 MHz | 750 MHz | 860 MHz | 1002MHz | Plug-In DC Value |
|---|---|---|---|---|---|
| 14 dB | - | - | - | - | 0 dB |
| 17 dB | 3.2 | 4.9 | 5.2 | 5.4 | 4 dB |
| 20 dB | 2.3 | 3.2 | 3.6 | 3.9 | 7 dB |
| 23 dB | 1.5 | 2.3 | 2.4 | 2.6 | 10 dB |
| 26 dB | 1.1 | 2.0 | 2.0 | 2.3 | 13 dB |
| 29 dB | 1.0 | 1.7 | 1.9 | 2.2 | 16 dB |

### Optional Return Filter Performance

| Tiering Mode | Frequency | Tap Port Loss Addition (dB) | Note |
|---|---|---|---|
| **Pass Thru*** | 5-1002 | 2.7 | |
| **High Pass*** | 5-42 | 40 | 42/51 split<br>Others available on request |
| | 51-54 | 2.4 | |
| | 54-1002 | 2.6 | |
| **Reverse Window*** | 5-12 | 30 | 15-18/51 split<br>Others available on request |
| | 15-18 | 5.0 | |
| | 21-42 | 30 | |
| | 51-54 | 2.4 | |
| | 54-1002 | 2.6 | |
| **OFF*** | 5-1002 | 50 minimum | |

**All losses shown in this table are in addition to the standard Tap Port losses based on DC Value*

| | |
|---|---|
| **Operating Temperature** | -40° F to +140° F<br>(-40° C to +60° C) |
| **Current Passing** | 15 amps,<br>40-90 VAC (In-Out)<br>350 mA (tap ports)<br>maximum (limited) |
| **Surge Protection** | |
| **In/Out Ports** | IEEE C62.41-1991,<br>category B3 6 kV |
| **Tap Ports** | IEEE C62.41-1991,<br>category A3 6 kV |
| **Through HUM Modulation** | 70 dB (average)@10A<br>65 dB (average)@12A<br>60 dB (average)@15A |
| **Mechanical Dimensions:** | 9x4.72x3.62 (inches) |

| | |
|---|---|
| **Communications** | FSK 19.2kbps,<br>102.2 MHz<br>crystal controlled<br>(Custom frequency available on request) (200kHZ wide) |
| **Power Consumption** | 24 mA @60 VAC |
| | 29 mA @90 VAC |

### Electrical Specifications

| | | |
|---|---|---|
| **Return Loss** | In-Out | 20 dB minimum |
| **Return Loss** | Tap Port | 20 dB minimum |
| **Isolation** | Port to Port | 25 dB minimum |
| **Isolation** | Out to Port | 10 dB + tap value, 30 dB maximum<br>(11 dB tap = 21 dB) @ 1 GHz |

*Specifications subject to change without notice*

# Signal Vision® 16 Port Intelligent Taps

## Features

- The intelligent addressable solution
  Remote RF on/off
  Remote high pass filtering (ingress control)
- 16 port compact design
- Non-interruptible design
- Reversible plug-in directional couplers
- Full 1 GHz performance
- Optional DC powering available
- Standard coaxial connections
- Weather and EMI sealed housing
- Compatible with industry standard billing systems


**SV-16ADT**
Versatile Addressable Tap System-16 Port

## Available Models

| | |
|---|---|
| **SV-16ADT** | 16-Port Basic Intelligent Tap |
| **SV-16ADT-F** | 16-Port Intelligent Tap with Return Filter |

*Patent Pending*

## Specifications

### 16-W Insertion Loss Table

| Tap Value | 40 MHz | 750 MHz | 860 MHz | 1002MHz | Plug-In DC Value |
|---|---|---|---|---|---|
| 23dB | – | – | – | – | 0 dB |
| 26 dB | 3.2 | 4.9 | 5.2 | 5.4 | 4 dB |
| 29 dB | 2.3 | 3.2 | 3.6 | 3.9 | 7 dB |

### Optional Return Filter Performance

| Tiering Mode | Frequency | Tap Port Loss Addition (dB) |
|---|---|---|
| **Pass Thru*** | 5-1002 | 2.7 |
| **High Pass*** | 5-42 | 40 |
| | 51-54 | 2.4 |
| | 54-1002 | 2.6 |
| **OFF*** | 5-1002 | 50 minimum |

**All losses shown in this table are in addition to the standard Tap Port losses based on DC Value*

| | |
|---|---|
| **Operating Temperature** | -40° F to +140° F<br>(-40° C to +60° C) |
| **Current Passing** | 15 amps,<br>40-90 VAC (In-Out)<br>350 mA (tap ports)<br>maximum (limited) |
| **Surge Protection** | |
| **In/Out Ports** | IEEE C62.41-1991,<br>category B3 6 kV |
| **Tap Ports** | IEEE C62.41-1991,<br>category A3 6 kV |
| **Through HUM Modulation** | 70 dB (average)@10A<br>65 dB (average)@12A<br>60 dB (average)@15A |
| **Mechanical Dimensions** | 9x4.72x3.62 (inches) |

| | |
|---|---|
| **Communications** | FSK 19.2kbps,<br>102.2 MHz<br>crystal controlled<br>(Custom frequency available on request) (200kHZ wide) |
| **Power Consumption** | 18 mA @60 VAC |
| | 22 mA @90 VAC |

### Electrical Specifications

| | | |
|---|---|---|
| **Return Loss** | In-Out | 18 dB minimum |
| **Return Loss** | Tap Port | 18 dB minimum |
| **Isolation** | Port to Port | 25 dB minimum |
| **Isolation** | Out to Port | 10 dB + tap value, 30 dB maximum<br>(11 dB tap = 21 dB) @ 1 GHz |

*Specifications subject to change without notice*

# Signal Vision® Intelligent Tap Gateway

The SV-ADTGC headend gateway transmits customer service or network technical service commands via a customer specific FSK modulated channel directly to the tap through your broadband plant. The headend gateway controller is connected to the billing system through CommScope's customizable management software package. This software integrates seamlessly with industry-standard billing systems and manages the taps and other filtered services. A network server or PC connects to the gateway by either an Ethernet port or a serial RS-232 connection.

**SV-ADTGC**
Intelligent Tap Gateway

## Features

- FSK transmitter in 1RU package
- Adjustable level
- Output test point
- Very cost effective

## Specifications

| Parameter | Specifications | Notes |
|---|---|---|
| **Operating Temperature Range** | 32° F to +120° F (0° C to +50° C) | |
| **FSK TX Frequency** | 102.2 MHz crystal controlled<br>(Custom frequency available on request) | |
| **Output Level** | 40-51 dBmV | Un-modulated |
| **Adjustment range** | 11 dB | |
| **Frequency Accuracy** | +/- 10 kHz | |
| **FSK Frequency Deviation** | +/- 67 kHz | |
| **Spectral Bandwidth** | 400 kHz (+/-200kHz)<br>@-100dBc/Hz | |
| **Communications Settings** | RS-232<br>Ethernet | 9600-8-N-1<br>IP |
| **RF Test Point** | -20dB +/- 1dB | |
| **AC Power In** | 120VAC, 230VAC 50/60Hz | |
| **Dimensions** | 19x17x1.7 (inches) | |

| Order Model Number | Frequency |
|---|---|
| **SV-ADTGC-** | Customer Specified |

*Specifications subject to change without notice*

## Inline Attenuators

### Features

- Inline body constructed from solid brass with bright tin plating
- Patented 4-sided, diamond shaped contact that has 250 grams of pressure that can accommodate all types of cable from F59 through F7 without damaging the center conductor
- Metal glaze type resistors ensure attenuation accuracy within 5%
- One-piece design
- Contact pin O.D, 0.032" ± .002"
- Female to male fittings
- Available in 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16 & 20 dB attenuations


**SV-FAM**
Inline Attenuators

| Electrical Specifications | |
|---|---|
| **Bandwidth** | DC-1002 MHz |
| **Return Loss In** | 25 dB minimum |
| **Return Loss Out** | 25 dB minimum |
| **Insertion Loss** | Value ± 0.5 dB max |

## Voltage Blocking Coupler

### Features

- Blocks AC and DC currents (AC to 90V)
- Inline body constructed from solid brass with bright tin plating
- Patented 4-sided, diamond shaped contact that has 250 grams of pressure that can accommodate all types of cable from F59 through F7 without damaging the center conductor
- One-piece design
- Contact pin O.D., 0.032" ± .002" contact pin
- Female to male fittings

**SV-VBC-90**
Voltage Blocking Coupler

| Electrical Specifications | |
|---|---|
| **Bandwidth** | 5-1002 MHz |
| **Return Loss** | 30 dB minimum |
| **Insertion Loss** | 0.5 dB maximum |

RoHS compliant

*Specifications subject to change without notice*

# Signal Vision® 1 GHz Inline Equalizer

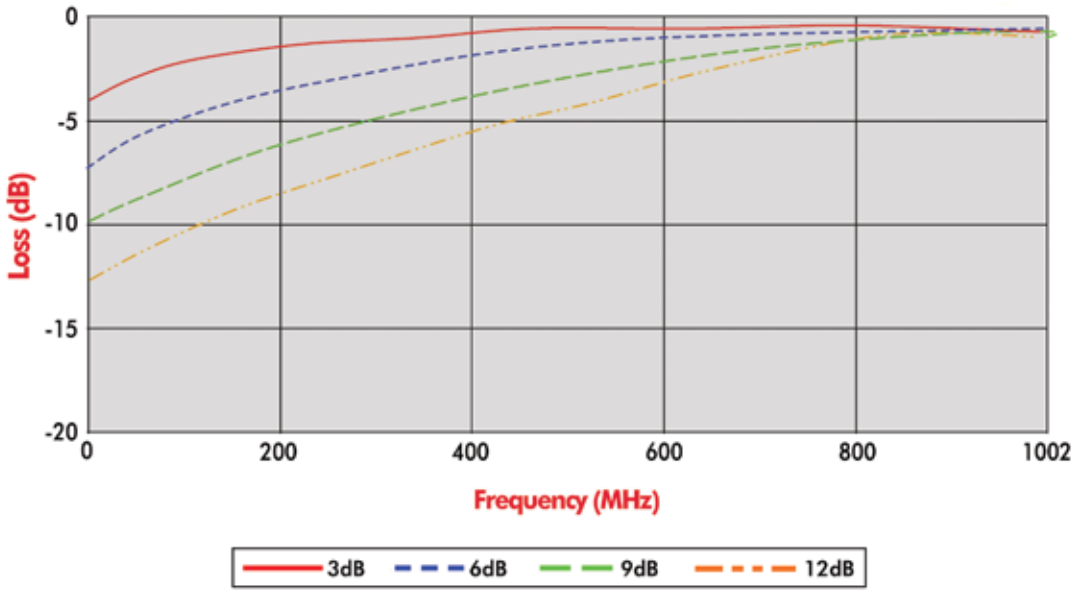
## Features

- Inline body constructed from solid brass with bright tin plating
- Patented 4-sided, diamond shaped contact that has 250 grams of pressure that can accommodate all types of cable from F59 through F7 without damaging the center conductor
- Improved ground plane with flat "F" port interface surfaces
- Designed with sealing surfaces to better accommodate "F" boots, sealing rings and shrink tubing
- Contact pin O.D., 0.032" ± .002"
- IEEE C-62.41 A3 – surge compliant
- Available in 3, 6, 9, 12 dB


**SV-EQ-***
Inline Equalizer

## Electrical Specifications

| | |
|---|---|
| **Bandwidth** | DC - 1002 MHz |
| **Return Loss** | 22 dB minimum |
| **Insertion Loss** | |
| **@1002 MHz** | 0.6 dB maximum |
| **Power Passing** | 600 mA AC |
| **Hum Modulation** | -60 dB minimum |




RoHS compliant

*Specifications subject to change without notice*

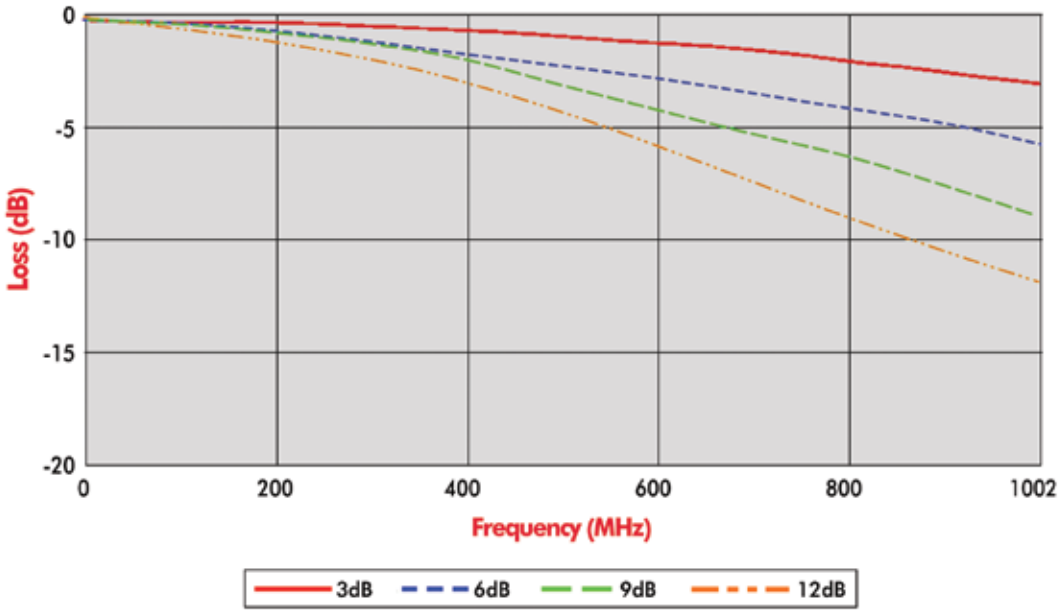
## Features

- Inline body constructed from solid brass with bright tin plating
- Patented 4-sided, diamond shaped contact that has 250 grams of pressure that can accommodate all types of cable from RG-59 through Type 7 without damaging the center conductor
- Improved ground plane with flat 'F' port interface surfaces
- Designed with sealing surfaces to better accommodate 'F' boots, sealing rings and shrink tubing
- Contact pin O.D., 0.032" ± .002"
- Available in 3, 6, 9, and 12 dB

**SV-CS-***
Inline Cable Simulator

## Electrical Specifications

| | |
|---|---|
| **Bandwidth** | DC - 1002 MHz |
| **Return Loss** | 22 dB minimum |
| **Insertion Loss** | |
| **@1002 MHz** | 0.25 dB maximum |
| **Power Passing** | 1 Amp AC |




RoHS compliant

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# Signal Vision® 1 GHz High-Pass Filter

## Features

- Inline body constructed from solid brass with bright tin plating
- Patented 4-sided, diamond shaped contact that has 250 grams of pressure that can accommodate all types of cable from RG-59 through Type 7 without damaging the center conductor
- Improved ground plane with flat 'F' port interface surfaces
- Designed with sealing surfaces to better accommodate 'F' boots, sealing rings and shrink tubing
- Superior return loss specification to 22 dB minimum
- Contact pin O.D., 0.032" ± .002"

RoHS compliant

**SV-HPF**
High-Pass Filter

## Electrical Specifications

| | |
|---|---|
| **Bandwidth** | 52-1002 MHz |
| **Return Loss** | |
| **52-1002 MHz** | 22 dB minimum |
| **Rejection** | |
| **5-42 MHz** | 40.0 dB minimum (Typical > 45 dB) |
| **Insertion Loss** | |
| **52-55 MHz** | 2.0 dB maximum |
| **56-750 MHz** | 1.5 dB maximum |
| **750-1002 MHz** | 0.8 dB maximum |

## 1 GHz Two-Way High-Pass Filter

## Features

- Innovative four-sided center conductor contact provides superior retention and electrical performance
- Utilizes surface mount technology
- 6kV ring wave surge protection on all ports
- Intermod protected
- 40 dB port-to-port isolation in the return band
- Flat-end "F" ports for proper ground plane match
- Better than 120 dB RFI protection
- Moisture sealed housing (15psi) with two layers of protection against corrosion
- Solder sealed proprietary backplate
- No casting lines on ports


**SV2HPF**
Two-Way High-Pass Filter

## Electrical Specifications

| | Cable Port 5-1002 MHz | HPF Port 54-1002 MHz |
|---|---|---|
| **Insertion Loss** (maximum) | | |
| **5-1002 MHz** | 4.0 dB | NA |
| **5-45 MHz** | NA | 40.0 dB |
| **54-1002 MHz** | NA | 5.0 dB |
| **Return Loss** (minimum) | | |
| **5-40 MHz** | 22 dB | 22 dB |
| **40-54 MHz** | 18 dB | 18 dB |
| **54-1002 MHz** | 22 dB | 22 dB |
| **Isolation** (minimum) | | |
| **5-450 MHz** | 40 dB | 40 dB |
| **450-1002 MHz** | 35 dB | 35 dB |

*Specifications subject to change without notice*

## 1 GHz 20dB Test Probes

**Features**

- Constructed from solid brass with nickel plating
- Spring loaded, Teflon protected tip
  Ensures accurate and safe measurements
- Fits 5/8" entry ports
- AC blocked optional

**Ordering Information**

| | |
|---|---|
| **SV-05** | 20dB Test Probe, AC/DC Blocked |
| **SV-05AC** | 20dB Test Probe, AC/DC Passing |

**Electrical Specifications**

| | |
|---|---|
| **Bandwidth** | 5-1002 MHz |
| **Insertion Loss** | 20 dB (+ 1 dB) |
| **Return Loss** | 18 dB minimum |
| **Shield Effectiveness** | -100 dB minimum |


**SV-05**
20dB Test Probe

## 1 GHz AC/RF Bypass Probe

**Features**

- Constructed from solid brass with nickel plating
- Spring loaded, Teflon protected tip
  Ensures accurate and safe measurements
- Fits 5/8" entry ports
- Passes AC/RF

**Electrical Specifications**

| | |
|---|---|
| **Bandwidth** | DC - 1002 MHz |
| **Insertion Loss** | 1.2 dB maximum |
| **Return Loss** | 18 dB minimum |
| **A.C. Thru Resistance** | Minimal |
| **A.C. Current Capacity** | 7 amps @ 90VAC for 15 min. |
| **Shield Effectiveness** | -100 dB min. |
| **Hum Modulation** | -65 dB @ 5 MHz, 6 amps. |


**SV-03**
AC/RF Bypass Probe

***Also Available in a Kit for Tap Bypass Applications***

**Electrical Specifications**

| | |
|---|---|
| **Bandwidth** | DC - 1002 MHz |
| **Insertion Loss** | 2.5 dB maximum |
| **Return Loss** | 18 dB minimum |
| **A.C. Thru Resistance** | Minimal |
| **A.C. Current Capacity** | 7 amps @ 90VAC for 15 min. |
| **Shield Effectiveness** | -100 dB min. |
| **Hum Modulation** | -65 dB @ 5 MHz, 6 amps. |

**SV-03 Kit**

***Kit Includes:***
2 ea SV-03 adaptors
1 ea SV-J36PQF jumper
1 ea PF-59 push-on fitting

RoHS compliant

*Specifications subject to change without notice*

# Signal Vision® Drop Noise Reducer

## The New Weapon Against Return Path Noise

Ferrite drop noise reducers have been used in the electrical, computer, aeronautical, radio, television and electromagnetic compliance industries for years. The CATV industry uses this technology in the design of many RF circuits to help control ingress.

The SV-DNR-1 simply clips onto the drop cable at the subscriber location between the ground block and tap. The ferrite material absorbs and converts RF energy on the coaxial cable's sheath into heat and dissipates this heat into the surrounding air. Removing this RF energy from the coaxial cable sheath helps prevent these unwanted signals from getting into the CATV plant and ultimately contaminating the return path with noise.

Now you can use this proven technology to reduce the return path noise accumulated from your subscriber's homes.

**SV-DNR-1**
Drop Noise Reducer

### Features

- Does not interfere with video or data signals
- Convenient installation with easy-to-close snaps
- Housing made of UV stabilized nylon
- Core provides constant dissipation of collected energy
- Consistent performance
- Cost effective

### Electrical Specifications

| | |
|---|---|
| **Frequency Range** | 5 - 100 MHz |
| **Sheath Current Attenuation** | 4-7 dB Typical |
| **Imepdance** | 60-90 Ohms |
| **Physical Dimensions** | 1.5″ x .75″ |
| **Fits Cable Sizes** | .240″ to .285″ Outer Dia. |

## NEW!
## XpressTite™ Torque Sleeve for Cable Assemblies

### Features

- Offers users the ability to properly tighten connectors in hard to reach places
- Prevents over tightening and damaging the port on expensive customer premise equipment
- Offers superior tightening in comparison to hand tightening
- Prevents loose connections which result in RF ingress and poor picture quality
- Freely moves to each end of the cable allowing the user to utilize a single torque sleeve at both the port and the wall location
- XpressTite is designed to not fall off cable assemblies during shipping

**SV-XT**

RoHS compliant

*Specifications subject to change without notice*

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