

VCON

multi-channel video
connector system



multi-channel connectors

distribution racks

cable assemblies

breakout boxes



connectors 3 - 6

distribution racks 7 - 8

breakout boxes 9 - 10

cable assemblies 11 - 12

VCON the new standard in multi-channel video

CONNECTORS | DISTRIBUTION RACKS | BREAKOUT BOXES | CABLE ASSEMBLIES



Gepco's V-CON Connector System sets the standard for the interfacing of multiple video channels in a single connector format. Designed to withstand the harsh environments encountered in outdoor broadcast, mobile production and staging applications, the V-CON system combines both precision electrical performance and exceptional durability in a single design.

Through extensive testing and user feedback, the V-CON connector system was designed to meet the specific needs and demands of remote broadcast and staging applications. Available as connectors, cable assemblies, breakout boxes and distribution racks, the complete V-CON series provides a turnkey, field-deployable system for the distribution of multiple channels of HD or component video.

VCON connectors

The new standard in multi-channel video connectors, the Gepco V-CON connector offers a convenient, reliable, and durable interface format for high density video applications. Designed for exceptional durability, the V-CON was specifically engineered for outdoor broadcast, mobile production and staging applications. It features an all-metal body, locking set-screw, and integrated cord grip, all in a completely weather-tight design.

Electrically, the V-CON has the bandwidth and performance for both multi-channel HD and component video applications. Through a configurable insert, the V-CON is available as a three to six-channel version that may be typically used in component video applications, while the 10, 12 or 16-channel versions can be used for high density, multi-channel HD video streams. The low insertion loss and 3GHz bandwidth of the V-CON allows it to be used in uncompressed HD serial digital applications. The V-CON coaxial elements are constructed from stainless steel and 50u gold-plated contacts to provide corrosion resistance and exceptionally long mating life.



- Configurable to 3, 4, 5, 6, 10, 12, or 16 Channels
- Extra-rugged, All-metal Body with Set-screw
- Unique Keyway Style for Each Configuration
- 50u Gold-plated and Stainless Contacts
- Weather Resistant
- 3GHz Bandwidth
- Uncompressed HD-SDI or Component Video
- Integrated Cord Grip

V-CON CONNECTORS

Part Number	# of Channels	Gender	Type	Shell Size	Maximum Cable Diameter
VCON16FC	16	Female	Cable Mount	Large - Type 36	.885"
VCON16MP	16	Male	Panel Mount	Large - Type 36	.885"
VCON12FC	12	Female	Cable Mount	Large - Type 36	.885"
VCON12MP	12	Male	Panel Mount	Large - Type 36	.885"
VCON10FC	10	Female	Cable Mount	Large - Type 36	.885"
VCON10MP	10	Male	Panel Mount	Large - Type 36	.885"
VCON6FC	6	Female	Cable Mount	Small - Type 24	.625"
VCON6MP	6	Male	Panel Mount	Small - Type 24	.625"
VCON5FC	5	Female	Cable Mount	Small - Type 24	.625"
VCON5MP	5	Male	Panel Mount	Small - Type 24	.625"
VCON4FC	4	Female	Cable Mount	Small - Type 24	.625"
VCON4MP	4	Male	Panel Mount	Small - Type 24	.625"
VCON3FC	3	Female	Cable Mount	Small - Type 24	.625"
VCON3MP	3	Male	Panel Mount	Small - Type 24	.625"

Additional Specifications

Structural Return Loss	-15dB, 1MHz-3GHz
Insertion Loss	.25 dB
Cable Termination Type	VDM230 Type 23 AWG Solid or VDM250 Type 25 AWG Stranded



Set-screws

Cable mount type V-CON connectors feature two set-screws, 180 degrees apart, for a locking fit that prevents accidental backshell loosening.



3GHz Coaxial Elements

V-CON series contacts feature low insertion-loss, low return-loss, and a 3GHz bandwidth for uncompressed HD video applications.



Integrated Cord Grip

An integrated compression gland provides strain relief and a weather-resistant seal. The internal width of the rear shell allows for a metal mesh cord grip to be used for additional strain and bend relief.

Stainless Steel and Gold-plated Contacts

Coaxial contacts are manufactured from stainless steel and 50 micron gold-plated brass to ensure corrosion resistance and exceptional mating life. Coaxial contact bodies fully captivate in connector insert.

Configurable Insert

The insert can be configured for 10, 12, or 16-channel versions in the large type 36 V-CON shell, or for 3, 4, 5, or 6-channel versions in the small type 24 V-CON shell.

O-ring Seal

Front O-ring gasket seals the mated connector from water or moisture ingress.

Three-point Lock Ring

Provides an exceptionally secure mating action.

All-metal Shell

The V-CON backshell, backnut, and lock ring are constructed from hard anodized aluminum for exceptional durability.

Captive Contact

Center pin or socket captivates in dielectric for a secure and positive fit.

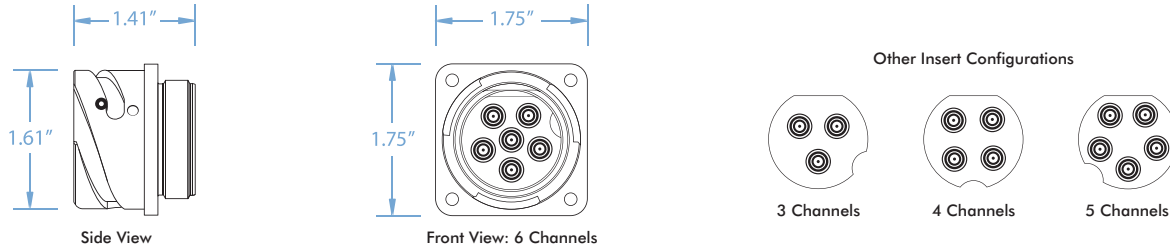
Unique Keyway Orientation

Each configuration (channel type) has a unique keyway location to prevent accidental mating between different configuration styles.

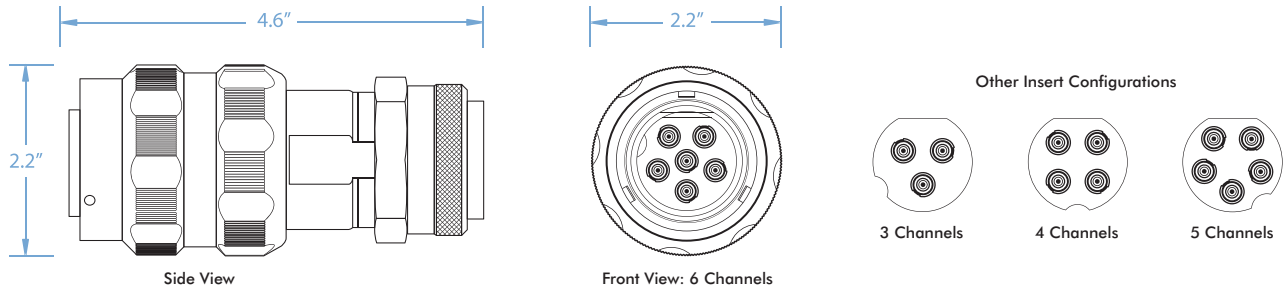


VCON connectors: drawings

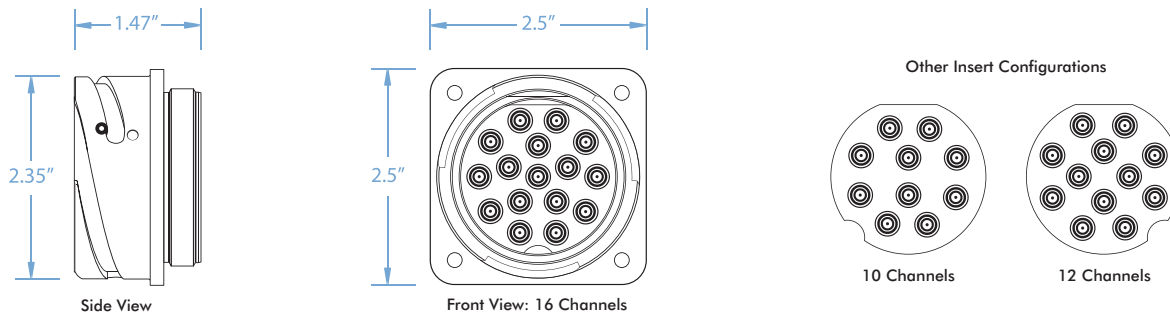
3-6 Channels: Panel Mount



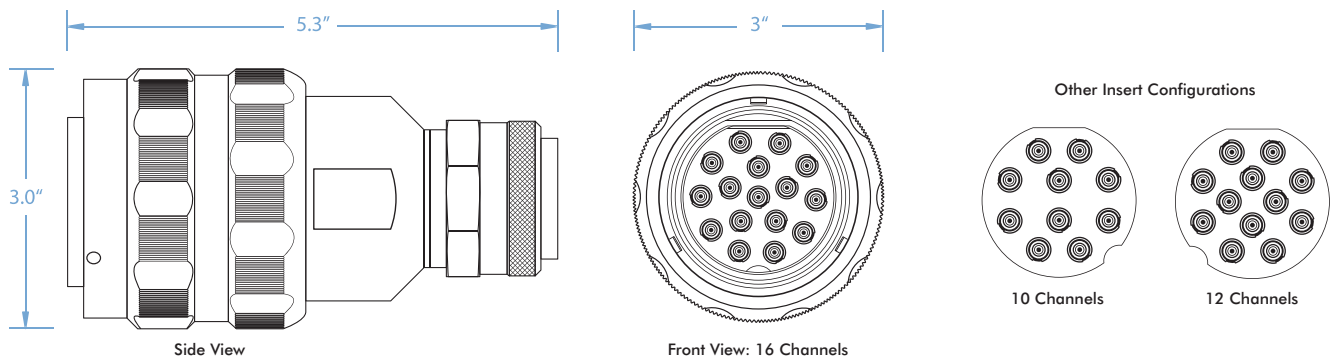
3-6 Channels: Cable Mount











10-16 Channels: Panel Mount



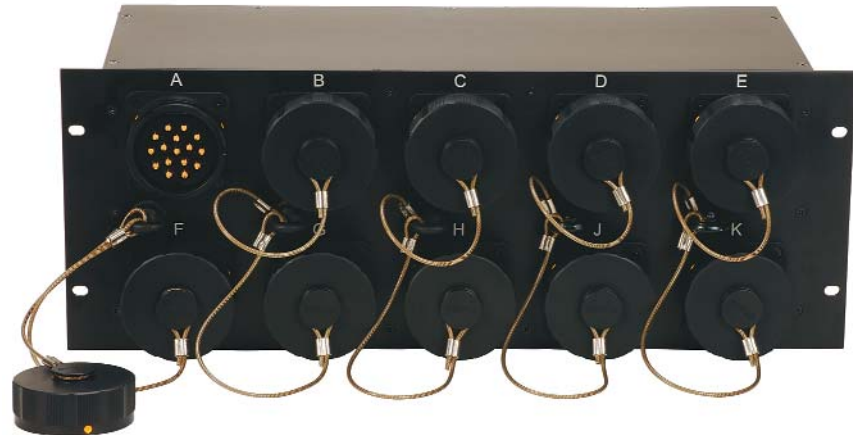
10-16 Channels: Cable Mount



VCON connectors: accessories & tools

	Part Number	Gender	Description
	VTE	Male or Female	Extraction Tool
	VTI	Male or Female	Insertion Tool
	PA1442	Male or Female	8-way Indent Crimp Tool
	VAG-P	Male	Alignment Guide for Crimp Tool
	VAG-S	Female	Alignment Guide for Crimp Tool
	VCON36DCP	Male - Large Type 36	Panel Mount Dust Cap for 10, 12, or 16 Channels
	VCON24DCP	Male - Small Type 24	Panel Mount Dust Cap for 3, 4, 5, or 6 Channels
	VCON36DCR	Female - Large Type 36	Cable Mount Dust Cap for 10, 12, or 16 Channels
	VCON24DCR	Female - Small Type 24	Cable Mount Dust Cap for 3, 4, 5, or 6 Channels
	4426-018	Male or Female - Large Type 36	.875" Max Cable Diameter
	4426-017	Male or Female - Large Type 36	.750" Max Cable Diameter
	4426-016	Male or Female - Large Type 36	.625" Max Cable Diameter

VCON distribution racks



The V-CON series distribution racks offer a convenient and flexible solution for the distribution of multiple coaxial channels in a permanent installation application. Ideal for junction boxes, truck I/O panels, control rooms, or staging applications, the V-CON series is available in a variety on configurations and sizes. Each contact of the V-CON is wired out to a BNC female connector on the back panel for up to a total of 160 channels in the 10x16 version. Available with three, five, or 10 V-CON connectors, each V-CON connector can be ordered as a three, four, five, six, 10, 12, or 16-channel version.

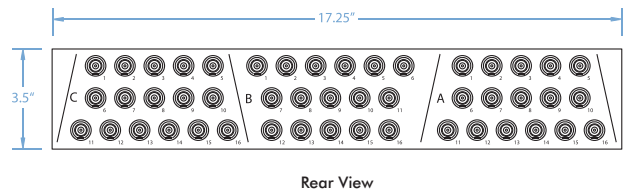
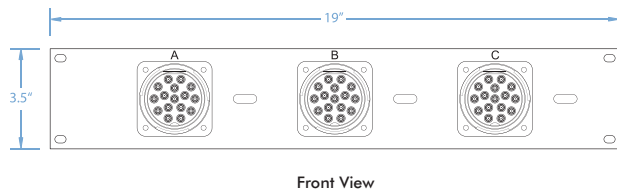
- Available in 3, 5, or 10 V-CON Multi-pin Versions
- 3, 4, 5, 6, 10, 12, or 16 Channels per V-CON
- 3GHz Bandwidth
- Uncompressed HD-SDI or Component Video
- Breaks out V-CON Multi-pin to BNCs
- Includes Weather-tight V-CON Dust Caps
- 4RU, 3RU, or 2RU Rack Height

V-CON DISTRIBUTION RACKS

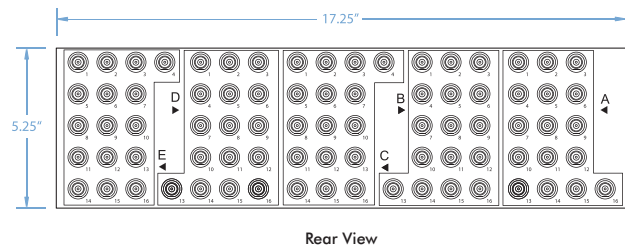
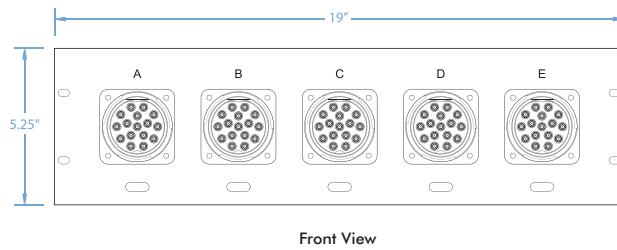
Part Number	# of V-CON Connectors	# of Channels/Multi-pin Connector	Rack Unit Height	V-CON Gender	BNC Gender
VDR10*	10	10, 12, 16	4	Male - Large Type 36	Female
VDR5*	5	10, 12, 16	3	Male - Large Type 36	Female
VDR5*S	5	3, 4, 5, 6	2	Male - Small Type 24	Female
VDR3*	3	10, 12, 16	2	Male - Large Type 36	Female
VDR3*S	3	3, 4, 5, 6	2	Male - Small Type 24	Female

* = Number of Channels per V-CON

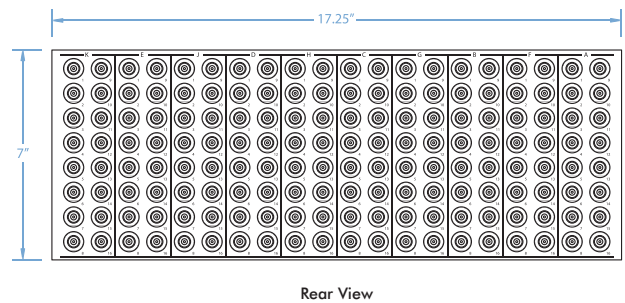
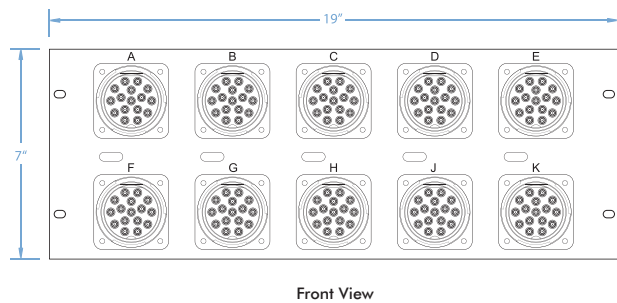
VDR316



VDR516



VDR1016



VCON breakout boxes



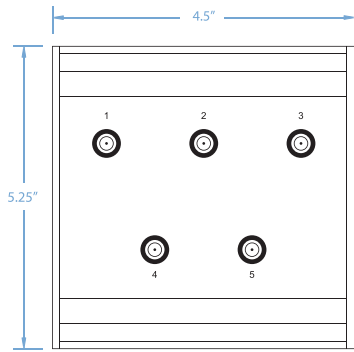
The V-CON series breakout boxes provide a compact and secure solution for interfacing V-CON snakes with external equipment. Built in a heavy gauge aluminum chassis with a recessed top plate, the V-CON breakout boxes provide exceptional durability and connector protection. Each coaxial channel in the V-CON connector is wired to a female BNC for easy access and patching. Available in three to 16-channel versions with a 3GHz bandwidth, the V-CON breakout boxes can be used for distribution of uncompressed HD or component video.

- Heavy-duty Aluminum Chassis
- Available in 3, 4, 5, 6, 10, 12, and 16-channel Versions
- 3GHz Bandwidth
- Uncompressed HD-SDI or Component Video
- Includes Weather-tight V-CON Dust Caps
- Breaks out V-CON Multi-pin to BNCs
- Recessed Top Plate Protects Connectors

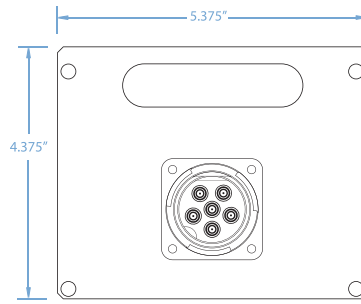
V-CON BREAKOUT BOXES

Part Number	# of Channels	Chassis Dimensions	V-CON Gender	BNC Type
VBB16	16	4.5" High x 5.25" Wide x 9" Long	1 Male - Large Type 36	16 Female
VBB12	12	4.5" High x 5.25" Wide x 9" Long	1 Male - Large Type 36	12 Female
VBB10	10	4.5" High x 5.25" Wide x 9" Long	1 Male - Large Type 36	10 Female
VBB6	6	4.5" High x 5.25" Wide x 4.5" Long	1 Male - Small Type 24	6 Female
VBB5	5	4.5" High x 5.25" Wide x 4.5" Long	1 Male - Small Type 24	5 Female
VBB4	4	4.5" High x 5.25" Wide x 4.5" Long	1 Male - Small Type 24	4 Female
VBB3	3	4.5" High x 5.25" Wide x 4.5" Long	1 Male - Small Type 24	3 Female

VBB5

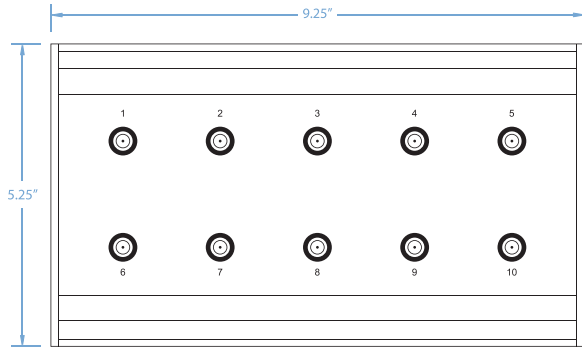


Top View

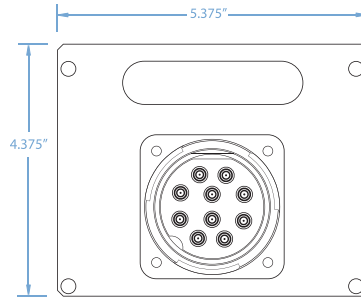


Side View

VBB10

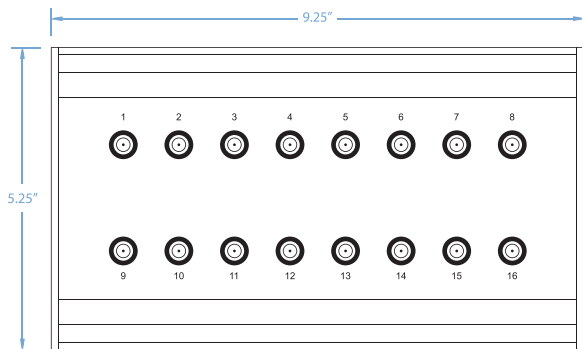


Top View

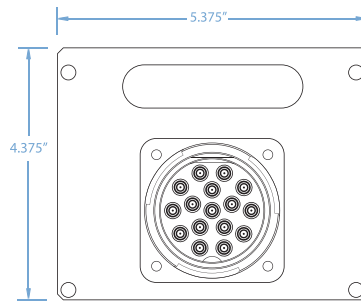


Side View

VBB16



Top View



Side View

VCON cable assemblies



V-CON terminated cable assemblies offer an extremely rugged, compact, and weather-resistant portable interconnect system for HD or component video applications. Built with the new Gepco V-CON connector and multi-channel Gepco video snake cable, V-CON cable assemblies can be custom ordered in three to 16-channel versions.

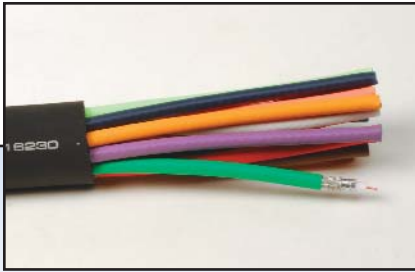
In addition to the durability provided by the internal strain relief, metal cord grip, and gaskets of the V-CON design, the connector is also sealed with an overbody, epoxy-lined heat shrink for additional protection. The video snake cables utilize miniature, high bandwidth, gas-injected coaxial elements that are jacketed with an overall, weather-resistant TPE jacket.

The combined materials and termination methods used in the Gepco V-CON cable assemblies create the most durable and convenient multi-channel video snake system for broadcast and hostile environment applications.

- Available in 3, 4, 5, 6, 10, 12, or 16-channel Versions
- Extra-rugged, All-metal Body with Set-screw
- Heavy-duty TPE Cable Jacket
- 50u Gold-plated and Stainless Contacts
- 3GHz or 1GHz Bandwidth
- Weather Resistant
- Uncompressed HD-SDI or Component Video
- Cord Grip with Overbody Heat Shrink

V-CON CABLE ASSEMBLIES

Part Number	# of Channels	V-CON Gender	Cable Type	Total Bandwidth	Applications
VMC16-length	16	Female - Large Type 36 (Both Ends)	VS16230	3GHz	Multi-channel HD
VMC12-length	12	Female - Large Type 36 (Both Ends)	VS12230	3GHz	Multi-channel HD
VMC10-length	10	Female - Large Type 36 (Both Ends)	VS10230	3GHz	Multi-channel HD
VMC6-length	6	Female - Small Type 24 (Both Ends)	RGBHVC250	1GHz	Component Video
VMC5-length	5	Female - Small Type 24 (Both Ends)	VS5230	3GHz	Multi-channel HD, Component Video
VMC5A-length	5	Female - Small Type 24 (Both Ends)	RGBSC250	1GHz	Component Video
VMC4A-length	4	Female - Small Type 24 (Both Ends)	RGBS250	1GHz	Component Video
VMC3A-length	3	Female - Small Type 24 (Both Ends)	RGB250	1GHz	Component Video



Precision HD Coax Snake

High Definition V-CON cable assemblies are constructed from Gepco VS230 series video snake cable. The VS230 series features miniature 23-gage solid conductors, gas-injected dielectrics, a 4.5GHz bandwidth for uncompressed HD formats, and a durable, all-weather TPE master jacket. For component video applications, the RGB 25-gage stranded series is also available.



All-metal Shell with Set-screws

Cable mount type V-CON connectors feature two set-screws, 180 degrees apart, for a locking fit that prevents accidental backshell loosening. The V-CON backshell, backnut, and lock ring are constructed from hard anodized aluminum for exceptional durability.



Cord Grip with Overbody Heat Shrink

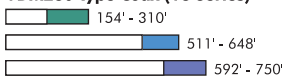
In addition to the internal V-CON strain relief, cable assemblies feature a metal mesh cord grip for additional bend and strain relief. The entire rear portion of the connector is also sealed with an overbody, epoxy-lined heat shrink for exceptional weather resistance and durability.

CABLE ELECTRICAL SPECIFICATIONS

Cable Used in Assembly	# of Chan.	Conductors	Nominal OD	Impedance	Return Loss (100kHz-1GHz), (1GHz-4.5GHz)	Capacitance	Cond. DCR per Mft/Shield of	Vel. Prop.	Attenuation (dB per 100ft)											
									1 MHz	10 MHz	71.5 MHz	135 MHz	270 MHz	360 MHz	720 MHz	1 GHz	1.5 GHz	3 GHz	4.5 GHz	
VS16230	16	23 AWG Solid BC	.885"	75 Ω (+/-3)	>23dB, >21dB	16.5 pF/ft	20.3 Ω/2.7 Ω	82%	0.38	1.19	3.01	3.80	5.40	6.18	9.30	10.5	13.0	18.5	22.8	
VS12230	12	23 AWG Solid BC	.800"	75 Ω (+/-3)	>23dB, >21dB	16.5 pF/ft	20.3 Ω/2.7 Ω	82%	0.38	1.19	3.01	3.80	5.40	6.18	9.30	10.5	13.0	18.5	22.8	
VS10230	10	23 AWG Solid BC	.785"	75 Ω (+/-3)	>23dB, >21dB	16.5 pF/ft	20.3 Ω/2.7 Ω	82%	0.38	1.19	3.01	3.80	5.40	6.18	9.30	10.5	13.0	18.5	22.8	
RGBHVC250	6	25 AWG (7x33) Stranded BC	.575"	75 Ω (+/-3)	>23dB, ----	16.5 pF/ft	30.0 Ω/4.8 Ω	82%	0.47	1.43	3.45	4.61	6.46	7.48	10.8	12.8	----	----	----	
VS5230	5	23 AWG Solid BC	.570"	75 Ω (+/-3)	>23dB, >21dB	16.5 pF/ft	20.3 Ω/2.7 Ω	82%	0.38	1.19	3.01	3.80	5.40	6.18	9.30	10.5	13.0	18.5	22.8	
RGBSC250	5	25 AWG (7x33) Stranded BC	.560"	75 Ω (+/-3)	>23dB, ----	16.5 pF/ft	30.0 Ω/4.8 Ω	82%	0.47	1.43	3.45	4.61	6.46	7.48	10.8	12.8	----	----	----	
RGBS250	4	25 AWG (7x33) Stranded BC	.470"	75 Ω (+/-3)	>23dB, ----	16.5 pF/ft	30.0 Ω/4.8 Ω	82%	0.47	1.43	3.45	4.61	6.46	7.48	10.8	12.8	----	----	----	
RGB250	3	25 AWG (7x33) Stranded BC	.460"	75 Ω (+/-3)	>23dB, ----	16.5 pF/ft	30.0 Ω/4.8 Ω	82%	0.47	1.43	3.45	4.61	6.46	7.48	10.8	12.8	----	----	----	

Serial Digital Coax Distances

VDM230 Type Coax (VS Series)



VDM250 Type Coax (RGB Series)



1.485 Gb/s (Uncompressed HDTV)

360 Mb/s (Compressed HDTV)

270 Mb/s (Component 4:2:2)

Maximum values represent the approximate range at which the bit error rate "cliff region" will occur. Individual system performance will vary.

part number index

4426-016	Page 6
4426-017	Page 6
4426-018	Page 6
PA1442	Page 6
VAG-P	Page 6
VAG-S	Page 6
VBB10	Page 9
VBB12	Page 9
VBB16	Page 9
VBB3	Page 9
VBB4	Page 9
VBB5	Page 9
VBB6	Page 9
VCON10FC	Page 3
VCON10MP	Page 3
VCON12FC	Page 3
VCON12MP	Page 3
VCON16FC	Page 3
VCON16MP	Page 3
VCON24DCP	Page 6
VCON24DCR	Page 6
VCON36DCP	Page 6
VCON36DCR	Page 6
VCON3FC	Page 3
VCON3MP	Page 3
VCON4FC	Page 3
VCON4MP	Page 3
VCON5FC	Page 3
VCON5MP	Page 3
VCON6FC	Page 3
VCON6MP	Page 3
VDR10*	Page 7
VDR3*	Page 7
VDR3*S	Page 7
VDR5*	Page 7
VDR5*S	Page 7
VMC10-length	Page 11
VMC12-length	Page 11
VMC16-length	Page 11
VMC3A-length	Page 11
VMC4A-length	Page 11
VMC5A-length	Page 11
VMC5-length	Page 11
VMC6-length	Page 11
VTE	Page 6
VTI	Page 6

Gepco International, Inc.

Corporate Headquarters and Main Warehouse

1770 Birchwood Avenue

Des Plaines, IL 60018

800.966.0069

P. 847.795.9555

F. 847.795.8770

Eastern Branch Office and Warehouse

80 Red Schoolhouse Road, Unit 110

Chestnut Ridge, NY 10977-7052

Western Branch Office and Warehouse

1000 N. Lake Street

Burbank, CA 91502

P. 818.569.5222

F. 818.569.5226

www.gepco.com

email: gepco@gepco.com

This publication contains the most current products and specifications as of its printing.

Items may be added, discontinued, or revised without notice.

Please contact Gepco to verify product specifications and availability.