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QUADRAPADDLE



Infinite Possibilities...

QuadraPaddle™ Technology

Revolutionary new QuadraPaddle contact technology from VPC allows infinite configuration possibilities to meet virtually any signal interconnect requirement. Innovative contact designs and cable plug assemblies ensure rapid, reliable interconnection to instrument cards in addition to seamless integration with COTS products, reducing setup time and costs. QuadraPaddle technology is engineered for maintainability, serviceability, and flexibility to provide infinite configurations with an unlimited variety of interconnect options.



Contact Specifications	
Operating Voltage & Current	3 Amps Max. Continuous 1250 VAC Max.
Contact Resistance	25 mΩ Max. Measured at 50 mV @ 100 mA
Insertion Force	2 oz. Nominal
Dielectric Withstanding Voltage (DWV)	1500 VDC Min.
Insulation Resistance	5000 MΩ Min.
Contact Body	Female (RCV) – BeCu (Twin Female) BeCu/Phörz (Crimp/Solder) Male (ITA) – Brass
Contact Plating	Female (RCV) – 50µ" Au over 100µ" Ni Male (ITA) – 30µ" Au over 100µ" Ni
Cycle Life	20,000+ Mating/Unmating Cycles

CONTACTS & PATCHCORDS

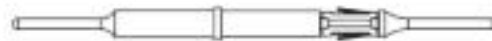
QUADRAPADDLE™ SIGNAL

VPC's QuadraPaddle™ contacts are available in pre-made patchcord configurations to reduce setup and avoid time spent preparing wire and crimping contacts.

Available in twin female, crimp/solder, twin male, and wire wrap designs, QuadraPaddle™ contacts are engineered for flexible interconnect options. Rated at 3 amps continuous (1250 VAC) with a 2 ounce insertion force, QuadraPaddle™ provides 4 reliable points of contact per pin, outstanding electrical performance, and low mating force.



P/N 610 138 100



P/N 610 138 115



P/N 610 138 116



P/N 610 138 109



P/N 610 138 117 / 118



P/N 610 138 112

QUADRAPADDLE™ SIGNAL CONTACTS 3 AMP

P/N	Description	Used in Module
Receiver Contacts, QuadraPaddle™ Signal – 3 Amp		
610 138 116	RCVR Contact, female 22-28 AWG, crimp	510 150 115, 510 150 116
610 138 100	RCVR Contact Twin Female - Replacement Contact Accepts .100" (2.54 mm) standard male connectors	
610 138 117	RCVR Contact, Adapter Pin, Round Post, Converts twin female contact to female - male contact	
610 138 118	RCVR Contact, Adapter Pin, Square Post, Converts twin female contact to female-male contact	
610 138 115	ITA Contact, Round Post Twin Male Accepts .100" (2.54 mm) standard female connectors	510 151 105, 510 151 106
610 138 109	ITA Contact, male 22-24 AWG, crimp/solder	510 151 105, 510 151 106
610 138 112	ITA Contact, male 26-28 AWG, crimp/solder	510 151 105, 510 151 106

QUADRAPADDLE™ SIGNAL PATCHCORDS 3 AMP

P/N	Description	Uses Contact
Receiver		
720 108 101	Patchcord, RCVR, 36" 24 AWG, single-ended, stranded	610 138 116
720 109 101	Patchcord, ITA, 36" 24 AWG, single-ended, stranded	610 138 109
720 109 102	Patchcord, ITA, 36" 26 AWG single-ended, solid, wire wrap	610 138 112

SIGNAL MODULES

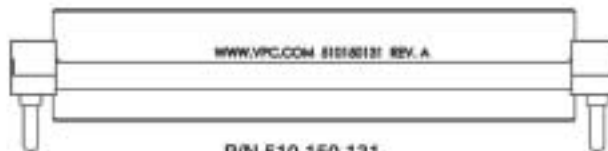
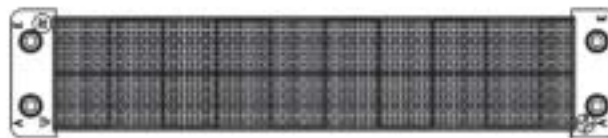
With 192 or 480 pins for high-density interconnection, QuadraPaddle™ modules are molded on .100" (2.54mm) centers to allow rapid integration with commercially available off-the-shelf connectors. Available with twin female or discrete-wired housings, QuadraPaddle™ modules allow consolidation of multiple instrument connections in virtually any configuration. Molded from LCP with reference letters and screening for ease of integration, QuadraPaddle™ modules add increased versatility to meet the next generation of Mass InterConnect requirements.



SIGNAL MODULE - 192 PIN

P/N 510 150 130

PN	Description
Receiver Modules	
510 150 130	RCVR Module 192 Position Twin Female, fully loaded with 610138100 twin female contacts
510 150 115	RCVR Module 192 Position Female, Wire Crimp, unloaded
ITA Modules	
510 151 105	ITA Module 192 Position Male, unloaded
510 151 107	ITA Module 192 Position Round Post, fully loaded with 610138115 twin male contacts
510 151 113	ITA Module 192 Position Square Post, Press Fit, fully loaded with 610138119 male wire wrap contacts



P/N 510 150 131

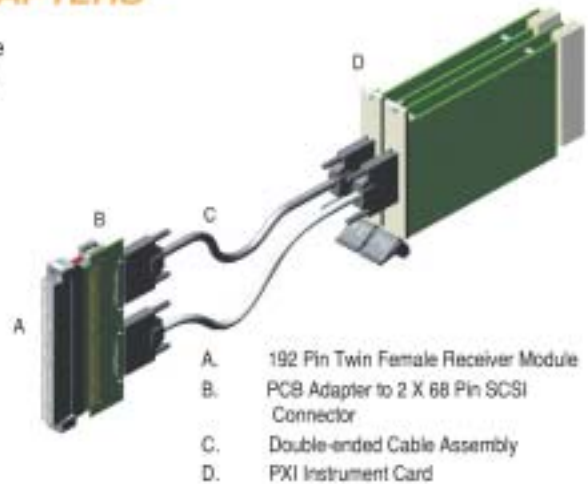
SIGNAL MODULE - 480 PIN

PN	Description
Receiver Modules	
510 150 131	RCVR Module 480 Position Twin Female, fully loaded with 610138100 twin female contacts
510 150 135	RCVR Module, 480 Position Round Post, fully loaded with 610138100 twin female to 610138117 male adapter contacts
510 150 116	RCVR Module 480 Position Female, Wire Crimp, unloaded
ITA Modules	
510 151 106	ITA Module 480 Position Male, unloaded
510 151 108	ITA Module 480 Position Round Post, fully loaded with 610138115 twin male contacts
510 151 114	ITA Module 480 Position Square Post, Press Fit, fully loaded with 610138119 male wire wrap contacts

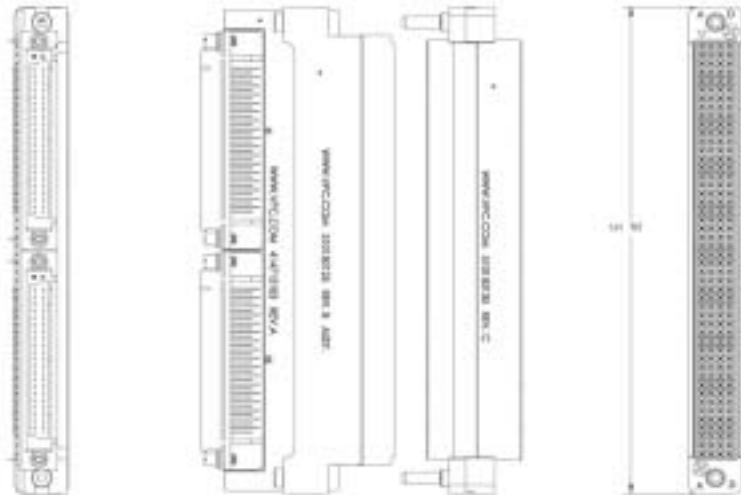
PCB (PRINTED CIRCUIT BOARD) ADAPTERS

For reduced wiring and ease of integration, QuadraPaddle™ products are available in configurations that incorporate a Printed Circuit Board (PCB) with standard SCSI connectors that allow interconnectivity via a double-ended standard cable!

SCSI PCB ADAPTER/2X68



- A. 192 Pin Twin Female Receiver Module
- B. PCB Adapter to 2 X 68 Pin SCSI Connector
- C. Double-ended Cable Assembly
- D. PXI Instrument Card

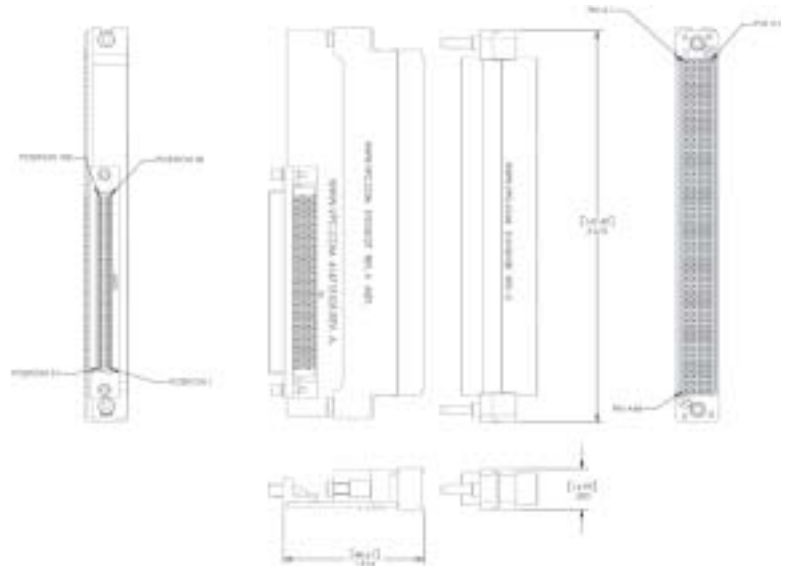


P/N 510 150 125

P/N	Description
2 X 68 SCSI PCB Adapter	
510 150 125	Receiver Module, 192 Position to PCB-mounted 2 X 68 pin Male SCSI Connectors
Standard Cables for PCB Adapters - 18"	
515 109 113	Cable Assembly, 68 Pin Female SCSI (Thumb Screws) to 68 Pin Male VHDCI (Thumb Screws)
515 109 117	Cable Assembly, 68 Pin Female SCSI (Thumb Screws) to 68 Pin Female SCSI (Thumb Screws)
515 109 119	Cable Assembly, 68 Pin Female SCSI (Thumb Screws) to 68 Pin Male SCSI (Spring Latch)
515 109 121	Cable Assembly, 68 Pin Female SCSI (Thumb Screws) to 68 Pin Male SCSI (Thumb Screws)
515 109 130	Cable Assembly, 68 Pin Female SCSI (Thumb Screws) to 68 Pin Female SCSI (Spring Latch)
Standard Cables for PCB Adapters - 36"	
515 109 114	Cable Assembly, 68 Pin Female SCSI (Thumb Screws) to 68 Pin Male VHDCI (Thumb Screws)
515 109 118	Cable Assembly, 68 Pin Female SCSI (Thumb Screws) to 68 Pin Female SCSI (Thumb Screws)
515 109 120	Cable Assembly, 68 Pin Female SCSI (Thumb Screws) to 68 Pin Male SCSI (Spring Latch)
515 109 122	Cable Assembly, 68 Pin Female SCSI (Thumb Screws) to 68 Pin Male SCSI (Thumb Screws)
515 109 131	Cable Assembly, 68 Pin Female SCSI (Thumb Screws) to 68 Pin Female SCSI (Spring Latch)

Custom cable assemblies for specific PXI and VXI instrument cards are available: www.vpc.com

SCSI PCB ADAPTER/1X100



PN 510 150 127

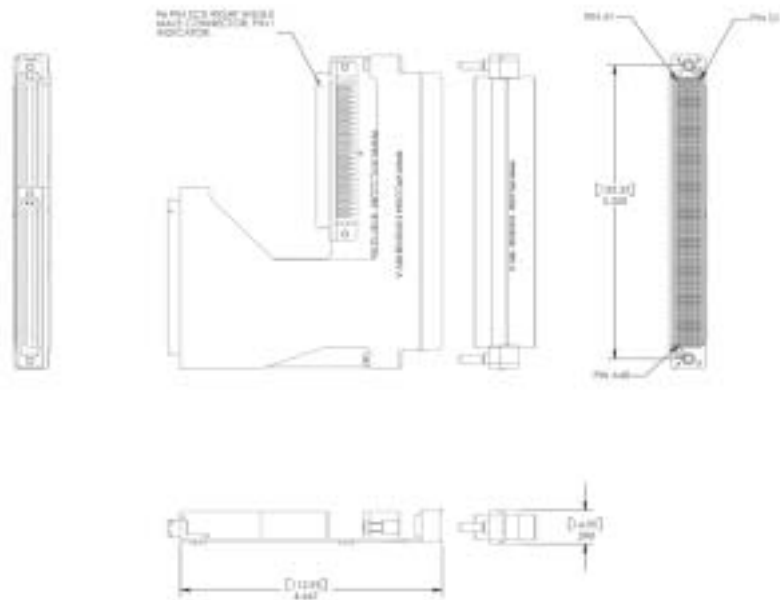
P/N	Description
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1 X 100 SCSI PCB Adapter

- 510 150 127 Receiver Module, 192 Position to PCB-mounted 1 x 100 pin Female SCSI Connector
- 515 109 134 Cable Assembly, 100 Pin Male SCSI (Thumb Screws) to 100 Pin Male SCSI (Thumb Screws), 18"
- 515 109 133 Cable Assembly, 100 Pin Male SCSI (Thumb Screws) to 100 Pin Male SCSI (Thumb Screws), 36"

Custom cable assemblies for specific PXI and VXI instrument cards are available: www.vpc.com

SCSI PCB ADAPTER/2X96



PN 510 150 128

P/N	Description
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2 X 96 SCSI PCB Adapter

- 510 150 128 Receiver Module, 192 Position to PCB-mounted 2 x 96 pin Male SCSI Connectors
- 515 109 007 Cable Assembly, 96 Pin Female SCSI (Spring Latch) to 96 Pin Female SCSI (Spring Latch), 18"
- 515 109 008 Cable Assembly, 96 Pin Female SCSI (Spring Latch) to 96 Pin Female SCSI (Spring Latch), 36"

Custom cable assemblies for specific PXI and VXI instrument cards are available: www.vpc.com

VPC's CONNECTOR TECHNOLOGY

GEMINI 2102 www.vpc.com/G2

The new **G²** from Virginia Panel Corporation offers the power of InterConnect technology in a compact, high-density, two-module package. Simultaneously engaging a wide range of InterConnect options in multiple configurations, the **G²** provides a rapid alternative to repeated connect/disconnect of individual leads and connectors in a rugged reliable system.

The ideal connector for a variety of applications, the **G²**:

- Engages up to 384 contacts in seconds
- Accommodates multiple I/O configurations, including signal, power, coaxial, pneumatic, and fiber optic
- Incorporates various contact technologies for standard and printed circuit board connection versatility
- Includes a slide-off, EMI-shielded cover that allows access to individual leads and contacts for ease of setup and troubleshooting
- Features a durable receiver and ITA that withstands use in industrial applications
- Locking handle simultaneously engages multiple test and measurement connections



Mounting Frames

Part Number	Frame Type	Description
310 113 391	5U Vertical Hinged Mounting Frame-G2	3 Receiver openings with 2 blanking plates
310 113 358	5U Vertical Hinged Mounting Frame-Blank	Painted off-white
310 113 395	5U Fixed Mounting Panel-19" Rack	3 Receiver openings with 2 blanking plates, Aluminum

Receiver and ITA

Part Number	Description
310 120 110	Receiver, G2 with Keying Feature, includes Protective Cover (Keying pins sold separately)
310 118 112	Keying Pin Kit, 2100 Series (Used with RCVR 310 120 110 and 310 104 318)
410 120 110	ITA with Removable Cover, G2
410 112 599	Circular Strain Relief Adapter, 1.625-18 UNEF for standard Mil Spec backshells
410 112 628	ITA Protective Cover, Polycarbonate

New Products

Gemini 2106 MODULE SOLUTION

The 6 module Gemini solution provides versatility on a small footprint. This small, high-density receiver can simultaneously engage up to 768 signal contacts. The adaptable 6 module integrates signal, coax, power, fiber optic, pneumatic, and thermocouple contacts in unlimited module configurations. The contacts are incorporated into cable assemblies for specific PXI cards. The Vertical Hinged Mounting Frame is suitable for Rack or Chassis mount applications. The ITA has a unique, removable two-piece, EMI-shielded cover which allows easy access to the modules and contacts providing the customer with a complete solution that is simple, modular, reconfigurable and accessible.



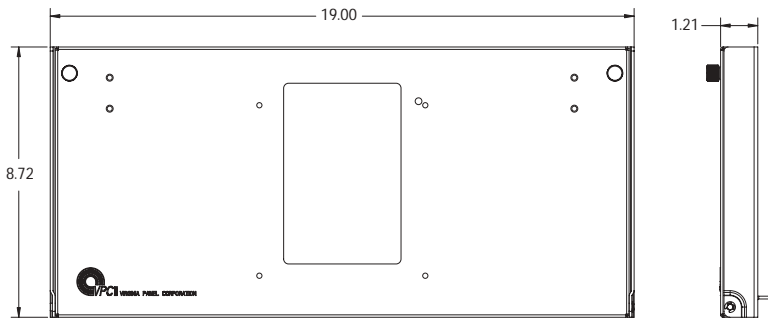
P/N	Description
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Required Components

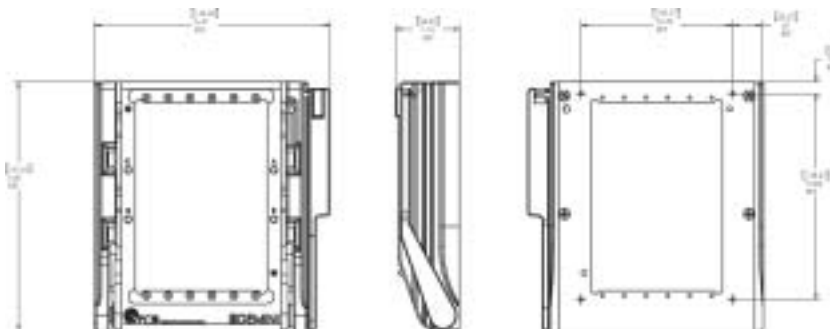
- 310 113 341 5U Vertical Hinged Mounting Frame
- 310 104 318 Receiver, 6 Module with Keying Feature
- 310 118 112 Keying Pin Kit, 2100 Series
- 540 xxx xxx Receiver Module Cable Assemblies - see pg. 21
- 510 xxx xxx Mating ITA Module - see pg. 16
- 720 xxx xxx ITA Patchcords - see pg. 22
- 410 104 273 ITA with removable cover

Accessories

- 310 113 158 Receiver Protective Cover
 - 410 112 296 ITA Protective Cover
 - 510 104 118 Blank Module - One Position
 - 310 113 370 Chassis Mount Flange Kit for National Instruments PXI-1006/1045, 18 Slot Chassis
 - 310 113 371 Chassis Mount Flange Kit for Pickering 40-930, 18 Slot Chassis
 - 310 113 374 Chassis Mount Flange Kit for PXIT 2000-514A/B, 14 Slot Chassis
- Contact VPC for other mounting flange requirements.
Most items typically available within 2-3 weeks

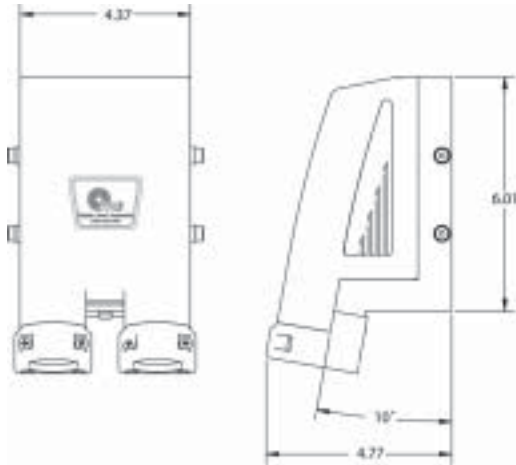


6 Module Vertical Hinged Mounting Frame - P/N 310 113 341



6 Module Receiver - P/N 310 104 318

For details, see www.vpc.com/2100Series



6 Module Interchangeable Test Adapter (ITA) with Sliding, Removable Cover - P/N 410 104 273



*6 Module Receiver Protective Cover
P/N 310 113 158*



*6 Module ITA Protective Cover
P/N 410 112 296*

Gemini 2110 MODULE SOLUTION

The 10 module solution provides great reliability while simultaneously engaging up to 1280 signal contacts. The versatile system integrates signal, coax, power, fiber optic, pneumatic, and thermocouple contacts in unlimited module configurations. The unique, two-piece, EMI-shielded ITA/ Enclosure features large adjustable cable clamps and slides open for easy access to modules and contacts. VPC has cable assemblies that mate to most PXI cards. True wireless interconnect solutions can be created using VPC's TAC™ contacts that mate directly to a PCB (Printed Circuit Board).



P/N	Description
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Required Components

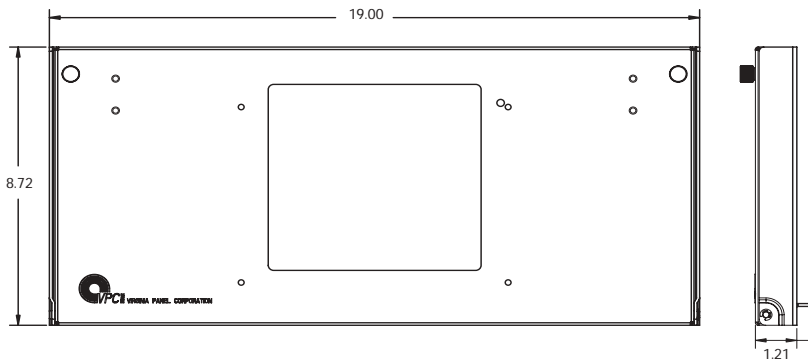
- 310 113 342 5U Vertical Hinged Mounting Frame
- 310 104 317 Receiver, 10 Module
- 540 xxx xxx Receiver Module Cable Assemblies - see pg. 21
- 510 xxx xxx Mating ITA Module - see pg. 16
- 720 xxx xxx ITA Patchcords - see pg. 22
- 410 104 272 ITA with removable cover

Required Components - PCB Capability

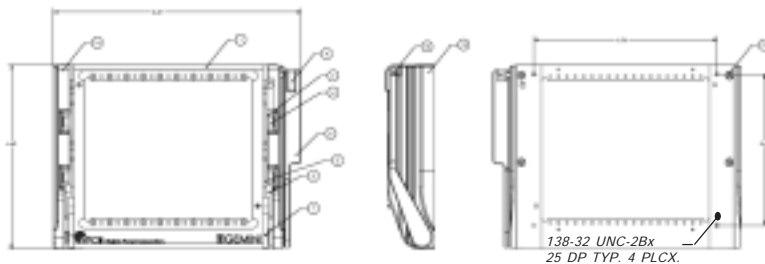
- 310 113 382 9U Vertical Hinged Mounting Frame for 19" Rack
- 310 104 314 Receiver, 10 Module with PCB capability
- 410 104 270 ITA with removable cover, with PCB capability

Accessories

- 310 113 154 Receiver Protective Cover
 - 410 112 299 ITA Protective Cover
 - 510 104 118 Blank Module - One Position
 - 310 113 370 Chassis Mount Flange Kit for National Instruments PXI-1006, 18 Slot Chassis
 - 310 113 371 Chassis Mount Flange Kit for Pickering 40-930, 18 Slot Chassis
 - 310 113 374 Chassis Mount Flange Kit for PXI 2000-514A/B, 14 Slot Chassis
- Contact VPC for other mounting flange requirements.
Most items typically available within 2-3 weeks

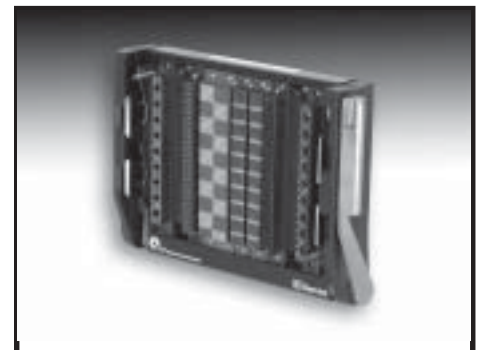


10 Module Vertical Hinged Mounting Frame - P/N 310 113 342



10 Module Receiver - P/N 310 104 314 shown with PCB capability

For details, see www.vpc.com/2100Series



P/N 310 104 314



10 Module Interchangeable Test Adapter (ITA) with Sliding, Removable Cover - P/N 410 104 272
10 Module Interchangeable Test Adapter (ITA) with Sliding, Removable Cover and PCB capability - P/N 410 104 270



10 Module Receiver Protective Cover
P/N 310 113 154



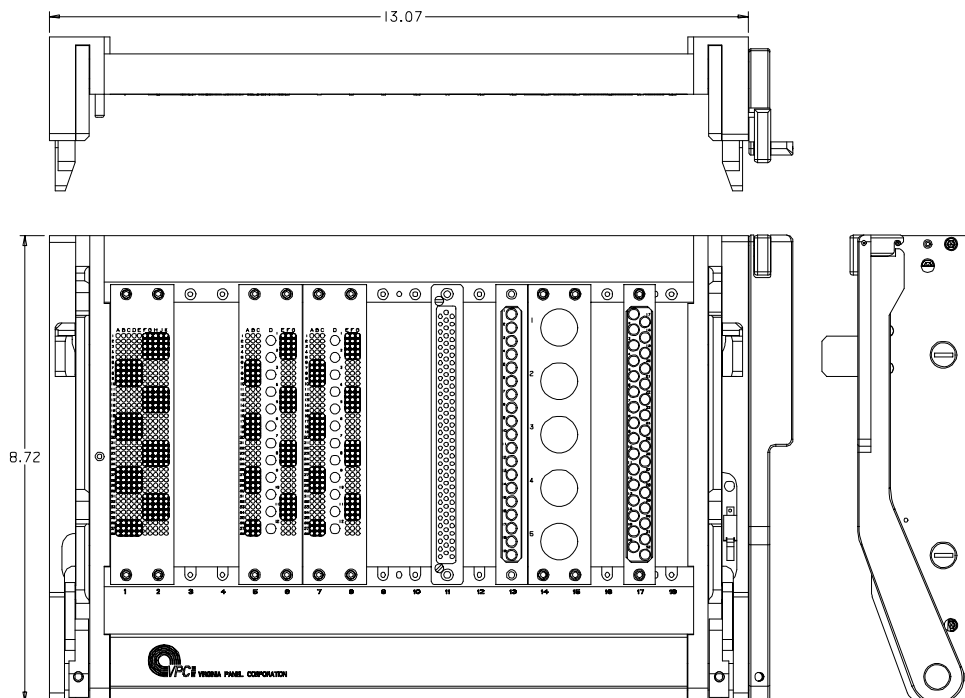
10 Module ITA Protective Cover
P/N 410 112 299

RECEIVERS

VPC's 2100 Series Gemini Receivers accept discrete wired and/or Printed Circuit Board loaded (18 and 10 module units) Interchangeable Test Adapters. Connector modules can be intermixed using Twin Access Contacts (TAC™) for direct PCB connection (18 and 10 module units) or pin and socket contacts for discrete wired terminations. Available in 18, 10, 6, or 2 module positions, Gemini Receivers mount to a Vertical Hinged Mounting Frame that can attach to multiple chassis types (with Plug & Play mounting flanges provided by the chassis manufacturer) or a 19" rack.



P/N	Description
310 104 314	Receiver 10 Module Positions with PCB capability
310 104 317	Receiver 10 Module Positions
310 104 318	Receiver 6 Module Positions
310 120 110	Receiver 2 Module Position, with protective cover
310 113 154	Receiver Protective Cover for 10 Module Receiver
310 113 158	Receiver Protective Cover for 6 Module Receiver
310 113 327	Receiver Protective Cover for 18 Module Receiver
310 113 394	Receiver Protective Cover for 2 Module Receiver (NOTE: if ordering P/N 310 120 110, no need to order this P/N)
310 120 101	Receiver 18 Module Positions, Single Tier, for discrete wire and/or printed circuit board
310 120 102	Receiver 18 Module Positions, Single Tier, for discrete wire and/or printed circuit board, with flush hangers for use with hinged shelf mounting frame (P/N 310 113 331)

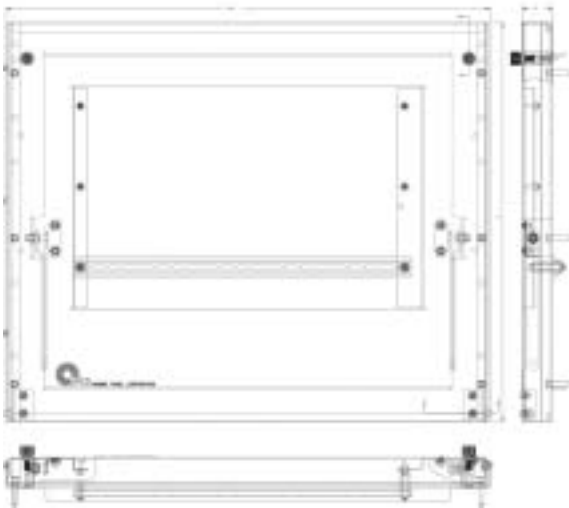


Receiver shown loaded with an assortment of PCB and discrete wired modules found on pages 12 - 16 and 22 - 26.

2100 SERIES/GEMINI INTERFACE

VERTICAL HINGED MOUNTING FRAMES

Vertical Hinged Mounting Frames bolt directly onto any 19" rack (EIA Universal Standard) and allow the Gemini Receiver to hinge down toward the operator for access to wiring. An incorporated hinge supports the Receiver when the system is hinged open. Vertical Hinged Mounting Frames feature a bar to provide strain relief for wires. **Plug & Play Mounting Flanges**, available from the chassis manufacturer, are required when mounting the Gemini Receiver and Vertical Hinged Mounting Frame (9U only) directly to a VXI chassis. VPC offers Plug & Play mounting for mounting Gemini Receivers and Vertical Hinged Mounting Frames (5U) directly to a PXI Chassis.

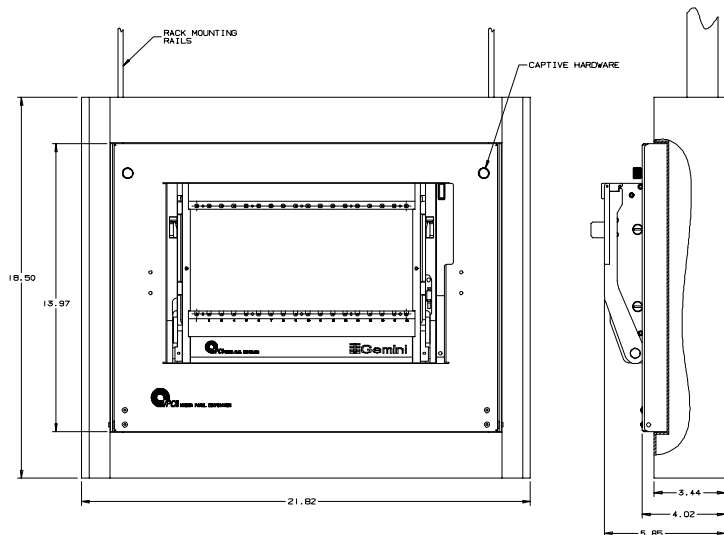


P/N	Description
310 113 328	18 Module Vertical Hinged Mounting Frame, 9U, for 19" Rack or VXI Chassis PCB Capability
310 113 322	18 Module Vertical Hinged Mounting Frame, 5U, for 19" Rack (or PXI Chassis)
310 113 338	Strain relief kit for VHMf (included w/all VHMf)
310 113 342	10 Module Vertical Hinged Mounting Frame, 5U
310 113 341	6 Module Vertical Hinged Mounting Frame, 5U
310 113 391	2 Module Vertical Hinged Mounting Frame, 5U
310 113 382	10 Module Vertical Hinged Mounting Frame 9U for 19" Rack, PCB capability
310 113 391	2 Module Vertical Hinged Mounting Frame, 5U
310 113 395	Fixed Vertical Hinged Mounting Frame, 5U for 19" Rack - Blank

HINGED SHELF MOUNTING FRAME

VPC's Hinged Shelf Mounting Frame accommodates Gemini Receivers mounted to a Vertical Hinged Mounting Frame. The horizontal configuration enables wiring to extend from under the Receiver Interface to the rack mounted test equipment allowing shorter wire lengths.

The hinged design, held open by a locking support hinge, provides easy access to the interface wiring during debugging. Rack mounting hardware is included.



P/N	Description
310 113 331	18 Module, Gemini, Hinged Shelf Mounting Frame (includes Vertical Hinged Mounting Frame)

Note: The Receiver must be purchased separately

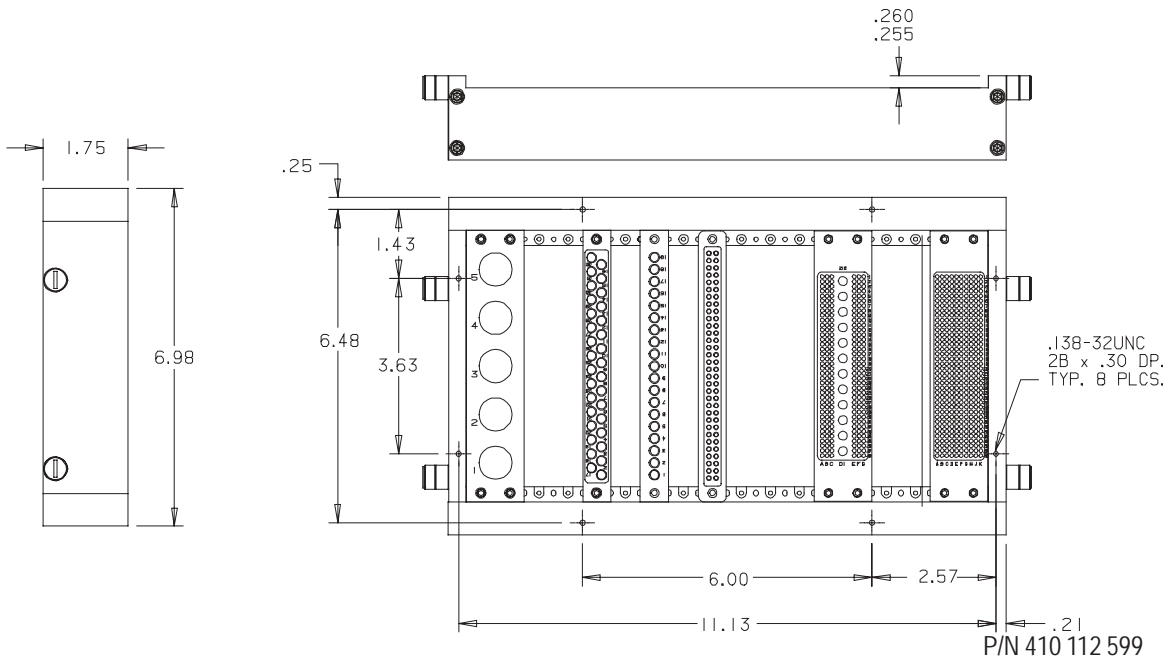
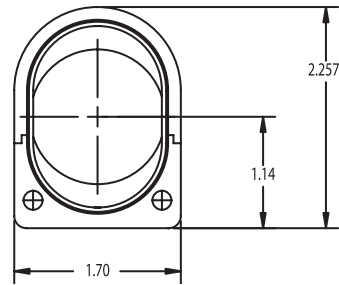
INTERCHANGEABLE TEST ADAPTER

The Gemini Interchangeable Test Adapter (ITA) accommodates up to 2, 6, 10, or 18 connector modules, a Printed Circuit Board (PCB) or a combination of connector modules and a PCB (PCB available only on 10 and 18 module units). Finished in clear chromate, the ITA can be used in a number of applications to accomplish multiple Unit Under Test (UUT) connection requirements. A wide range of connector modules are available separately for user configuration. (see pages 16 - 20 and 26- 30).

NOTE: Mechanical specifications for PCBs can be found at: www.vpc.com/manuals



P/N	Description
410 120 101	Interchangeable Test Adapter (ITA), 18 Module positions, PCB Compatible
410 120 111	Interchangeable Test Adapter (ITA), 18 Module positions, not PCB Compatible
410 112 517	Protective cover ITA (plastic), 18 Module
410 112 541	Protective cover ITA (aluminum), 18 Module
410 104 270	ITA with removable cover, PCB capability, 10 Module
410 104 272	ITA with removable cover, 10 Module
410 112 299	Protective cover ITA, 10 Module
410 104 273	ITA with removable cover, 6 Module
410 112 296	Protective cover ITA, 6 Module
410 120 110	ITA with removable cover, 2 Module
410 112 628	Protective cover ITA (polycarbonate), 2 Module
410 112 599	Circular Strain Relief Adapter, 1.625-18 UNEF for standard Mil Spec backshells



2100 SERIES/GEMINI INTERFACE

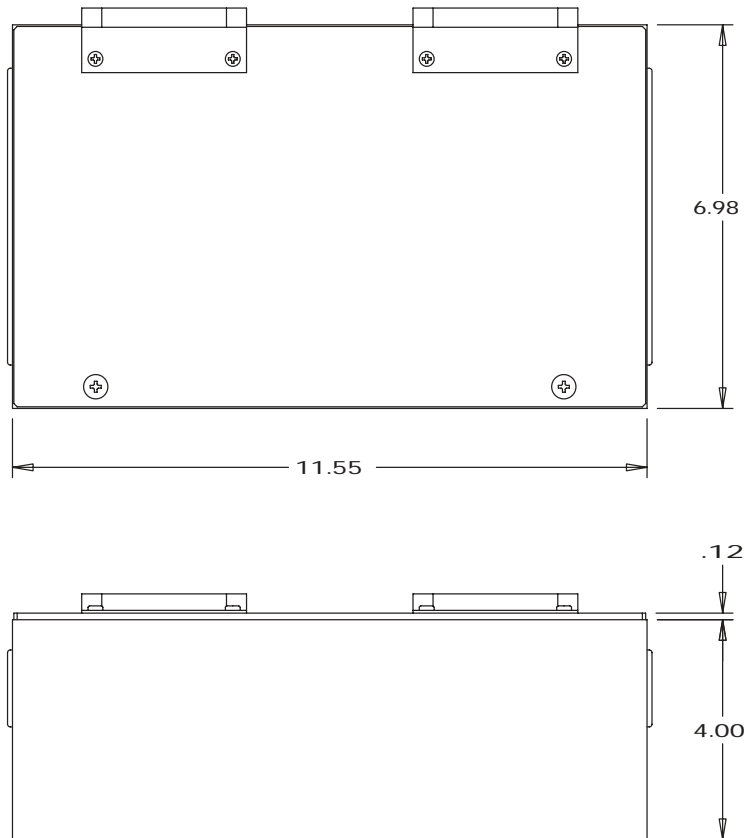
ITA ENCLOSURE

Made of aluminum, the Enclosure body for the 18 module features a hinged cover plate with quarter turn hardware that provides easy access to ITA wiring. The Enclosure is secured to the ITA by socket head cap screws (included with enclosure). Handles are integrated for easy removal from the Receiver.

The 6 and 10 module enclosures are EMI-shielded and slide open for easy access to modules and contacts. Large, adjustable cable clamps accommodate various size wire bundles, and the angle of the cable clamp assemblies is designed not to interfere with access to lower racks.



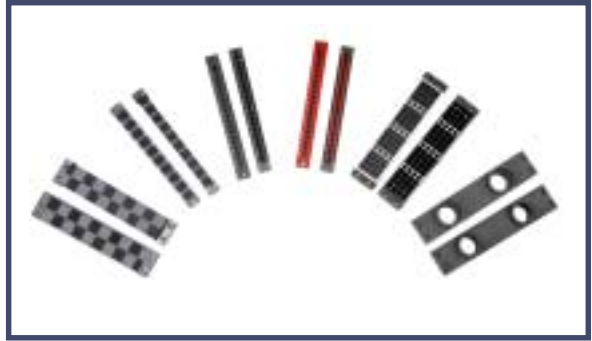
P/N	Description
410 112 527	Enclosure for 18 module ITA (P/N 410 120 101) 4" deep



P/N 410 112 527

CONNECTOR MODULES — PIN AND SOCKET

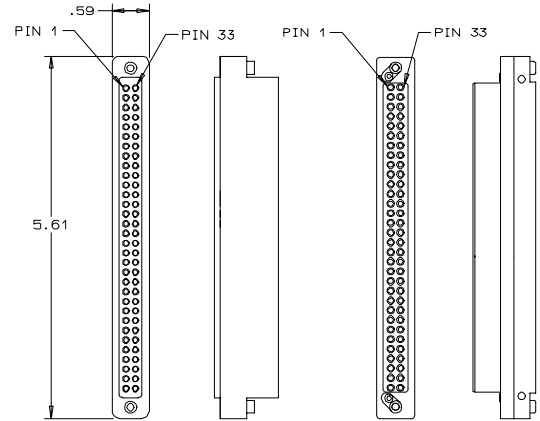
Modules are available in various configurations to meet specific testing needs. The standard modules — 64 pin signal, 96 pin signal, 192 pin signal, 19 pin mini power/coaxial, 20 GHz, 40 GHz, Pneumatic, Fiber Optic — offer the capability of handling various signal requirements. Connector Modules can be intermixed in any configuration (including TAC Modules) depending on the test requirement. Other module configurations are available in our 90 Series catalog.



SIGNAL MODULES 64 PIN

The 64 pin Signal Receiver Module is made from Ryton® R-7 and will withstand temperatures up to 220° C. The 64 pin Signal ITA Module is made from an engineered resin and will withstand temperatures up to 150° C. Both the ITA and Receiver Modules have molded nomenclature and include mounting hardware.

P/N	Description
<i>Receiver Module</i>	
510 104 134	Signal Module (RCVR) 64 positions for discrete wiring
<i>ITA Module</i>	
510 108 101	Signal Module (ITA) 64 positions for discrete wiring



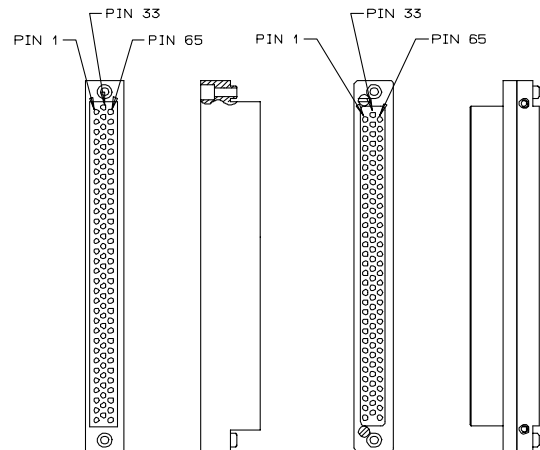
P/N 510 108 101

P/N 510 104 134

SIGNAL MODULES 96 PIN

The 96 pin Signal Modules are made from Ryton R-7, withstanding temperatures up to 220° C. Nomenclature is molded on the Module and mounting hardware is included.

P/N	Description
<i>Receiver Module</i>	
510 104 136	Signal Module (RCVR) 96 positions for discrete wiring
<i>ITA Module</i>	
510 108 126	Signal Module (ITA) 96 positions for discrete wiring



P/N 510 108 126

P/N 510 104 136

SIGNAL MODULES 192 PIN

The 192 pin Signal Modules are made from LCP liquid crystal polymer, withstanding temperatures up to 260° C. Nomenclature is molded on the Module and mounting hardware is included.

P/N	Description
<i>Receiver Module</i>	
510 150 115	Signal Module (RCVR) 192 positions for discrete wiring
<i>ITA Module</i>	
510 151 105	Signal Module (ITA) 192 positions for discrete wiring

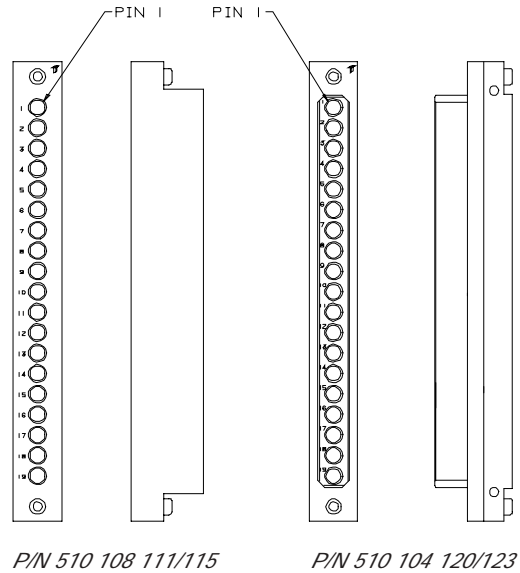
For Quadra Paddle contact information, see page 2.

2100 SERIES/GEMINI INTERFACE

MINI POWER/COAXIAL MODULES

The 19 pin Mini Power and Mini Coaxial Modules are made from Ryton R-7, withstanding temperatures up to 220° C. Nomenclature is silk screened white on the Module and mounting hardware is included. Power Module faces are screened red.

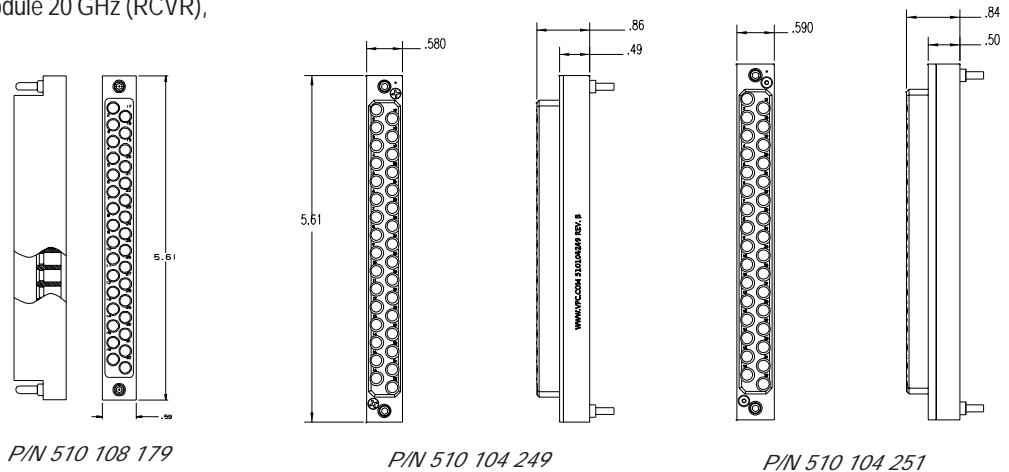
P/N	Description
<i>Receiver Modules</i>	
510 104 120	Mini Coaxial Module (RCVR) 19 positions
510 104 123	Mini Power Module (RCVR) 19 positions
510 104 150	Mini Coaxial Module (RCVR) 76 positions
<i>ITA Modules</i>	
510 108 111	Mini Coaxial Module (ITA) 19 positions
510 108 115	Mini Power Module (ITA) 19 positions
510 108 132	Mini Coaxial Module (ITA) 76 positions



75 OHM and 20 GHz COAXIAL MODULES 32 PIN

The 32 pin Coaxial Modules accommodate both 75 OHM and 20 GHz Coaxial Contacts and are made from G-10, withstanding temperatures of 115° C. Nomenclature is silk-screened white onto the Module.

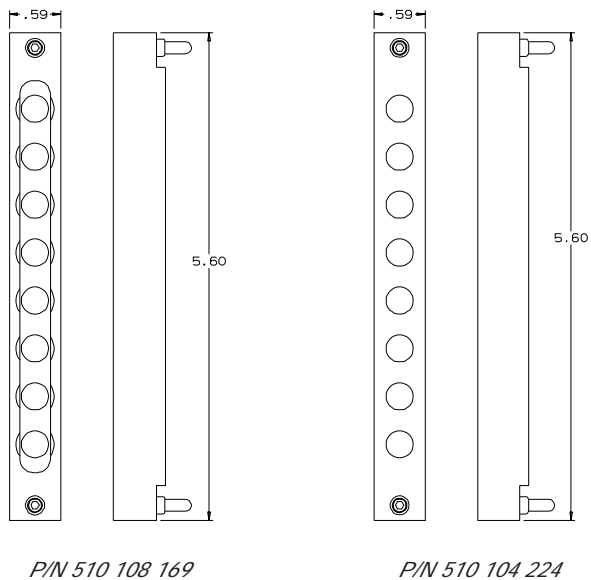
P/N	Description
ITA	
510 108 179	Coaxial Module 20 GHz/75 OHM (ITA), 32 contact (one-piece module)
Receiver	
510 104 249	Coaxial Module 75 OHM (RCVR), 32 contact
510 104 251	Coaxial Module 20 GHz (RCVR), 32 contact



40 GHz MODULES

The 8 pin 40 GHz Coaxial ITA and Receiver Modules are made from Aluminum, clear chromated and withstand temperatures of 125° C. Nomenclature is silkscreened black onto the Module.

P/N	Description
Receiver	
510 104 224	Coaxial Module 40 GHz (RCVR), 8 contact positions
ITA	
510 108 169	Coaxial Module 40 GHz (ITA), 8 contact positions



2100 SERIES/GEMINI INTERFACE

PNEUMATIC MODULES

VPC offers two types of Pneumatic Modules. One is designed for larger diameter (3/8" ID) pneumatic connectors, with positions for 5 panel mount pneumatic/vacuum connectors and occupying 2 module positions in the Receiver.

The other Pneumatic Module is designed for smaller diameter (1/8" ID) pneumatic connectors, with positions for 10 panel mount pneumatic/vacuum connectors and occupying 1 module position.

P/N	Description
<i>Receiver Module</i>	
510 104 160	Pneumatic Module (RCVR) 5 contact positions (for .250" & 3/8" ID pneumatic connectors)
<i>ITA Modules</i>	
510 108 144	Pneumatic Module (ITA) 5 contact positions (for .250" & 3/8" ID pneumatic connectors)

P/N 510 108 144

P/N 510 104 160

P/N	Description
<i>Receiver Module</i>	
510 104 185	Pneumatic Module (RCVR) 10 contact positions (for 1/8" ID pneumatic connectors)
<i>ITA Modules</i>	
510 108 160	Pneumatic Module (ITA) 10 contacts positions (for 1/8" ID pneumatic connectors)

P/N 510 104 185

P/N 510 108 160

FIBER OPTICS MODULES AND CONTACTS

Virginia Panel offers Fiber Optics Modules and Patchcords used in our 90 Series and Gemini Receivers and Interchangeable Test Adapters (ITAs). Both the Receiver and ITA Modules are made of aluminum with nickel plating and have 14 termini positions. A protective dust cover for the fiber optic module is available.

The Fiber Optics termini have an insertion loss of 0.5 dB typical, a return loss of -35 dB or better and an engagement force of 1.5 lbs. per contact. The fiber optics termini is hermaphroditic, however, the Receiver Patchcord Assembly includes an alignment sleeve. A cleaning kit and removal tool are available.

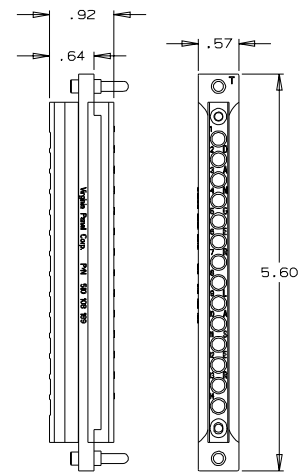
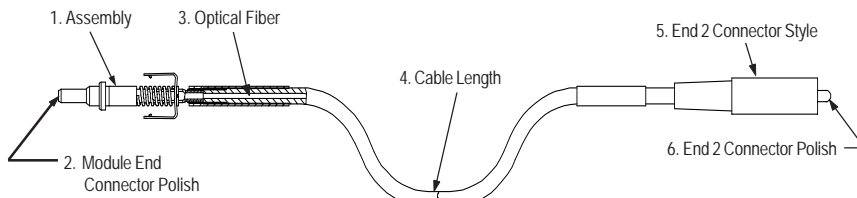


Receiver and ITA module loaded with Fiber Optics Assembly Patent Pending

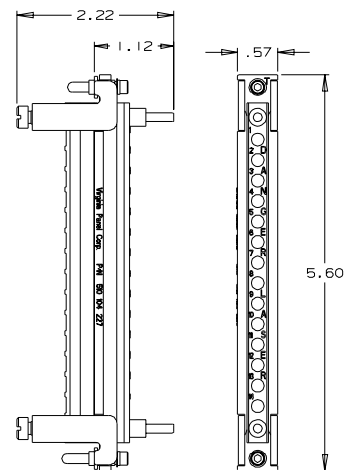
Modules

Patent Pending

P/N	Description
<i>ITA</i>	
510 108 189	ITA Module, Fiber Optics with 14 positions
510 109 295	ITA Fiber Optic Module Protective Dust Cover
<i>Receiver</i>	
510 104 227	Receiver Module, Fiber Optics with 14 positions
510 109 294	Receiver Fiber Optic Module Protective Dust Cover

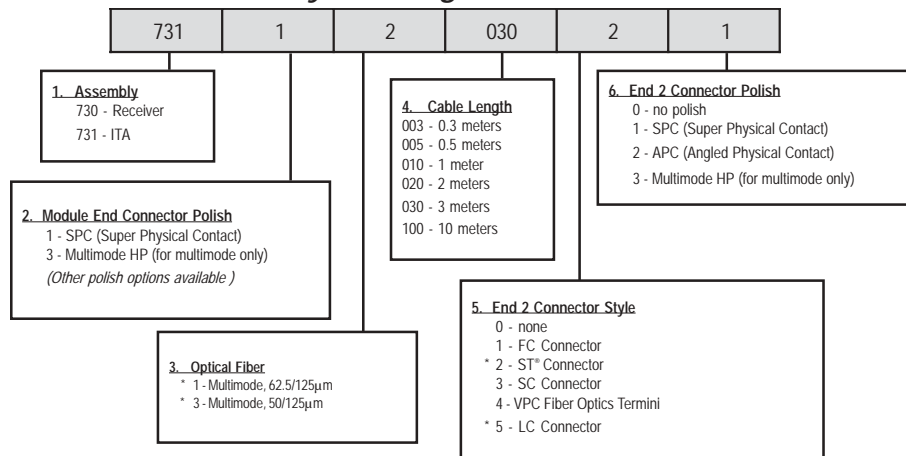


P/N 510 108 189



P/N 510 104 227

Patchcord Assembly Ordering Chart:



**Not available with angle polish*

Subject to change due to technological advances.

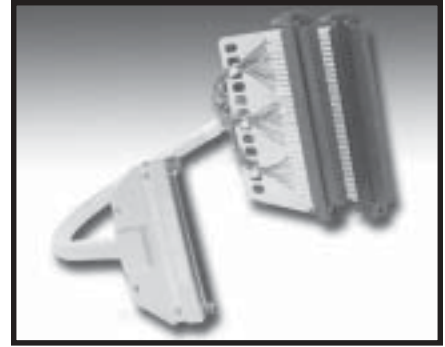
P/N	Description
510 109 273	Strain relief kit included with modules

CABLE ASSEMBLIES

Virginia Panel manufactures cable assemblies and patchcords for over 500 VXI cards and PXI instruments

PXI Cable Assemblies

VPC provides ready-to-use cable assemblies to connect between the standard connectors used on PXI cards and the VPC Receiver. One end of the cable is connected to the PXI instrument; the other is installed into the receiver providing a fast, efficient, reliable connection. Use them to mass interconnect a PXI or PXI/SCXI system and make the most of your application!



www.vpc.com/pxi/configurator



VPC's **PXI and VXI Configurators** streamline the process of finding the right part numbers needed to make your connections.

1. Choose the manufacturer for the PXI or VXI card you are using.
2. Choose your card number from the drop down menu
3. Displayed are the results. You see the VPC Receiver Cable Assembly part number, the mating ITA module, and the corresponding ITA patchcords.

VXI Cable Assemblies

For VXI applications, Virginia Panel offers Cable Assemblies that mate the VXI card connection with VPC connector modules.



Cable Assemblies offer:

- 20, 30, and 48 inch lengths (Consult factory for special requirements)
- Longer wire lengths allowing the Receiver to be placed wherever needed on the rack providing direct access to the VXI chassis
- An "open" structure, allowing Cable Assemblies to be used with any size VXI card on any size chassis



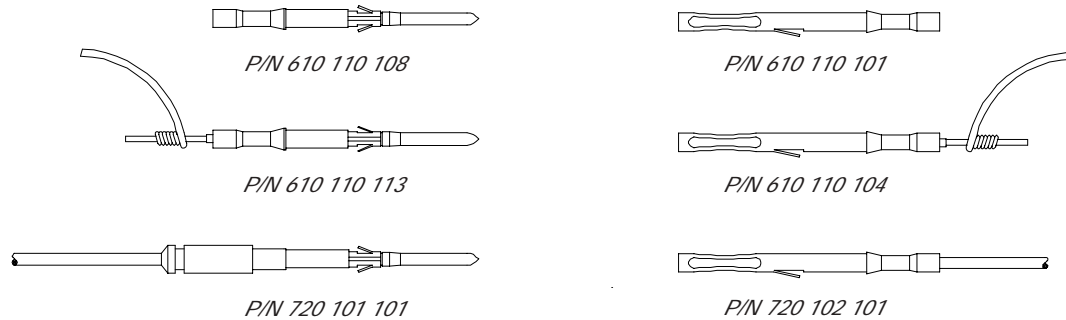
Please contact the factory or visit the web-site (www.vpc.com/vxi/configurator) for a complete listing of available cable assemblies for your VXI/PXI needs.

CONTACTS AND PATCHCORDS/PIN AND SOCKET

Contacts and Patchcords are available in various sizes and configurations. Contacts are ordered separately and are terminated by crimp, solder or wire wrap. *Custom Patchcords are available upon request.*

SIGNAL CONTACTS AND PATCHCORDS

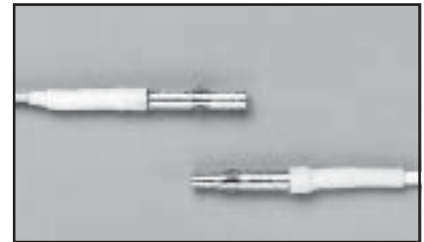
Signal contacts carry up to 5 amperes (22 AWG wire) or 10 amperes (14 AWG wire) continuous and can carry pulsed current up to 15 amperes at a maximum duration of 800 milliseconds. Resistance ranges from .002 - .005 OHMs. Superior performance is achieved by VPC's patented Tri-paddle design. Patchcords use stranded wire unless otherwise noted.



P/N	Description	Used in Module
<i>Receiver</i>		
610 110 101	Signal Receiver Contact, Crimp/Solder, 22 AWG (max.), 30 μ" gold	510 104 134/136/149
610 110 104	Signal Receiver Contact, with .025 square wire wrap post, 30 μ" gold	510 104 134/136/149
610 110 128	Signal Receiver Contact, Crimp/Solder, 10 AMP, 14 AWG (max.), 30 μ" gold	510 104 134/136/149
610 110 167	Signal Receiver Contact, Crimp/Solder, 5 Amp, 26-28 AWG. 30 μ" gold	510 104 134/136/149
720 102 101	Signal Receiver Patchcord, 24 AWG, contact one end, 36" (uses P/N 610 110 101)	510 104 134/136/149
720 102 102	Signal Receiver Patchcord, 26 AWG, solid, contact one end, 36" (uses P/N 610 110 101)	510 104 134/136/149
<i>ITA</i>		
610 110 108	Signal ITA Contact, Crimp/Solder, 22 AWG (max.), 30 μ" gold	510 108 101/126
610 110 113	Signal ITA Contact, with .025 square wire wrap post, 30 μ" gold	510 108 101/126
610 110 129	Signal ITA Contact, Crimp/Solder, 10 AMP, 14 AWG (max.), 30 μ" gold	510 108 101/126
610 110 169	Signal ITA Contact, Crimp/Solder, 5 Amp, 26-28 AWG. 30 μ" gold	510 108 101/126
720 101 101	Signal ITA Patchcord, 24 AWG, contact one end, 36" (uses P/N 610 110 108)	510 108 101/126
720 101 102	Signal ITA Patchcord, 26 AWG, solid, contact one end, 36" (uses P/N 610 110 108)	510 108 101/126

MINI POWER CONTACTS AND PATCHCORDS

Mini Power contacts carry up to 50 amperes continuous current, 480 VAC. Maximum resistance is 10 Milliohms.

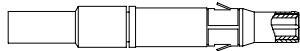


P/N	Description	Used in Module
<i>Receiver</i>		
610 116 112	Mini Power Receiver Contact, Solder, 8 AWG (max.), 50 μ" gold	510 104 123
716 102 122	Mini Power Receiver Patchcord, 12 AWG, contact one end, 36" (uses contact P/N 610 116 112)	510 104 123
<i>ITA</i>		
610 115 124	Mini Power ITA Contact, Solder, 8 AWG (max.), 50 μ" gold	510 108 115
610 115 125	Mini Power ITA Contact, Solder, 8 AWG (max.), 30 μ" gold	510 108 115
716 101 155	Mini Power ITA Patchcord, 12 AWG, contact one end, 36" (uses contact P/N 610 115 125)	510 108 115
716 101 175	Mini Power ITA Patchcord, 16 AWG, 36", 50 μ" gold	510 108 115

2100 SERIES/GEMINI INTERFACE

MINI COAXIAL CONTACTS AND PATCHCORDS/50 OHM

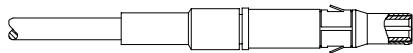
Mini Coaxial contacts have a maximum VSWR less than 1.02 up to 500 MHz. Crosstalk is down less than 60 dB @ 500 MHz. Insertion loss is less than 0.05 dB @ 500 MHz. Resistance is 5 Milliohms maximum @ 0.5 Amps, never exceeding 10 Milliohms.



P/N 610 103 115



P/N 610 104 114



P/N 710 102 137

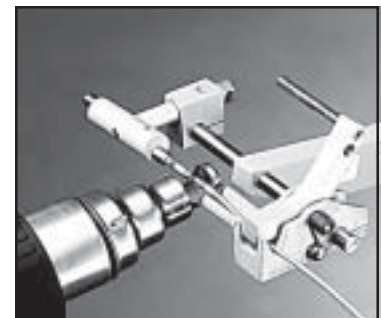


P/N 710 107 155

P/N	Description	Used in Module
<i>Receiver</i>		
610 104 114	Mini Coaxial Receiver Contact, RG316	510 104 120
610 104 141	Mini Coaxial Receiver Contact, RG178	510 104 120
710 107 155	Mini Coaxial Receiver Patchcord, RG316, contact one end, 36" (uses contact P/N 610 104 114)	510 104 120
710 107 237	Mini Coaxial Receiver Patchcord, RG178, contact one end, 36" (used contact P/N 610 104 141)	510 104 120
<i>ITA</i>		
610 103 115	Mini Coaxial ITA Contact, RG316	510 108 111
610 103 130	Mini Coaxial ITA Contact, RG178	510 108 111
610 103 136	Mini Coaxial ITA Contact, 24 AWG	510 108 111/132
610 103 150	Mini Coaxial ITA Contact, two .025 round posts for PCB	510 108 111
610 103 161	Mini Coaxial ITA Contact, for twisted pair	510 108 111/132
610 103 166	Mini Coaxial ITA Contact, 24 AWG	510 108 111/132
710 102 137	Mini Coaxial ITA Contact, RG316, contact one end, 36" (uses contact P/N 610 103 115)	510 108 111
710 106 219	Mini Coaxial ITA Contact, RG178, contact one end, 36" (uses contact P/N 610 103 130)	510 108 111

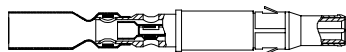
MINI COAXIAL SOLDER SLEEVE® CONTACTS AND PATCHCORDS/50 OHM

A durable, reliable and economical alternative to traditional crimping methods, the Solder Sleeve is made of heat-shrinkable thermoplastic. The sleeve contains a fluxed solder pre-form which provides the exact amount of solder and flux required to connect coaxial wire to the contact. The solder sleeve's one-piece, pre-assembled design makes application as easy as stripping the wire, inserting it and heating the contact. After shrinking, the sleeve acts as an insulator and provides strain relief for the solder joint. Connection errors are reduced by the use of a specially designed holding fixture and pre-designated location for heat application (see Tools on page 38).

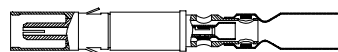


Termination in 3 Easy Steps:

1. Strip the wire.
2. Insert the wire into the contact.
3. Heat the contact in the designated location.



P/N 610 103 140

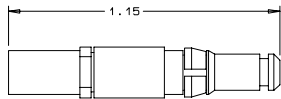


P/N 610 104 142

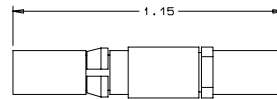
P/N	Description	Used in Module
<i>Receiver</i>		
610 104 142	Mini Coaxial Receiver Contact, solder sleeve, RG316 & RG178	510 104 120
710 107 323	Mini Coaxial Receiver Patchcord, solder sleeve, one end, 36", RG316	510 104 120
710 107 324	Mini Coaxial Receiver Patchcord, solder sleeve, one end, 36", RG178	510 104 120
<i>ITA</i>		
610 103 140	Mini Coaxial ITA Contact, solder sleeve, RG316 & RG178	510 108 111
710 106 304	Mini Coaxial ITA Patchcord, solder sleeve, one end, 36", RG316	510 108 111
710 106 305	Mini Coaxial ITA Patchcord, solder sleeve, one end, 36", RG178	510 108 111

20 GHz COAXIAL CONTACTS

The 20 GHz Coaxial contacts have an impedance of 50 OHMs and a current rating of 5 amps. Insertion loss is $\sqrt{06} \times f$ (GHz)dB. Contact resistance of center contact is 5 Milliohms; contact resistance of outer contact is 3 Milliohms. VSWR is 1.15 + .01 (F) GHz using cable M17/60-RG142 and SF142B. It is recommended to use SF142B to achieve 20 GHz.



P/N 610 102 110

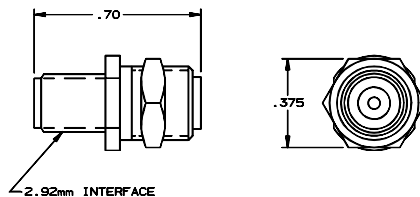


P/N 610 102 109

Contact Part Numbers					Used in Module
610 102 110	ITA 20 GHz Coaxial Contact, crimp/clamp or crimp (20 GHz with SF142B)				510 108 179
610 102 109	Receiver 20 GHz Coaxial Contact, crimp/clamp or crimp (20 GHz with SF142B)				510 104 251
610 102 117	ITA 20 GHz Coaxial Contact, for M17/84-RG223				510 108 179
610 102 116	Receiver 20 GHz Coaxial Contact, for M17/84-RG223				510 104 251
Patchcords	Contact Used	Length	Wire	Description	
710 106 325	610 102 110	36"	RG142	ITA, contact one end (8 GHz max.)	510 108 179
710 107 352	610 102 109	36"	RG142	Receiver, contact one end (8 GHz max.)	510 104 251
710 106 457	610 102 117	36"	RG223	ITA, PCCX (12 GHz)	510 108 179
710 107 484	610 102 116	36"	RG223	Receiver, PCCX (12 GHz)	510 104 251

40 GHz COAXIAL CONTACTS

The 40 GHz Coaxial Contact is a blind mate connector that mates with SMA, 3.5 mm and 2.92 mm connectors. The temperature range is -50° C to +125° C. Insertion loss and VSWR are as follows:



P/N 610 102 114

FREQUENCY RANGE (GHz)	LOSS (MAX dB)	SWR (MAX)
dc - 18	0.3	1.35
18 - 40	1.5	1.55

P/N	Description	Used in Module
<i>Receiver/ITA</i>		
610 102 114	40 GHz Receiver/ITA Contact	510 104 224 510 108 169

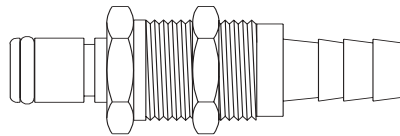
NOTE: VPC recommends the 40 GHz Modules be placed in module slots near the outside edges of the Receiver, i.e. Module slots 1 and 18.

2100 SERIES/GEMINI INTERFACE

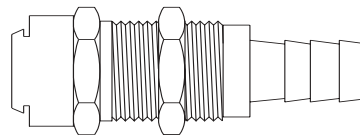
PNEUMATIC CONTACTS

The bodies of the 3/8" OD connector are made of chrome-plated brass, pressure/vacuum rated to 250 psi (17.3 Bar), and have operating temperatures between -40° F to 180° F (-40° C to 82° C). Pneumatic Connectors are available with either ferrules polytube fittings (3/8" tubing OD) or hose barb (3/8" tubing ID). Ferrules fittings securely attach tubing without hose clamps - which is recommended for the hose barb type (hose clamp not included).

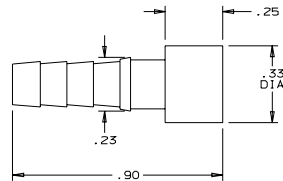
The bodies of the 1/8" OD connector are made of Delrin®, pressure/vacuum rated to 100 psi (6.9 Bar), and have operating temperatures between -40° F to 180° F (-40° C to 82° C). These connectors (1/8" ID) are available with hose barb.



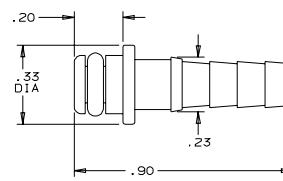
P/N 610 132 104



P/N 610 131 104



P/N 610 132 105



P/N 610 131 106

P/N	Description	Used in Module
<i>Receiver</i>		
610 131 101	Pneumatic Contact, ferrules fitting, 3/8" OD, .250" ID (9.5 x 6 mm)	510 104 160
610 131 104	Pneumatic Contact, hose barb, 3/8" ID (9.5 mm)	510 104 160
610 131 106	Pneumatic Contact, hose barb, 1/8" ID (4 mm)	510 104 185
<i>ITA</i>		
610 132 101	Pneumatic Contact, ferrules fitting, 3/8" OD, .250" ID (9.5 x 6 mm)	510 108 144
610 132 104	Pneumatic Contact, hose barb, 3/8" ID (9.5 mm)	510 108 144
610 132 105	Pneumatic Contact, hose barb, 1/8" ID (4 mm)	510 108 160

CONNECTOR MODULES FOR PCB TERMINATION

VPC's patented *Twin Access Contacts (TACs™)* are used in applications requiring direct PCB termination. **TAC Connector Modules** are available in four configurations — 380 pin Signal, 228 pin Signal/12 pin Coaxial or Power, 46 pin Coaxial (50 OHM)/Power, or 180 pin Signal/10 pin Coaxial (75 OHM) — found on pages 23 - 26. Receiver and ITA Wiring Modules loaded with Wiring Contacts are necessary when discrete wiring TACs (see Figure A). All modules are made from an engineered resin, with operating temperatures ranging from -50° C to 85° C. The TAC Receiver Module is available either with or without a contact protective cover. Receiver Module faces are screened with a white checkerboard pattern and all modules are screened with white nomenclature. Modules include mounting hardware. Contacts are sold separately.

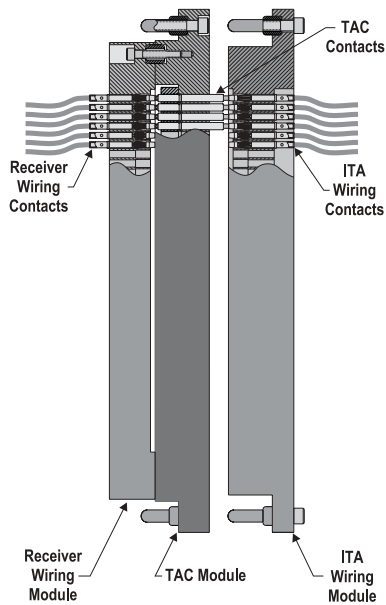
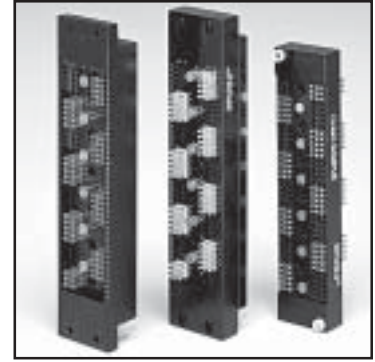


Figure A.
Tac Module - Discrete Wired on both sides

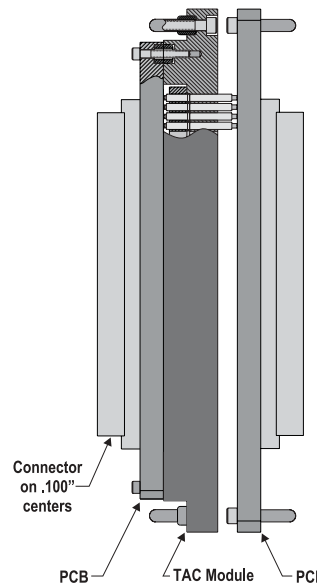


Figure B.
Tac Module - PCB to PCB

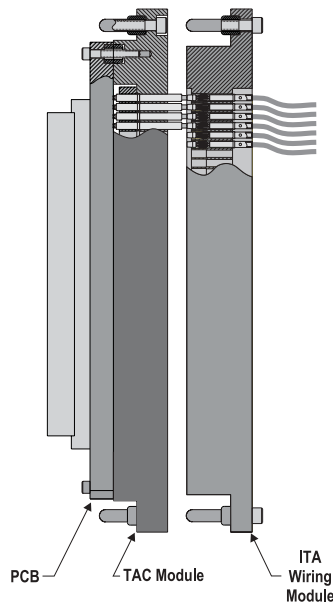


Figure C.
Tac Module - PCB to Discrete Wiring Module

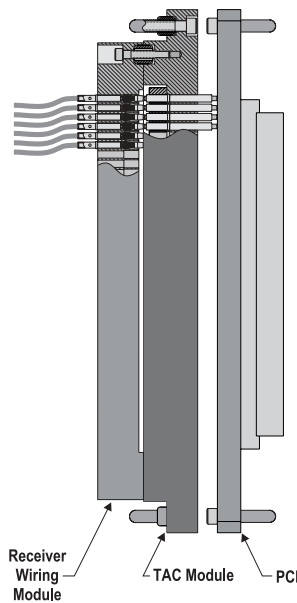
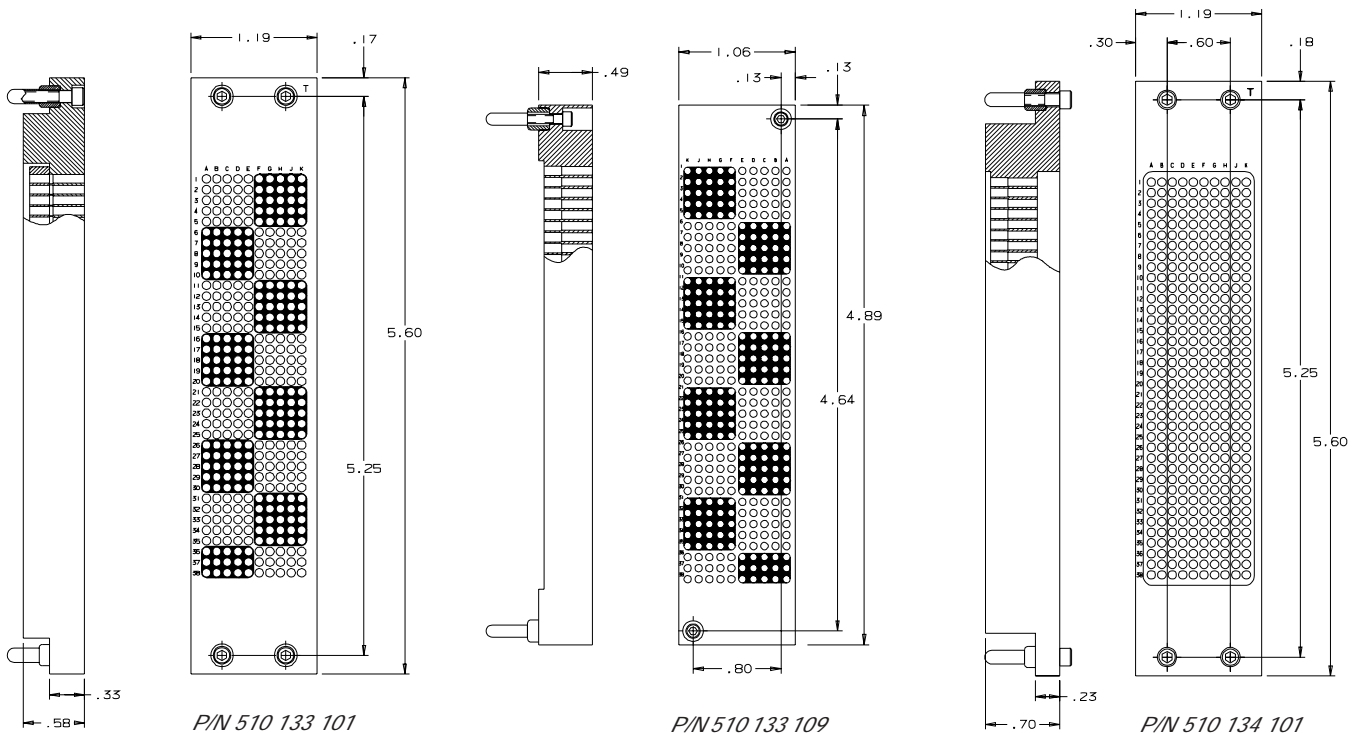


Figure D.
Tac Module - Discrete Wiring Module to PCB

2100 SERIES/GEMINI INTERFACE

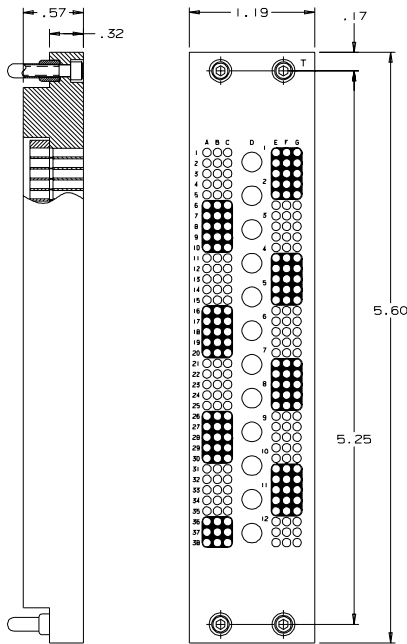
TAC Configuration Models: SIGNAL MODULES

P/N	Description	Contacts Used
<i>Receiver Modules</i>		
510 133 101	TAC Module (Receiver) with positions for 380 TAC Signal Contacts	610 122 101
<i>Receiver Wiring Module</i>		
510 133 109	Receiver Wiring Module with positions for 380 Signal Wiring Contacts	610 127 110/111 737 101 101
<i>ITA Wiring Module</i>		
510 134 101	ITA Wiring Module with positions for 380 Signal Wiring Contacts	610 127 110/111 737 101 101

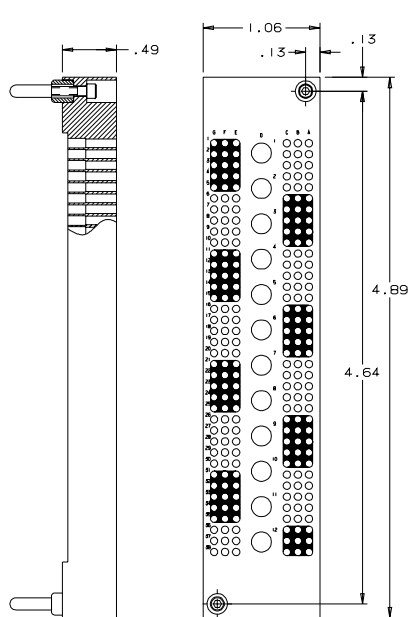


SIGNAL/COAXIAL MODULES

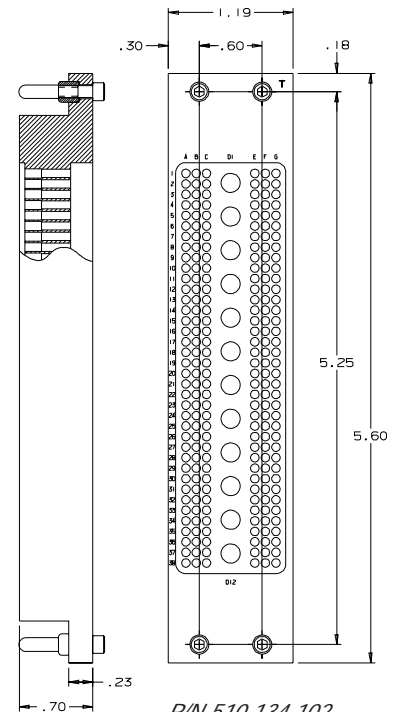
P/N	Description	Contacts Used
<i>Receiver Modules</i>		
510 133 103	TAC Module (Receiver) with positions for 228 TAC Signal Contacts and 12 TAC Coaxial or Power Contacts	610 122 101/610 133 101 610 135 101
<i>Receiver Wiring Module</i>		
510 133 110	Receiver Wiring Module with positions for 228 Signal Wiring Contacts and 12 Coaxial or Power Wiring Contacts	610 127 110 & 111/737 101 101 610 136 101 & 102/737 102 101/102 610 134 101/737 104 101
<i>ITA Wiring Module</i>		
510 134 102	ITA Wiring Module with positions for 228 Signal Wiring Contacts and 12 Coaxial or Power Wiring Contacts	610 127 110 & 111/737 101 101 610 136 101 & 102/737 102 101/102 610 134 101/737 104 101



P/N 510 133 103



P/N 510 133 110

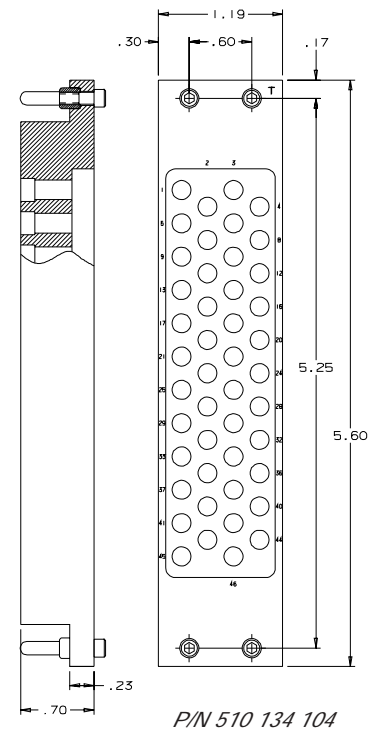
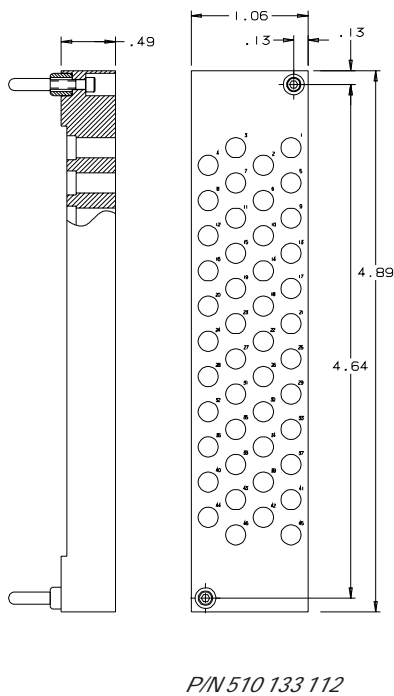
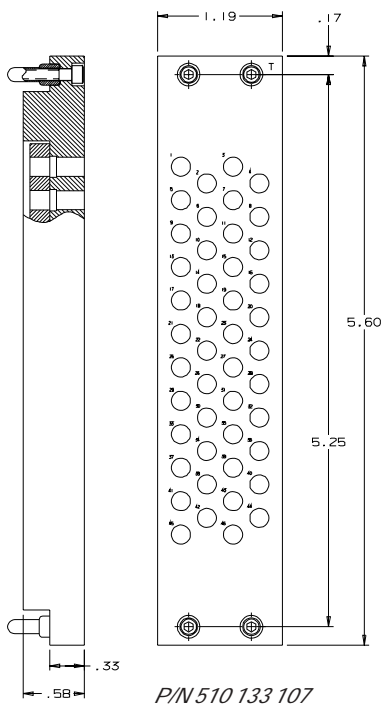


P/N 510 134 102

2100 SERIES/GEMINI INTERFACE

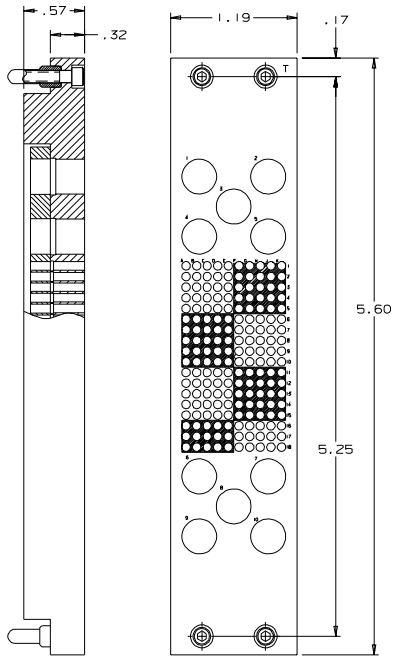
COAXIAL (50 OHM)/POWER MODULES

P/N	Description	Contacts Used
<i>Receiver Modules</i>		
510 133 107	TAC Module (Receiver) with positions for 46 TAC Coaxial or Power Contacts	610 133 101/610 135 101
<i>Receiver Wiring Module</i>		
510 133 112	Receiver Wiring Module with positions for 46 Coaxial or Power Wiring Contacts	610 136 101/102 737 102 101/102 610 134 101/103 & 737 104 101
<i>ITA Wiring Module</i>		
510 134 104	ITA Wiring Module with positions for 46 Coaxial or Power Wiring Contacts	610 136 101/102 737 102 101/102 610 134 101/103 & 737 104 101

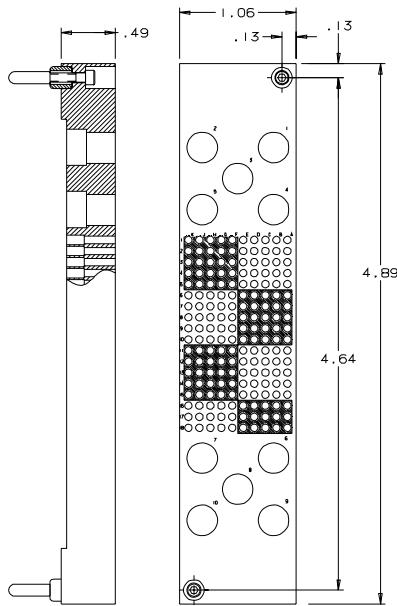


SIGNAL/COAXIAL (75 OHM) MODULES

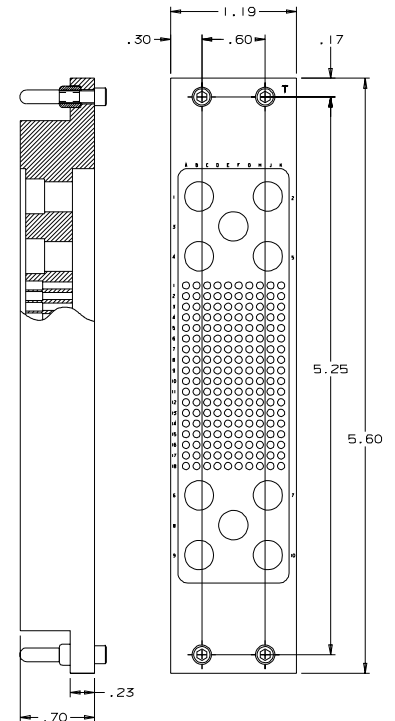
P/N	Description	Contacts Used
<i>Receiver Modules</i>		
510 133 105	TAC Module (Receiver) with positions for 180 TAC Signal Contacts and 10 TAC Coaxial (75 OHM) Contacts	610 122 101 610 133 102
<i>Receiver Wiring Module</i>		
510 133 111	Receiver Wiring Module with positions for 180 Signal Wiring Contacts and 10 Coaxial (75 OHM) Wiring Contacts	610 127 110/111 737 101 101 610 134 102
<i>ITA Wiring Module</i>		
510 134 103	ITA Wiring Module with positions for 180 Signal Wiring Contacts and 10 Coaxial (75 OHM) Wiring Contacts	610 127 110/111 737 101 101



P/N 510 133 105



P/N 510 133 111



P/N 510 134 103

2100 SERIES/GEMINI INTERFACE

TWIN ACCESS CONTACTS

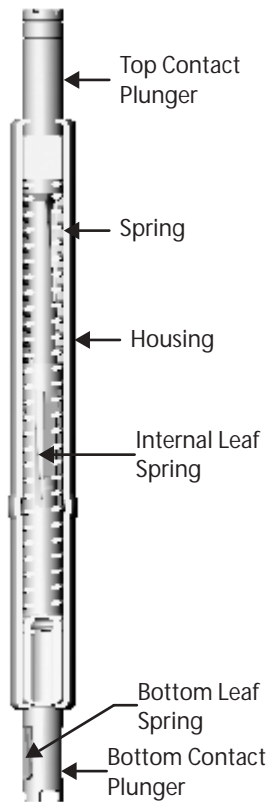
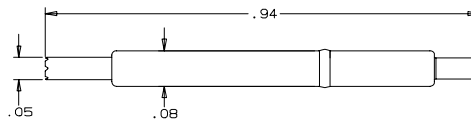
Virginia Panel Corporation's patented Twin Access Contact (TAC™) is designed to mate directly with a Printed Circuit Board (PCB) on both sides of the contact. The TAC features double-ended wiping action that will not damage the contact pads on the PCB.



SIGNAL TAC

Maximum contact force of each Signal TAC is 2 ounces, enabling the user to fully load the modules, yet easily engage and disengage the interface. TAC can mate directly to a PCB, reducing the time and dollars spent on discrete wiring a system. (TAC can also be discrete wired using the wiring contacts shown on pages 35-37).

P/N	Description	Used in Module
610 122 101	TAC Signal Receiver Contact for printed wired or discrete wired connection	510 133 101/102/103 510 133 104/105/106



Signal TAC Technical Specifications (P/N 610 122 101)

MECHANICAL/ELECTRICAL

Surface to Surface Contact Resistance	<20 Milliohms
Life Expectancy	>25,000 Cycles
Current Rating	3 AMPS Continuous DC
Frequency Range	DC to 50 MHz
Crosstalk	<60 dB Down at 1 MHz
Dielectric Breakdown Voltage	>1500 VDC
Working Front Travel	.080 inches
Working Rear Travel	.060 inches
Max Front Travel	.100 inches
Max Rear Travel	.080 inches
Force at Working Travel	2.0 ounces

MATERIAL

Plungers	360 Brass
Keyway	Beryllium Copper
Housing	Nickel Silver
Spring	Nickel Plated Music Wire

PLATING

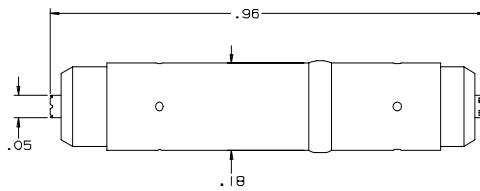
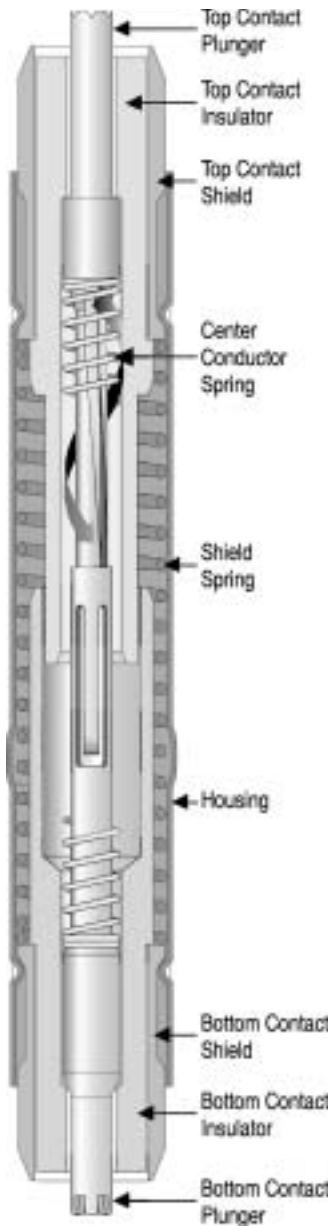
Plunger	0.000100 Nickel Underplate and 0.000030 Gold Overplate
Keyway	0.000100 Nickel Underplate and 0.000050 Gold Overplate

COAXIAL TAC/50 OHM

VPC's Receiver Coaxial TAC contact features the same double-ended wiping action as our TAC Signal Contact. Impedance is 50 OHMS. TAC can mate directly to a PCB or be discrete wired using wiring contacts (see pages 35-37).



P/N	Description	Used in Module
610 133 101	TAC Coaxial (50 OHM) Receiver Contact for printed wired or discrete wired connection	510 133 103/104/107/108



Coaxial TAC Technical Specifications (P/N 610 133 101)

MECHANICAL/ELECTRICAL	
Surface to Surface Contact Resistance	<40 Milliohms
Life Expectancy	>25,000 Cycles
Current Rating	500 mA Continuous
Impedance	50 OHMS, Nominal
VSWR*	<1.16 up to 500 MHz, 1.3 up to 2 GHz
Crosstalk	<60 dB Down at 500 MHz
Dielectric Breakdown Voltage	>1500 VDC
Working Front Travel	.090 inches
Working Rear Travel	.070 inches
Max Front Travel	.110 inches
Max Rear Travel	.090 inches
Force at Working Travel	7.0 ounces
MATERIAL	
Top Contact Plunger	360 Brass
Bottom Contact Plunger	Beryllium Copper
Shields	360 Brass
Housing	260 Brass
Springs	Nickel Plated Music Wire
PLATING	
Top Contact Plunger	0.000100 Nickel Underplate and 0.000030 Gold Overplate
Bottom Contact Plunger	0.000100 Nickel Underplate and 0.000050 Gold Overplate
Shields	0.000100 Nickel Underplate and 0.000030 Gold Overplate
Housing	0.000100 Nickel Underplate and 0.000030 Gold Overplate

* Specifications available upon request

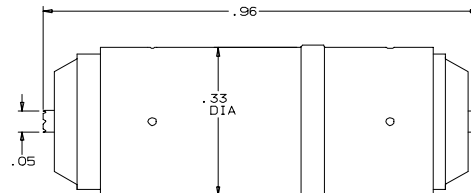
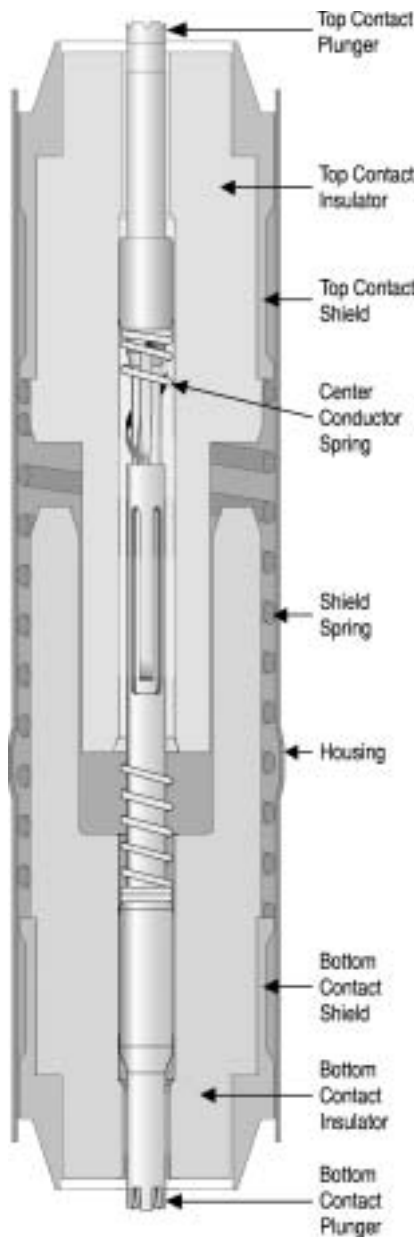
2100 SERIES/GEMINI INTERFACE

COAXIAL TAC/75 OHM

VPC's Receiver Coaxial TAC contact features the same double-ended wiping action as our TAC Signal Contact. Impedance is 75 OHMS. TAC can mate directly to a PCB or be discrete wired using wiring contacts (see pages 35-37).



P/N	Description	Used in Module
610 133 102	TAC Coaxial (75 OHM) Receiver Contact for printed wire or discrete wired connection	510 133 105/106



Coaxial TAC Technical Specifications (P/N 610 133 102)

MECHANICAL/ELECTRICAL	
Surface to Surface Contact Resistance	<40 Milliohms
Life Expectancy	>25,000 Cycles
Current Rating	500 mA Continuous
Impedance	75 OHMS, Nominal
VSWR*	<1.15 up to 500 MHz, 1.3 up to 2 GHz
Crosstalk	<60 dB Down at 500 MHz
Dielectric Breakdown Voltage	>1500 VDC
Working Front Travel	.090 inches
Working Rear Travel	.070 inches
Max Front Travel	.110 inches
Max Rear Travel	.090 inches
Force at Working Travel	7.0 ounces

MATERIAL	
Top Contact Plunger	360 Brass
Bottom Contact Plunger	Beryllium Copper
Shields	360 Brass
Housing	260 Brass
Springs	Nickel Plated Music Wire

PLATING	
Top Contact Plunger	0.000100 Nickel Underplate and 0.000030 Gold Overplate
Bottom Contact Plunger	0.000100 Nickel Underplate and 0.000050 Gold Overplate
Shields	0.000100 Nickel Underplate and 0.000030 Gold Overplate
Housing	0.000100 Nickel Underplate and 0.000030 Gold Overplate

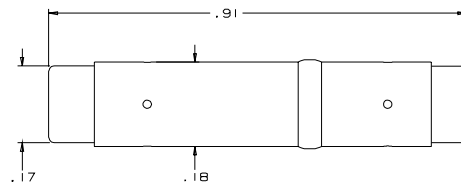
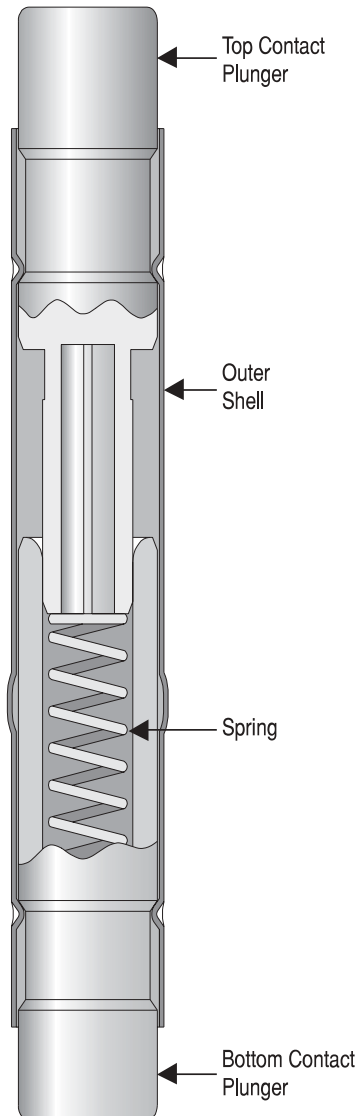
* Specifications available upon request

POWER TAC

VPC's Receiver Power TAC contact features the same double-ended wiping action as our TAC Signal Contact and is rated at 20 Amps. TAC can mate directly to a PCB or be discrete wired using wiring contacts (see pages 35-37).



P/N	Description	Used in Module
610 135 101	TAC Power Receiver Contact for printed wired or discrete wired connection	510 133 103/104/107/108



Power TAC Technical Specifications (P/N 610 135 101)

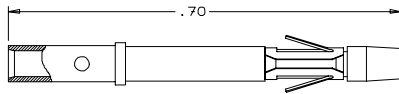
MECHANICAL/ELECTRICAL	
Surface to Surface Contact Resistance	<10 Milliohms
Life Expectancy	>25,000 Cycles
Current Rating	20 AMPs Continuous DC
Temperature Rise	<30°C
Dielectric Breakdown Voltage	>1500 VDC
Working Front Travel	.070 inches
Working Rear Travel	.060 inches
Max Front Travel	.090 inches
Max Rear Travel	.080 inches
Force at Working Travel	25.0 ounces
MATERIAL	
Top Contact Plunger	Beryllium Copper
Bottom Contact Plunger	360 Brass
Outer Shell	260 Brass
Spring	Nickel Plated Music Wire
PLATING	
Top & Bottom Plungers	0.000100 Nickel Underplate and 0.000030 Gold Overplate
Outer Shell	0.000100 Nickel Underplate and 0.000030 Gold Overplate

2100 SERIES/GEMINI INTERFACE

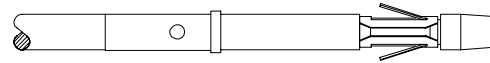
WIRING CONTACTS AND PATCHCORDS/TAC

Wiring Contacts are used to discrete wire TAC contacts. Available in Signal, Coaxial and Power, the Wiring Contacts are used in ITA and/or Receiver Wiring Modules. Patchcords use stranded wire unless otherwise noted.

SIGNAL WIRING CONTACTS AND PATCHCORDS



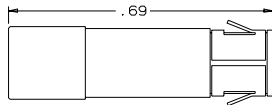
P/N 610 127 110



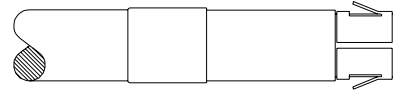
P/N 737 101 101

P/N	Description	Used in Module
610 127 110	ITA/Receiver Signal Wiring Contact, Crimp/Solder with retaining ring, 20 AWG (max.)	510 133 109/110/111 510 134 101/102/103
610 127 111	ITA/Receiver Signal Wiring Contact, Wire Wrap with retaining ring	510 133 109/110/111 510 134 101/102/103
610 127 115	ITA/Receiver Signal Wiring Contact Strip, 38 positions, unshrouded, double-row, vertical board-to-board and board-to-cable connectors, through-hole headers (for TAC/PCB Interface or PCB only)	510 133 113/114/115/116/121 510 133 117/118/119/120 510 134 105/106/107/108/113 510 134 109/110/111/112
610 127 116	ITA/Receiver Signal Header Wire Assembly, 4 positions, to mate with P/N 610127115	
737 101 101	ITA/Receiver Signal Wiring Patchcord, 24 AWG, 36" (uses contact P/N 610127110)	510 133 109/110/111 510 134 101/102/103

POWER WIRING CONTACTS AND PATCHCORDS



P/N 610 136 101

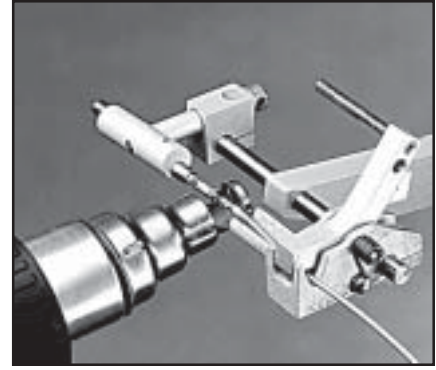


P/N 737 102 101

P/N	Description	Used in Module
610 136 101	ITA/Receiver Power Wiring Contact, 10 AWG (max.)	510 133 110/112 510 134 102/104
610 136 102	ITA/Receiver Power Wiring Contact, 18 AWG (max.)	510 133 110/112 510 134 102/104
610 136 103	ITA/Receiver Power Wiring Contact, 10 AWG (max.) for TAC/PCB Interface	510 133 117/118/119/120 510 134 109/110/111/112
610 136 104	ITA/Receiver Power Wiring Contact, 18 AWG (max.) for TAC/PCB Interface	510 133 117/118/119/120 510 134 109/110/111/112
737 102 101	ITA/Receiver Power Wiring Patchcord, 12 AWG, 36" (uses contact P/N 610136101)	510 133 110/112 510 134 102/104
737 102 102	ITA/Receiver Power Wiring Patchcord, 18 AWG, 36" (uses contact P/N 610136102)	510 133 110/112 510 134 102/104
737 102 110	ITA/Receiver Power Wiring Patchcord, 18 AWG, 72" (uses contact P/N 610136 02)	510 134 102/104
737 102 114	ITA/Receiver Power Wiring Patchcord, 18 AWG, 20" (uses contact P/N 610136 02)	510 134 102/104
737 103 101	ITA/Receiver Power Wiring Patchcord, 12 AWG, 36" (uses contact P/N 610136103)	510 133 117/118/119/120 510 134 109/110/111/112
737 103 102	ITA/Receiver Power Wiring Patchcord, 18 AWG, 36" (uses contact P/N 610136104)	510 133 117/118/119/120 510 134 109/110/111/112

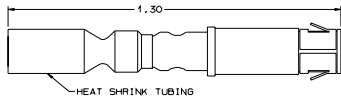
COAXIAL WIRING CONTACTS AND PATCHCORDS/50 OHM

There are 2 types of 50 OHM Coaxial Wiring contacts available — Solder Sleeve® for wire termination and SMB connection. The durable and economical Solder Sleeve is made of heat-shrinkable thermoplastic. The sleeve contains a fluxed solder pre-form which provides the exact amount of solder and flux required to connect coaxial wire to the contact. The solder sleeve's one-piece, pre-assembled design makes application as easy as stripping the wire, inserting it and heating the contact. After shrinking, the sleeve acts as an insulator and provides strain relief for the solder joint. Connection errors are reduced by the use of a specially designed holding fixture and pre-designated location for heat application (see Tools on page 38).

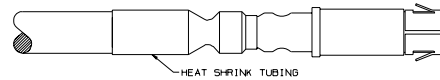


Termination in 3 Easy Steps:
 1. Strip the wire. 2. Insert the wire into the contact.
 3. Heat the contact in the designated location.

Solder Sleeve Ordering Information:



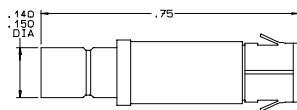
P/N 610 134 101



P/N 737 104 101

P/N	Description	Used in Module
610 134 101	ITA/Receiver Coaxial Wiring Contact with Solder Sleeve termination, RG178 & RG316	510 133 110/112 510 134 102/104
610 134 107	ITA/Receiver Coaxial Wiring Contact with Solder Sleeve termination, RG178 & RG316, for TAC/PCB Interface	510 133 117/118/119/120 510 134 109/110/111/112
737 104 101	ITA/Receiver Coaxial Wiring Patchcord, RG316, 36" (uses contact P/N 610134101)	510 133 110/112 510 134 102/104
737 104 105	ITA/Receiver Coaxial Wiring Patchcord, RG316, 72"	510 134 102/104
737 104 118	PCCX Receiver, 50 OHM Surface Contact to Male SMA, RG-316 20"	510 134 102/104
737 104 119	PCCX Receiver, 50 OHM Surface Contact to Female SMB, RG-316 20"	510 134 102/104
737 104 120	PCCX Receiver, 50 OHM Surface Contact to Male BNC, RG-316 20"	510 134 102/104
737 105 101	ITA/Receiver Coaxial Wiring Patchcord, RG316, 36" (uses contact P/N 610134107)	510 133 117/118/119/120 510 134 109/110/111/112

SMB Ordering Information:



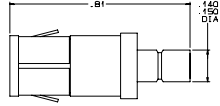
P/N 610 134 103

P/N	Description	Used in Module
610 134 103	ITA/Receiver Coaxial Wiring Contact for SMB connection (50 OHM)	510 133 112 510 134 104
610 134 106	ITA/Receiver Coaxial Wiring Contact for SMB connection (50 OHM), for TAC/PCB Interface	510 133 117/118/119/120 510 134 109/110/111/112

2100 SERIES/GEMINI INTERFACE

COAXIAL WIRING CONTACT/75 OHM

The 75 OHM Coaxial Wiring Contact is terminated with various connectors.



P/N 610 134 102

P/N	Description	Used in Module
610 134 102	ITA/Receiver Coaxial Wiring Contact for SMB connection (75 OHM)	510 133 111 510 134 103
737 106 101	PCCX TAC surface, 75 Ohm to SMZ 20"	510 134 103
737 106 102	PCCX TAC surface, 75 Ohm to 1.0/2.3 20"	510 134 103
737 106 103	PCCX TAC surface, 75 Ohm to Mini SMB 20"	510 134 103

**CONTACT AND PATCHCORD TOOLS —
PIN AND SOCKET**

Virginia Panel provides a complete selection of crimp and extraction tools, as well as an assortment of inspection and quality control tools. Mini Coax users who already own a suitable crimp tool handle may now purchase the Hex Die with Locator separately.

To assist in determining the proper tools needed, refer to the cross reference charts on pages 40-42.



P/N	Description	Used with P/N
Crimp Tools		
910 101 103	Signal, (RCVR/ITA)	610 110 101/108
910 101 115	Mini Coaxial Hex (RCVR/ITA), included with P/N 910 104 126	610 104 114/141 610 103 115/130
910 101 124	20 GHz, (RCVR/ITA)	610 102 109/110
Crimp Dies/Locators		
910 104 107	Signal, (RCVR/ITA) Standard	610 110 101/108
910 104 127	Signal, (RCVR) with wire stop for 22-24 AWG (optional, may not need if using P/N 910 104 107)	610 110 101
Extraction Tools		
910 110 102	Signal Contact, (RCVR/ITA)	610 110 101/104/108/113 720 101 101/102 720 102 101/102
910 112 104	Mini Power/Coaxial Contact (RCVR/ITA)	610 104 114/141/142 610 116 112 710 107 155/237/323/324 716 102 122 610 103 115/130/140 610 115 124/125 710 102 137 710 106 219/304/305 716 101 155
910 112 117	20 GHz, (RCVR/ITA)	610 102 109/110
Miscellaneous Tools		
910 121 144	Solder Kit for Solder Sleeve Mini Coaxial Contact, includes Raychem Holding Fixture (AD-1319) and Adapter (P/N 910 121 149), does not include heat gun	610 104 142/610 103 140
910 121 149	Adapter for use with Raychem Holding Fixture (AD-1319)	610 104 142/610 103 140
910 121 160	Steinel Heat Gun with Nozzle (110V)	610 104 142/610 103 140
910 121 167	Steinel Heat Gun with Nozzle (220V)	610 104 142/610 103 140
Fiber Optics Tools		
910 112 118	Extraction Tool for Fiber Optics (RCVR/ITA)	
910 112 119	Ferrule Insertion/Extraction Tool for Fiber Optics (RCVR/ITA)	
910 112 120	Fiber Optic Tool Kit includes: extraction tool (P/N 910 112 118); ferrule insertion/extraction tool (P/N 910 112 119); and insertion tool (P/N 910 113 104)	
910 113 104	Insertion Tool for Fiber Optics (RCVR/ITA)	

2100 SERIES/GEMINI INTERFACE

CONTACT AND PATCHCORD TOOLS — TWIN ACCESS CONTACT

Virginia Panel provides a complete selection of crimp and extraction tools, as well as an assortment of inspection and quality control tools.

To assist in determining the proper tools needed, refer to the **cross reference charts** on pages 40-42.



P/N	Description	Used with P/N
Crimp Tools		
910 101 103	Signal Wiring Contact	610 127 110
Crimp Dies/Locators		
910 104 133	Signal Wiring Contact	610 127 110
Extraction Tools		
910 110 110	Signal Wiring Contact	610 127 110/111 737 101 101
910 112 112	Coaxial (50 OHM) and Power Wiring Contacts	610 134 101/103/106/107 610 136 101/102/103/104 737 102 101/102 737 103 101/102 737 104 101 737 105 101
910 112 116	Coaxial (75 OHM) Wiring Contacts	610 134 102
Miscellaneous Tools		
910 121 162	Solder Kit for Coaxial Surface Contact, includes Raychem Holding Fixture (AD-1319) and Adapter (P/N 910121163), does not include heat gun	610 134 101/107
910 121 163	Adapter for use with Raychem Holding Fixture (AD-1319)	610 134 101/107
910 121 160	Steinel Heat Gun with Nozzle (110V)	610 134 101/107
910 121 167	Steinel Heat Gun with Nozzle (220V)	610 134 101/107

QUADRAPADDLE CONTACT TOOLS

Crimp Tools		
910 101 103	Signal QuadraPaddle Contact (ITA)	610 138 109/112
910 101 125	Signal QuadraPaddle Contact (RCVR)	610 139 104/106
Crimp Dies/Locators		
910 104 140	Signal QuadraPaddle Contact	610 139 109/112
Extraction Tools		
910 110 111	Signal QuadraPaddle Contact (ITA)	610 138 109/111/112/114/115
910 110 112	Signal QuadraPaddle Contact (RCVR)	610 138 100/104/106