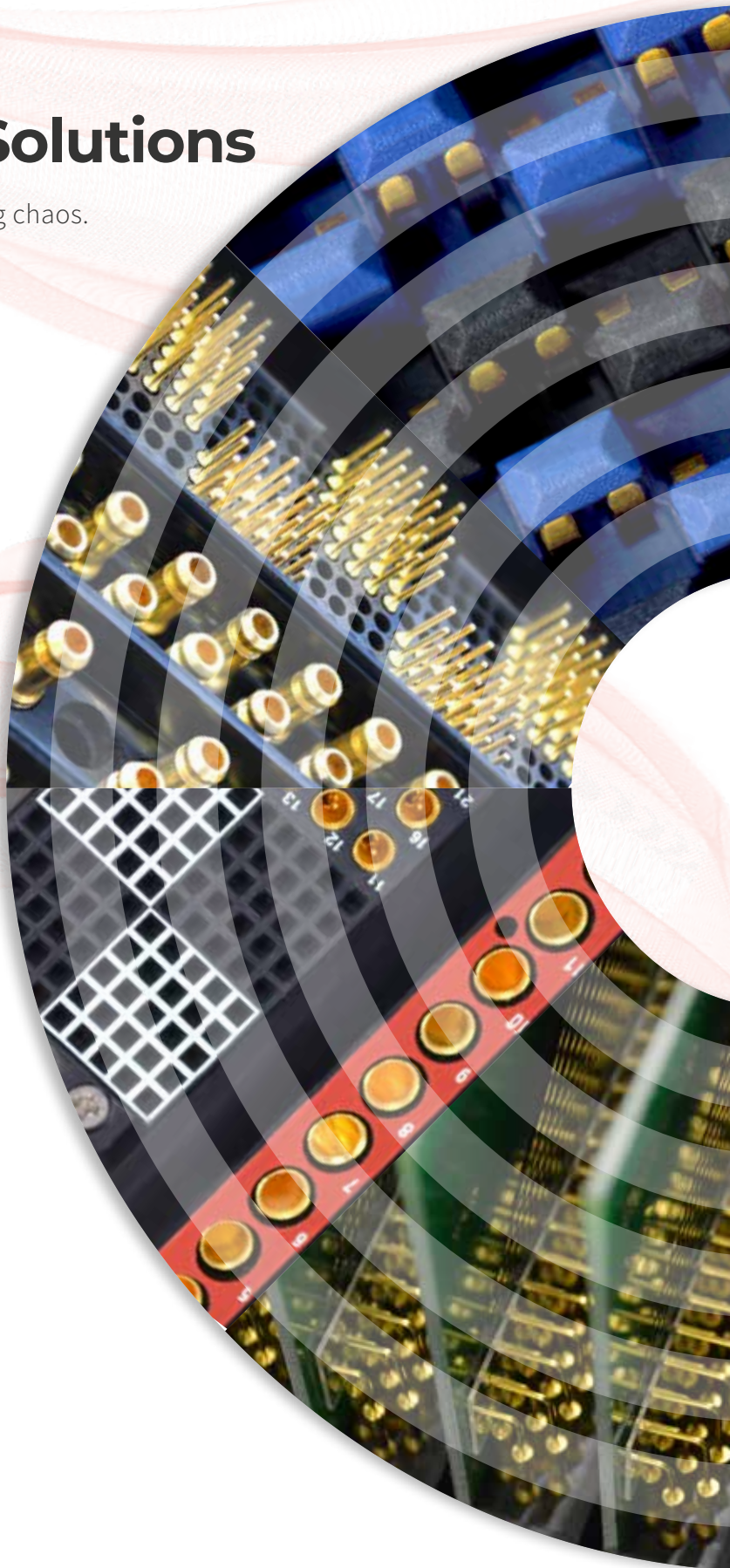


TEST & MEASUREMENT

Mass InterConnect Solutions

...creating order out of wiring chaos.

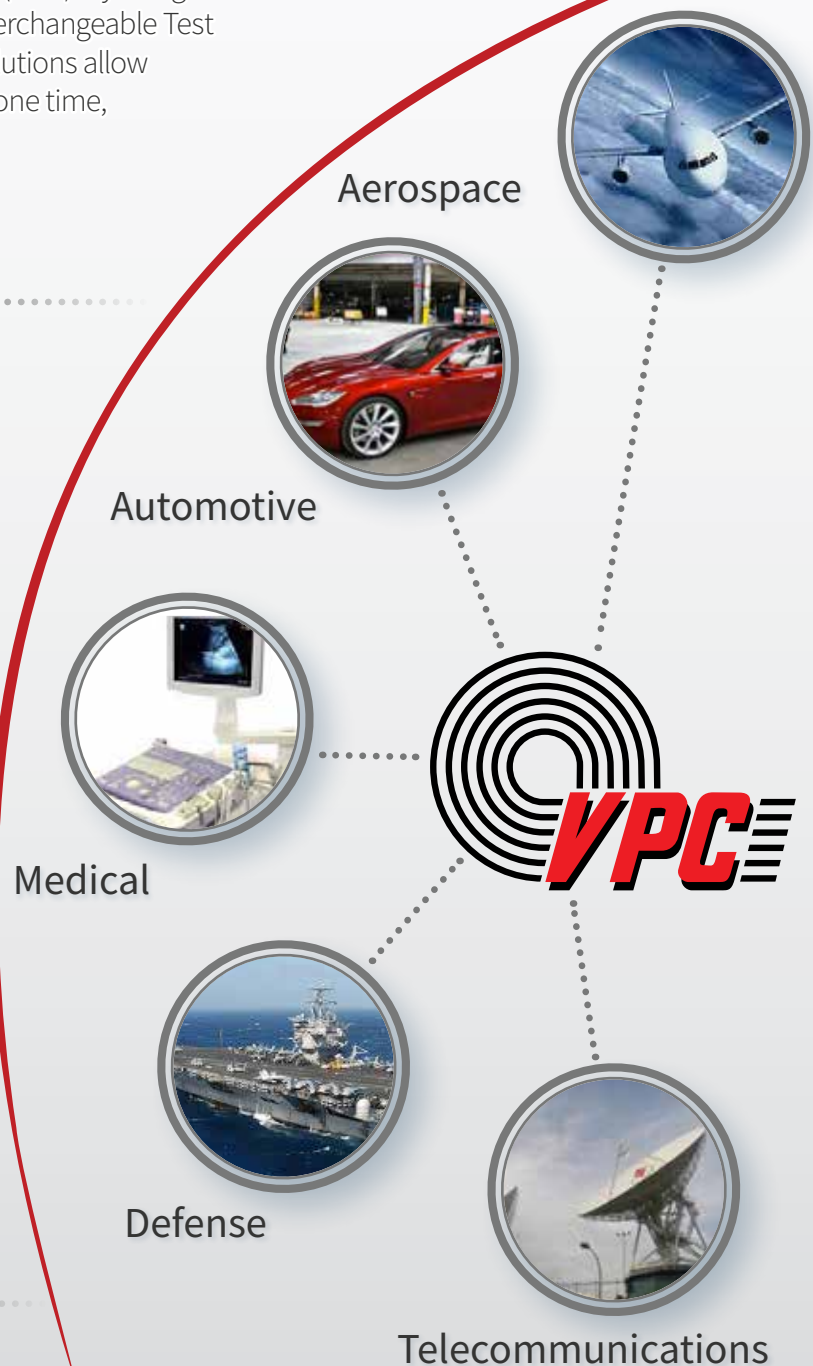


Why Standardize with VPC?

VPC offers over 60 years of unparalleled experience and expertise in the field of Mass InterConnect solutions. Our commitment to uncompromising quality, continuous improvement and exceptional value means you can be rest assured our products receive the rigorous and expedient testing you demand.

Used by test and measurement professionals in the fields of defense, aerospace, automotive, medical and more, VPC provides the critical connection between the tester and the unit under test (UUT). By using a Receiver on the tester side and mating it with an Interchangeable Test Adapter (ITA), our modular and scalable solutions allow multiple types of I/O to be easily mated at one time, simplifying the test process.

- **Protect and extend** the life of expensive test equipment
- **Increase throughput** by quickly and easily standardizing one tester to multiple units under test (UUTs)
- Both **standard and customized solutions** to meet your specific needs
- A **dedicated team of engineers** to help you design and meet your system requirements
- **Simplified** cable and patchcord management
- Wiring configurations for virtually **any type** of test and measurement instrumentation



Mass InterConnect Solutions

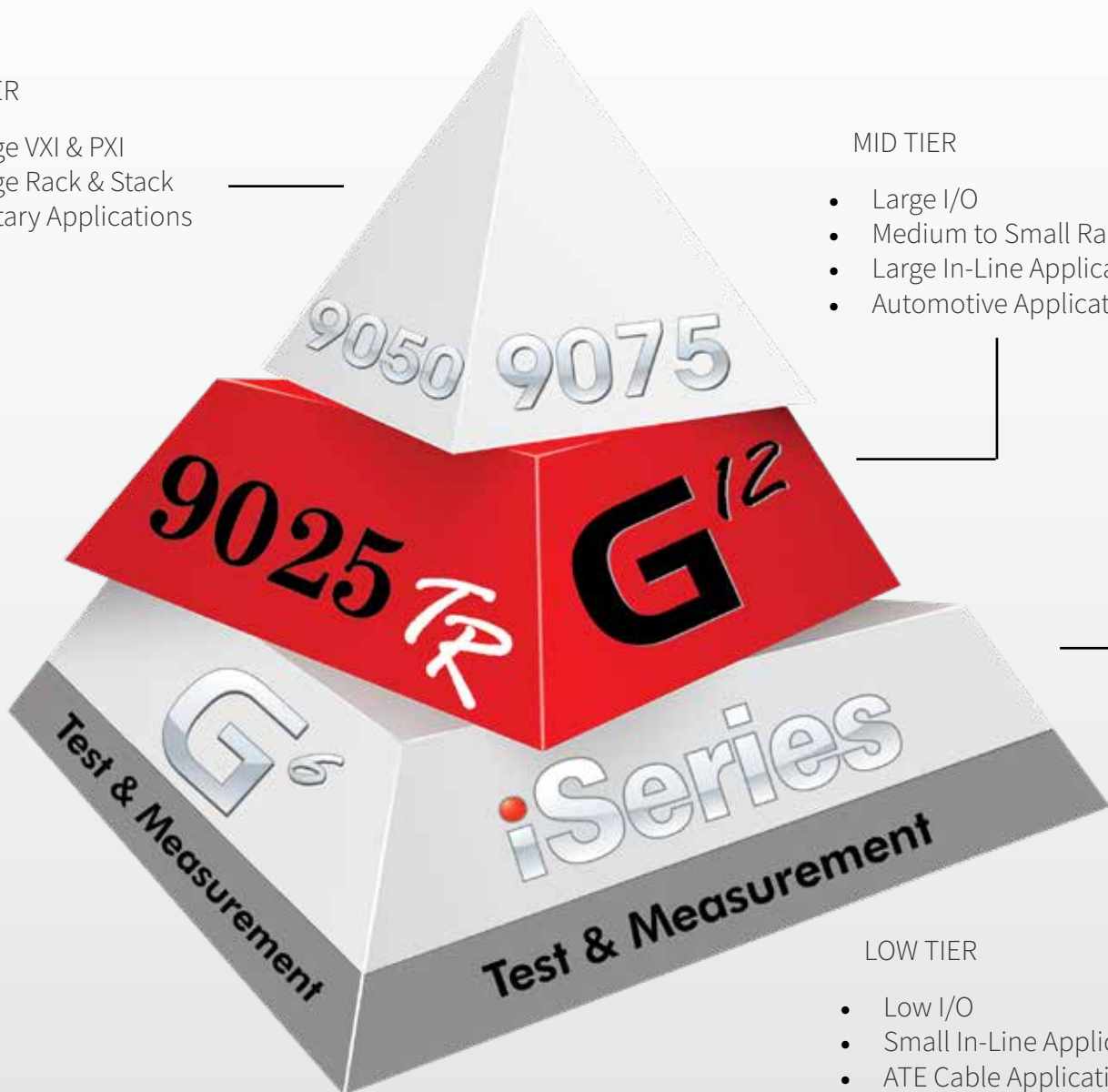
...creating order out of wiring chaos.

TOP TIER

- Large VXI & PXI
- Large Rack & Stack
- Military Applications

MID TIER

- Large I/O
- Medium to Small Rack & Stack
- Large In-Line Applications
- Automotive Applications



LOW TIER

- Low I/O
- Small In-Line Applications
- ATE Cable Applications
- Tabletop Test - PCI

What Do We Offer?

VPC offers solutions to fit any test and measurement application you may have. From low I/O solutions such as the iSeries (i1, i2 and iCon) to high I/O products such as our 9025 and 9050, we can configure a solution to fit your requirements, while extending the life of your test equipment.

Features & benefits of using a Mass InterConnect

90 Series Receiver and Receiver Modules: A rugged InterConnect mechanism to connect to test instrumentation. Mates to the ITA frame and modules.

90 Series ITA and ITA Modules: Mates to the Receiver and houses the modules, PCB adapters, cable assemblies and patchcords for connection to the UUT.

iSeries Receiver Cable Assemblies: iSeries Receivers connect to Standard/90 Series modules in the 90 Series ITA.

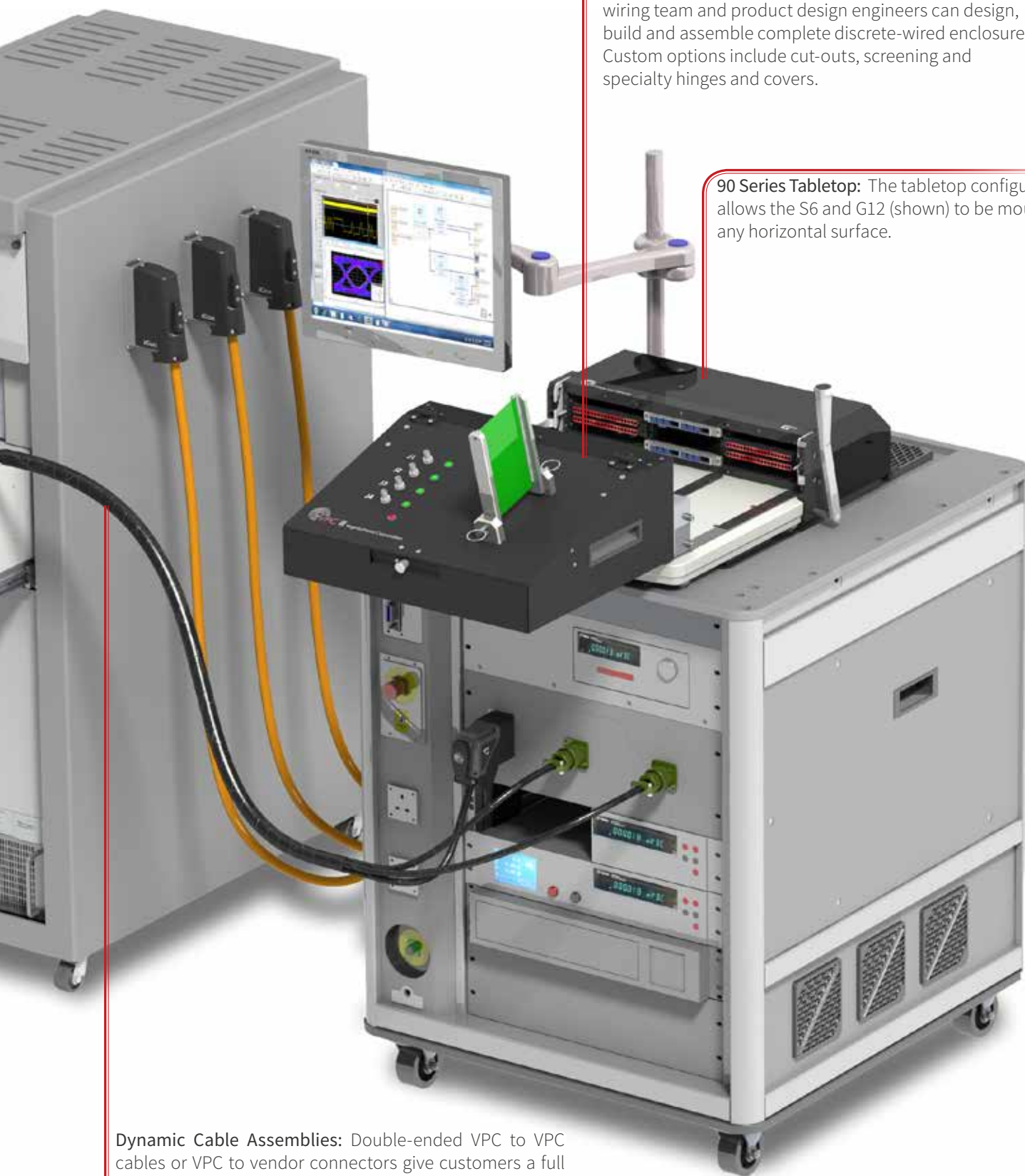
iSeries Receiver Connectors: Mount to either an ITA enclosure or rack panel for secondary or primary test connections.

iSeries Interchangeable Test Adapter (ITA) Connectors: Connects to the iSeries Receiver connectors. ITA cable assemblies house wiring within the connector to protect and provide strain relief.

Mounting Options: VPC provides three types of mounting options to allow for easy access to test instrumentation: Fixed mounting, Vertical Hinged Mounting Frame, and Slide configuration.

Unit Under Test (UUT): Connects directly to your UUT using secondary VPC connectors or direct connections with custom designed enclosures.

Instrument Card Solutions: Using our Wire+ Configurator find over 3000 pre-engineered cable assemblies and InterConnect adapters supporting hundreds of PXI, LXI and VXI instrument cards.



Standard and Custom ITA Enclosures: Our in-house wiring team and product design engineers can design, build and assemble complete discrete-wired enclosures. Custom options include cut-outs, screening and specialty hinges and covers.

90 Series Tabletop: The tabletop configuration allows the S6 and G12 (shown) to be mounted to any horizontal surface.

Dynamic Cable Assemblies: Double-ended VPC to VPC cables or VPC to vendor connectors give customers a full range of cable solutions.

DESIGN COLLABORATION

Building Relationships to Improve Manufacturability

There is more to VPC than build-to-print manufacturing. When customers choose to standardize with VPC, they gain access to VPC's engineering resources, whose aim is to reduce unnecessary complexity, improve delivery timelines, administrate prototype and production builds, and provide documentation control.

From wired enclosures to cable assemblies, VPC is able to help sponsor test programs with larger lot sizes, reduced setup time, consistent wiring, and on-hand inventory, and it all starts at the design-level. VPC's design engineers help customers develop and/or improve wirelists and technical drawings which enhances manufacturability and reduces unnecessarily complex drawings that may reduce consistency from a manufacturability standpoint. Whether designing self-test adaptors or designing enclosures for a specific test program set, VPC engineers are trained to solve all integration challenges to ensure that boxes are designed and delivered without the need to debug after receipt.



REDUCED TIME AND COSTS



Prototype to production build costs are reduced as VPC design engineers help to streamline processes for production.



INCREASED ENGINEERING RESOURCES



When standardizing with VPC, customers gain access to its engineering resources whose aim is to reduce complexity and improve delivery timelines.



STANDARDIZATION



Customers who standardize with VPC interfaces experience reduced setup time, better consistency, and less obsolescence compared to standard test equipment.

We create test experiences that have a positive effect on your company and your customers.



PCB DESIGN SERVICES

VPC offers a comprehensive range of PCB solutions for use with a Mass InterConnect. Our services include high speed signal design, board-mounted high density interconnects and differential impedance control.

WIRING DESIGN SERVICES

VPC's Wire+ Advantage program provides engineered and quality tested cable assemblies. This enables easier system configuration by allowing integration of your Mass InterConnect system with virtually any type of test and measurement instrumentation. Whether you need discrete-wired cable assemblies, innovative PCB adapter cards, wired adapters, or our wired enclosures, VPC has a solution for your InterConnect needs.

PCB DESIGN CAPABILITIES

Whether your team is interested in developing PCBs for use in complex enclosures, ITAs, or receivers, VPC's PCB design team can produce rigid or flex boards for digital, analog, and high speed applications.

WIRING DESIGN CAPABILITIES

VPC has made substantial investments in state-of-the-art automation equipment to speed production. VPC is able to produce thousands of patchcords an hour with consistent and reliable terminations. Automated machinery reduces test and validation time while ensuring you receive a quality product on time.

SYSTEMS INTEGRATION

How Customers Have Standardized on VPC

VPC continuously develops new products to meet the needs of the test and measurement industry. We take great pride in offering reliable, economic solutions to organize your connections in modular and scalable configurations that can adapt to your changing test requirements.

Achieving Scalability with the 9050 and iCon

The 9050 VXI receiver and ITA form the backbone of this tester. With a common I/O pin map, any number of groups can develop ITAs and Test Program Sets to utilize the tester, further simplifying testing and procurement. Test engineers opted for a standard VPC L-shaped enclosure design suitable for testing circuit cards. This ITA design allows technicians to mount cards on a horizontal surface to prevent damage.

The test engineers chose VPC's iCon connector due to its extreme versatility, wide range of pin configurations and termination types. The iCon's low insertion force and simple, secure locking mechanism makes it one of the simplest connectors for technicians to install and remove. The project team also found VPC's support beneficial. During manufacturing, the project schedule began to slip. The project team turned to VPC to pre-wire their iCon, which enabled them to get back on schedule.





SCALABILITY IN AUTOMATED TEST EQUIPMENT

The iCon's low insertion force and simple, secure locking mechanism makes it one of the simplest connectors for technicians to install and remove.

It is not uncommon for VPC customers to design “common core” testers with options to upgrade with break out boxes, adapters, and cable harnesses. Many common core testers exclusively use VPC interfaces at an enterprise-level so that they can be scaled to meet future test needs with standard, off-the-shelf VPC solutions.

When developing these common core testers, customers benefit from top-level part numbers to help speed procurement to aid in maintenance or expansion.

iDock Series



D1 & D3/4



FEATURES

- With the D1 engage up to 160 signal contacts and configure your I/O with our iCon modules
- With the D3/4 engage up to 672 signal contacts and configure your I/O with our iCon modules or 90 Series modules
- Floating bushings help to ensure a successful mate each time

VPC has extended its portfolio with to include four automatic docking connectors: the D1, D3/D4, D12, and D25. Each of these connectors feature an engageless frame for use with automatic test handling equipment to mate test adapters. Automatic docking connectors reduce the time it takes to test, making them an ideal solution for production or manufacturing environments. Automatic docking connectors also minimize operator interaction, which reduces the opportunity for error.



D12 & D25



FEATURES

- With the D12 engage up to 2,880 signal contacts and configure with up to twelve 90 Series modules
- With the D25 engage up to 5,952 signal contacts and configure with up to twenty-five 90 Series modules
- Both the D12 and D25 still offer full system testing integrity even when partially loaded

The iDock Series offers reliable transmission options for signal, power, high current, high voltage, coax, high speed data rates, and fiber optic. The flexible, modular design of iDock Series connectors allows the user to consolidate a variety of connection types into individual connector solutions. iDock Series connectors can be used for automatic docking or in a reliable frame format for rack and panel applications.



i2 Micro iCon



FEATURES

- 168 signal points available with QuadraPaddle™ Technology
- Hybrid option offers 120 signal points and 12 micro coaxial/micro power pins
- 30° cable exit for vertical stackability
- 0.8" footprint for horizontal stackability

The i2 is a slim-line, low I/O connector with capabilities for discrete-wiring, horizontal and right-angle PCB mounting. Because of its 0.8" profile, high-density with PCB connection capability and tested reliability, the i2 is the connector interface for a major U.S. Military platform testing new digital and legacy radio systems, radar, avionics and other devices.



i2 MX



FEATURES

- Multiple modular inserts allow maximum flexibility
- EMI-shielding option ensures performance and signal integrity
- Unique cable exit provides maximum cable bundle capacity
- Removable, all metal ITA backshell

The i2 MX offers a configurable solution with multiple I/O inserts and optional Electromagnetic Interference (EMI) shielding in a slim 0.8" footprint. With multiple modular inserts to choose from, the i2 MX gives you the flexibility to engineer the ideal connector to meet your test application needs.



i1



FEATURES

- Hybrid modules available for additional I/O options
- Removable backshell and engaging mechanism for easy wire access
- PCB-mountable
- Quick connect 180° half-turn engagement handle
- Engineered for at least 10,000 cycles

The i1 accepts all standard iCon modules, offering a variety of I/O options, including the High Power 150 Amp contact. Its small size enables both vertical and horizontal stackability. The i1 connector was chosen by a major automated test company to quickly and easily changeover automated mixed-signal functional tests for assemblies in electronics manufacturing environments.



iCon

FEATURES

- Hybrid modules available for additional I/O options
- Removable backshell and engaging mechanism for easy wire access
- PCB-mountable
- Quick connect 180° half-turn engagement handle
- Engineered for at least 10,000 cycles



The iCon is a PCB-compatible rack and pin connector designed specifically for the test and measurement industry. Multiple aviation manufacturing leaders test complex electrical interconnect sub-systems using the iCon interface due to its ability to allow test operators to use common interface cables and quick test set-up. The iCon also allows high-end automobile manufacturers to create custom, configurable test systems with off-the-shelf components and standard test interfaces.

G⁶ & G¹⁰



G6 and G10



FEATURES

- Cable mount ITA includes slide-off EMI-shielded cover
- Engage up to 1,440 signal contacts with the G6 and 2,400 with the G10
- Precise signal integrity with the QuadraTrack engagement system
- Reliable connectivity beyond 20,000 cycles

The G6 and G10 support a wide range of I/O and provide versatile, high-density interconnect solutions. Both can accommodate either a discrete wired connection or PCB, in one system. The quick engage/disengage mechanism of the G6 and the G10 allow rapid test changeover by automotive manufacturers testing Engine Control Units (ECUs) such as audio, navigation systems, air bags and lock-key.



S6

FEATURES



- Up to 1,440 points in only 1U of rack space
- Tabletop, slide, or rack mount versions available
- Supports signal, power, coaxial, pneumatic, thermocouple, twinaxial and fiber optic contacts
- Reliable connectivity beyond 20,000 cycles

The S6 low-profile solution supports up to 1,440 contact points in a minimal 1U of rack space. The robust and reliable S6 provides repeatable test capabilities for small and intermediate size test applications.

G^{12x}



G12x



FEATURES

- Precision engagement of over 2,800 contacts in a 3U height in the G12
- Precision engagement of over 4,300 contacts in a 5U height in the G12x
- Easy glide docking for fixture guidance
- Reliable connectivity beyond 20,000 cycles

The G12 offers I/O options to meet virtually any connectivity requirement and is available in both slide and tabletop configurations. It is ideal for commercial, contract manufacturing, automotive and other high-volume testing environments.



G18



FEATURES

- Ideal solution for 18 slot PXI chassis
- Engage up to 4,320 contacts in one motion
- Slide mount option supports up to 180 lbs.
- QuadraTrack engaging mechanism ensures precise signal integrity

The G18 is a high-density InterConnect capable of supporting a wide variety of I/O options in various configurations. The G18 enables the reliable and repeatable transfer of digital, analog and radio frequency signals for systems testing automotive antenna amplifiers for several German manufacturers using an LXI platform.

G²⁰



G20 & G20X



FEATURES

- 0.8" centers correspond with PXI system slot requirements
- Accepts all standard 90 Series and i2 modules
- Enables pull through removal of connector modules and instrumentation
- Multiple configurations and I/O options

The industry standard for pull-thru systems since 2004, VPC's line of pull-thru solutions allow a variety of module configurations, enabling integration of multiple I/O options with room to expand. From the 20 module G20 to the double-tiered G40x, VPC offers pull-thru solutions for every application need.

9025 *TR*



9025 and 9025TR



FEATURES

- Updated receiver with 30% reduced handle force and lighter weight
- 9025TR features a handle which can be installed on either the right or left side of the receiver
- Precise signal integrity maintained by QuadraTrack
- Engineered for over 20,000 cycles

The 9025 is ideal for rack/slide mounting applications or Vertical Hinged Mounting Frames. Designed with room for expansion and rapid changeover. The 9025 is the main interface for high speed test and measurement systems involving radio frequency and microwave applications.

9050



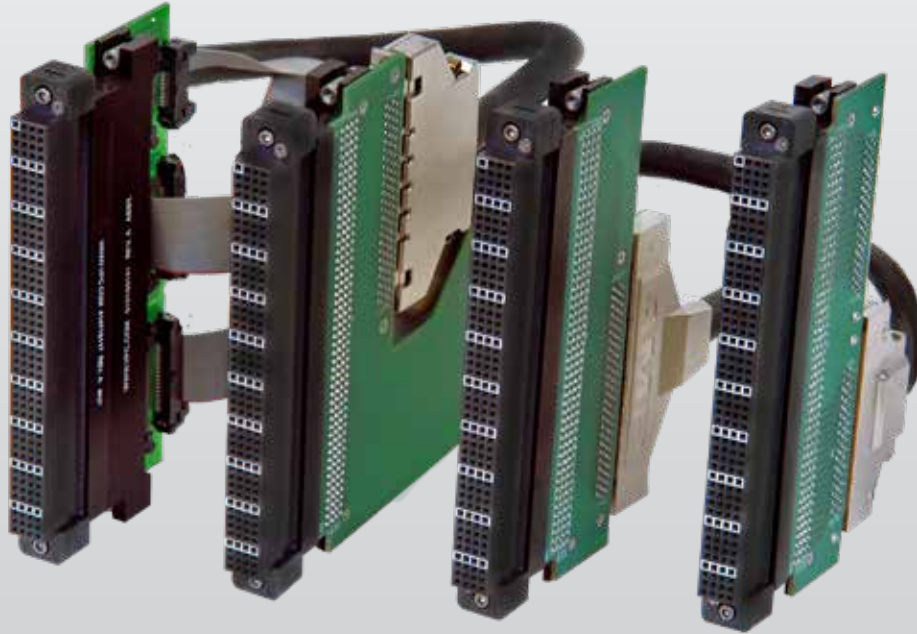
9050 & 9075



FEATURES

- Intermixable connector modules for custom interfaces
- Platform configuration supports up to 180 lb.
- VXI Plug and Play Kit offers easy access to adapters and instrumentation
- Reliable connectivity beyond 20,000 cycles

The rack mountable 9050 and 9075 receivers are designed to accept their own and 9025 ITAs to support advanced Mass InterConnect requirements and a wide range of I/O's. It is widely used by the U.S. Military to test electronic, electromechanical, electro-optical equipment assemblies and circuit cards for weapons systems, radar systems and communications gear.



PCB Solutions



FEATURES

- Ideal for PXI applications
- Available in configurations that incorporate common PXI connectors
- Available in QuadraPaddle™ and TriPaddle
- Consolidate connections for rapid integration

VPC offers several PCB adapter solutions supporting our 90 Series and iSeries product lines. Choose from right angle or direct wire to board mounting. Wire to board connections use twin female QuadraPaddle™ contacts to connect directly to male headers on a PCB. Right angle solderless compliant headers enable connection to PCB adapters or virtually any custom PCB.

MODULES, CONTACTS, AND PATCHCORDS

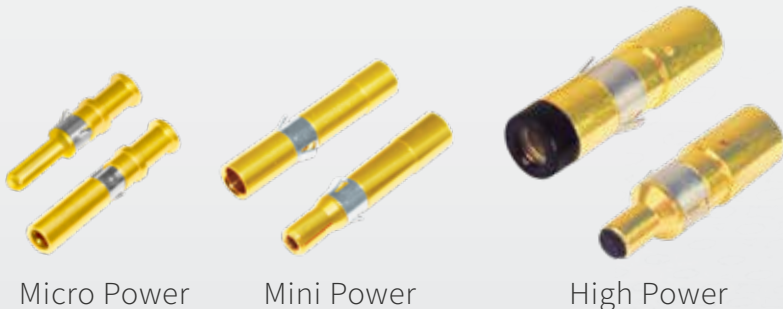
VPC offers a wide selection of intermixable modules and contacts, allowing you to create an InterConnect solution specific to your testing needs with the ability to modify as requirements change.

Each module is designed to allow maximum I/O without compromising the contact life cycle. Each contact is engineered to withstand frequent changeover, with many rated up to 20,000 cycles.

VPC can also configure and assemble customized patchcords with pre-terminated contacts, a cost-effective and time-saving alternative to meet your wiring specifications.

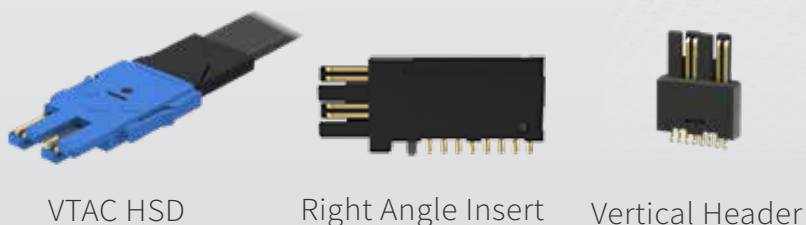
Visit vpc.com to see full product offerings.

Power Options



- Mini Power rated to 65 Amps with 8 AWG wire
- High-density Micro Power rated to 21 Amps
- High Power contact rated to 150 Amps
- Over 10,000 cycle life

High Speed Digital Options



- 12.5+ Gbps per differential pair
- 50μ" gold-plated and self-aligned contacts
- i2 MX will accommodate 22 VTAC HSD inserts
- VTAC precision-welded inserts reduce resistance and increase signal integrity with a seamless transition from wire to connector
- 150,000 mating cycles

Signal Options



QuadraPaddle™



SIM QuadraPaddle™



TriPaddle

- QuadraPaddle™ compact size allows for high density
- QuadraPaddle™ – 5 Amp operating current
TriPaddle – 7-10 Amp operating current
- Plug and play simplicity
- Long lasting – over 20,000 cycle life
- SIM QuadraPaddle™ accepts 22-28 AWG patchcords

Fiber & Pneumatic



Fiber Optic



Pneumatic



Mini Pneumatic

- Polymer Optical Fiber (POF) supports low speed, short distance applications
- Mini Multimode Fiber supports higher speed fiber optic needs
- Mini Pneumatic contacts (available in 4mm and 6mm) fit into iCon Mini Power, Mini Coaxial and 90 Series modules

Coaxial/RF Options



Micro Coax



Mini Coax



50 GHz Coax



26 GHz Coax

- Micro Coax vertical header available
- Micro Coax rated to 3 GHz using RG316 or RG178 and a maximum of 10.5 GHz using RG316 Double Shielded
- Robust Mini Coax designed for minimal crosstalk with 50 and 75 Ohm impedance
- 26 GHz coaxial contact uses Flex 402 wire and offers the best density for higher frequency requirements
- High density 50 GHz contact that fits hybrid micro-coax modules

Virginia Panel Corporation, through its people, is committed to

UNCOMPROMISED QUALITY



**CONTINUOUS IMPROVEMENT
EXCEPTIONAL VALUE**

VPC is an ISO 9001:2015 certified business, reinforcing our dedication to operating a Quality Management System. Our manufacturing and engineering personnel undergo in-house training programs, including blueprint reading, GD&T, crimping, assembly, and more.

VPC is an IPC member in good standing. All wiring assemblers are trained to comply with soldering and inspection per IPC J-STD-001. VPC complies with IPC/WHMA-A-620 with in-house certified IPC trainers and all assemblers certified as IPC-620A application specialists. We are capable of producing to all IPC Classes (1, 2 and 3) specific to each customer's requirements.

The VPC Quality Assurance (QA) Lab conducts tests for point-to-point continuity, shorts and insulation resistance to ensure the final product meets both the customer's and our own high quality standards. Our QA Lab's automated equipment uses a flagship tester, the Cable Test MPT-5000. In addition, our network analyzer tests the electrical response of RF cables to a specified frequency range.

Visit vpc.com for more information.



ISO 9001:2015 FM 91006



Dedicated to providing solutions across multiple standards.



Technical information in this document is subject to change without notice.

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VPC has technically
trained and educated
Field Application
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- China
- Hungary
- India
- Israel
- United States

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✔ Test & Measurement