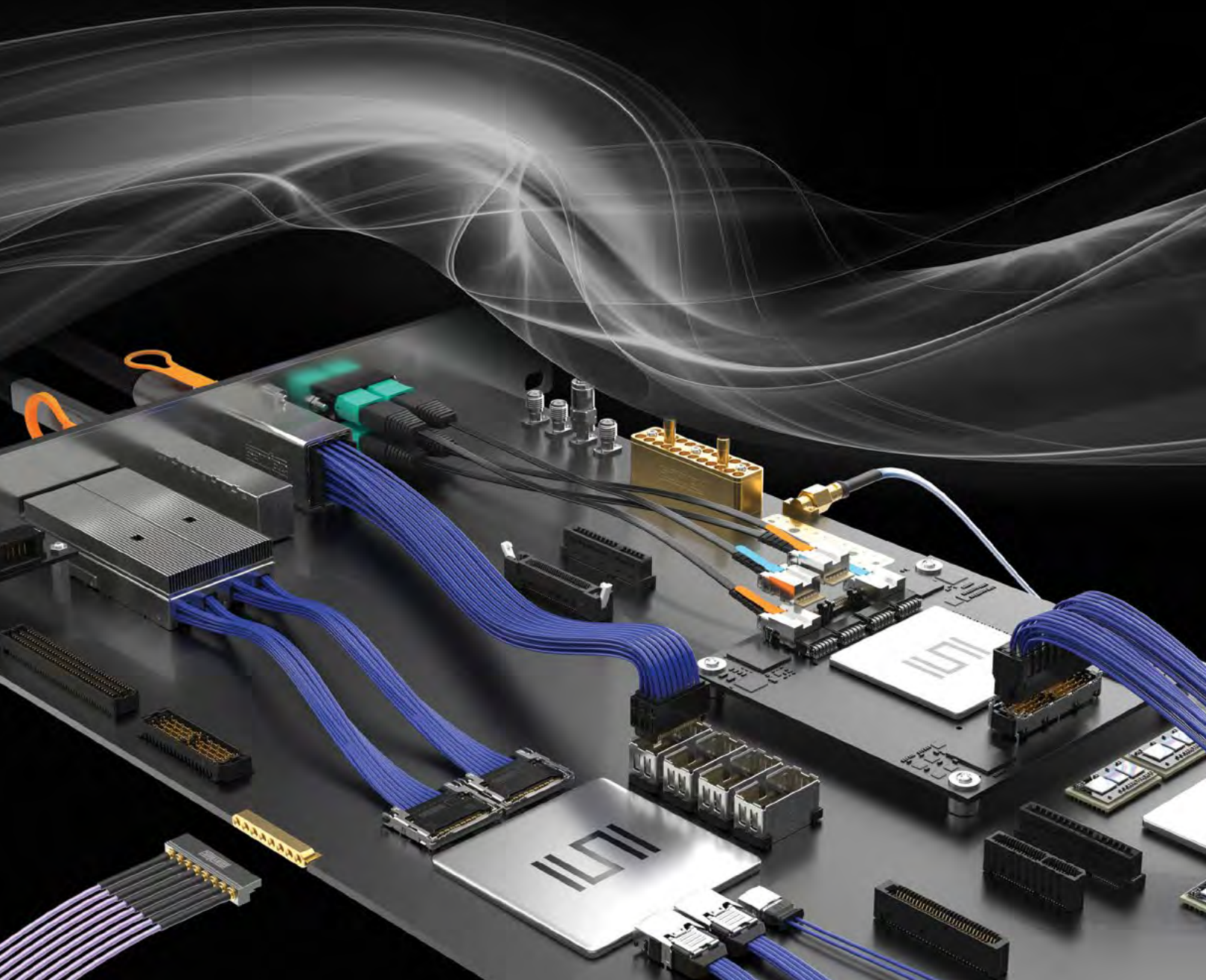




TECHNOLOGY & NEW PRODUCT OVERVIEW



A DIFFERENT BREED OF CAT

INNOVATIVE TECHNOLOGIES • SUDDEN SERVICE® • SILICON-TO-SILICON™ SOLUTIONS

Samtec is much more than just another connector company. We put people first, along with a commitment to **exceptional service, quality products** and **innovative technologies** that take the industry further faster. This is enabled by our unique, **fully integrated business model**, which allows for true **collaboration and innovation** without the limits of traditional business models.

We believe that taking care of our customers and our employees is paramount in how we approach our business, and this belief is deeply ingrained throughout Samtec worldwide.

INNOVATIVE TECHNOLOGIES

From standard cataloged products to unique high-performance design, Samtec's **SOLUTION BLOCKS** are designed to support any interconnectivity need, regardless of application, performance requirements or environment.

Silicon-to-Silicon™ Solutions



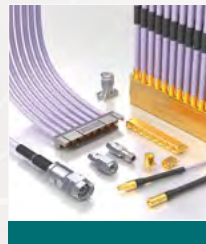
HIGH-SPEED BOARD-TO-BOARD



HIGH-SPEED CABLE



OPTICS



RF

Core Board-to-Board



RUGGED/POWER



FLEXIBLE STACKING

SUDDEN SERVICE®

Samtec is the service leader in the industry, offering unmatched technical support, free product samples and access to online resources, and innovative online tools to help streamline the design process.



CORE SERVICE



TECH SUPPORT



WEB TOOLS



SYSTEM SERVICE



#1 in Bishop's Customer Survey of the Electronic Connector Industry

THE TECHNICAL RENAISSANCE

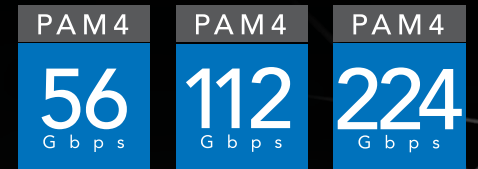
Driven by *progress*, challenged by unprecedented *demands*, a catalyst for next level *innovation*... enabled by Samtec's **Silicon-to-Silicon™ Solutions**.

During the Renaissance – a historic time of a cultural, artistic, political and economic "rebirth" – traditional ways of thinking were challenged, reimagined and redefined. Fields of study such as architecture, art and science were often intertwined, enabling new ideas, innovations and advancements never before considered. Fast forward to the 21st Century, and we too are experiencing a Renaissance – a **Technical Renaissance** – along with its inherent challenges.

Quickly advancing and evolving industries such as the **5G Network, High-Performance Computing, Artificial Intelligence and Auto "2.0"** are driving new architectures that demand previously unimaginable transmission speeds, bandwidths, frequencies and densities – all while balancing scalability, power and thermal management concerns, and of course, cost.

...we won't experience 100 years of progress in the 21st century – it will be more like 20,000 years of progress (at today's rate).¹
~ Ray Kurzweil

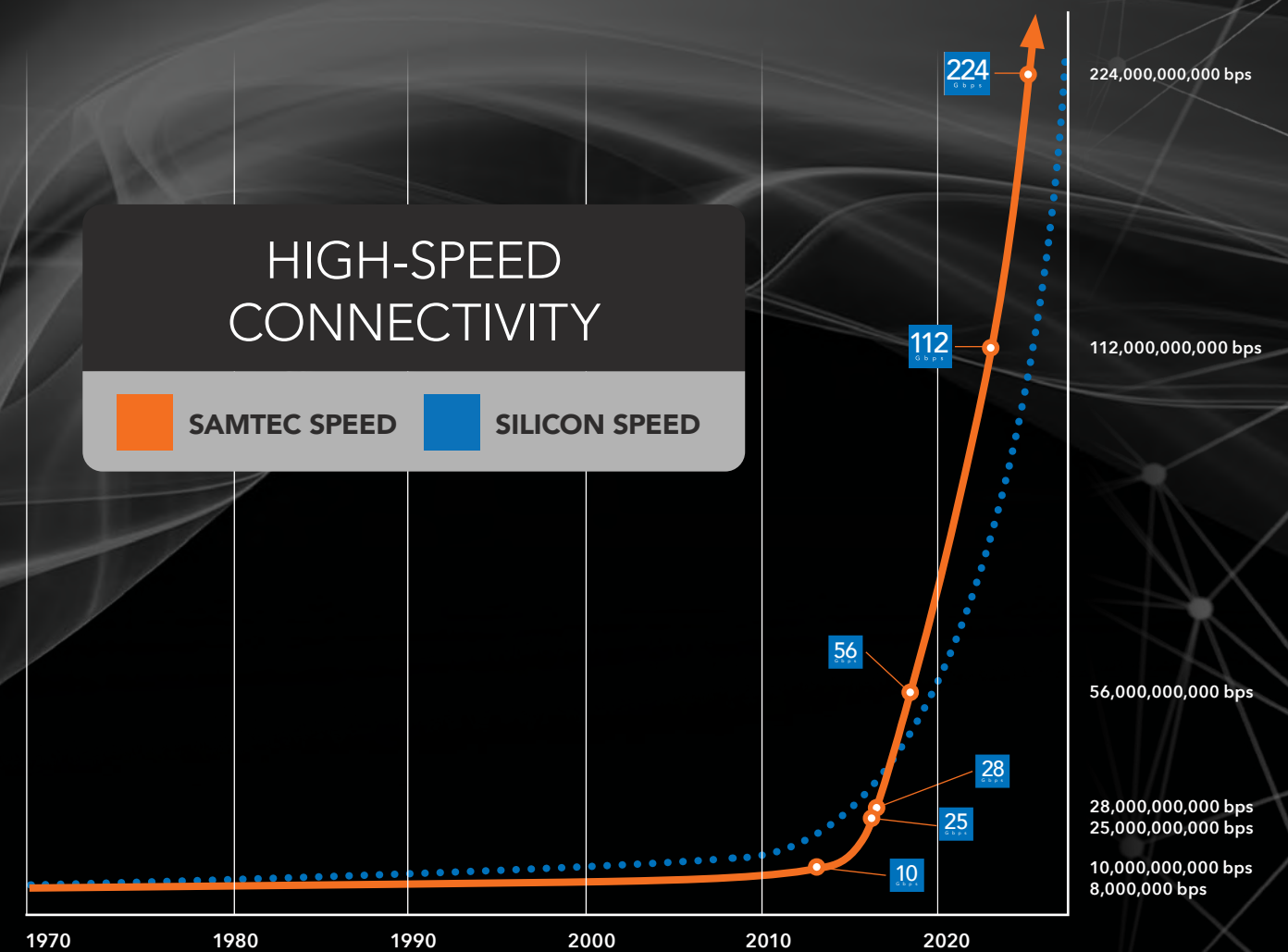
Samtec's Silicon-to-Silicon™ interconnect solutions consistently exceed industry-standard connectivity demands, **enabling the path to 224 Gbps** performance and beyond.



While interconnect solutions that support bleeding edge speeds are certainly important, those capabilities can be rendered ineffective unless it is part of a well-designed and optimized system. A holistic approach to system design – particularly as speeds, bandwidths and densities increase – is a must.

Samtec provides high-level design assistance and engineering support both at the component level and system level, to ensure full system performance optimization - from bare die, to IC package, to PCB, to connectors and cables, and back again: **Full System Optimization... from Silicon-to-Silicon™**.

Learn more about how Samtec can help with your high-performance system design at samtec.com/s2s.



Whatever we did in the past that enabled this incredible innovation... that's not going to work for the future... There's no question.²
~ Gary Dickerson

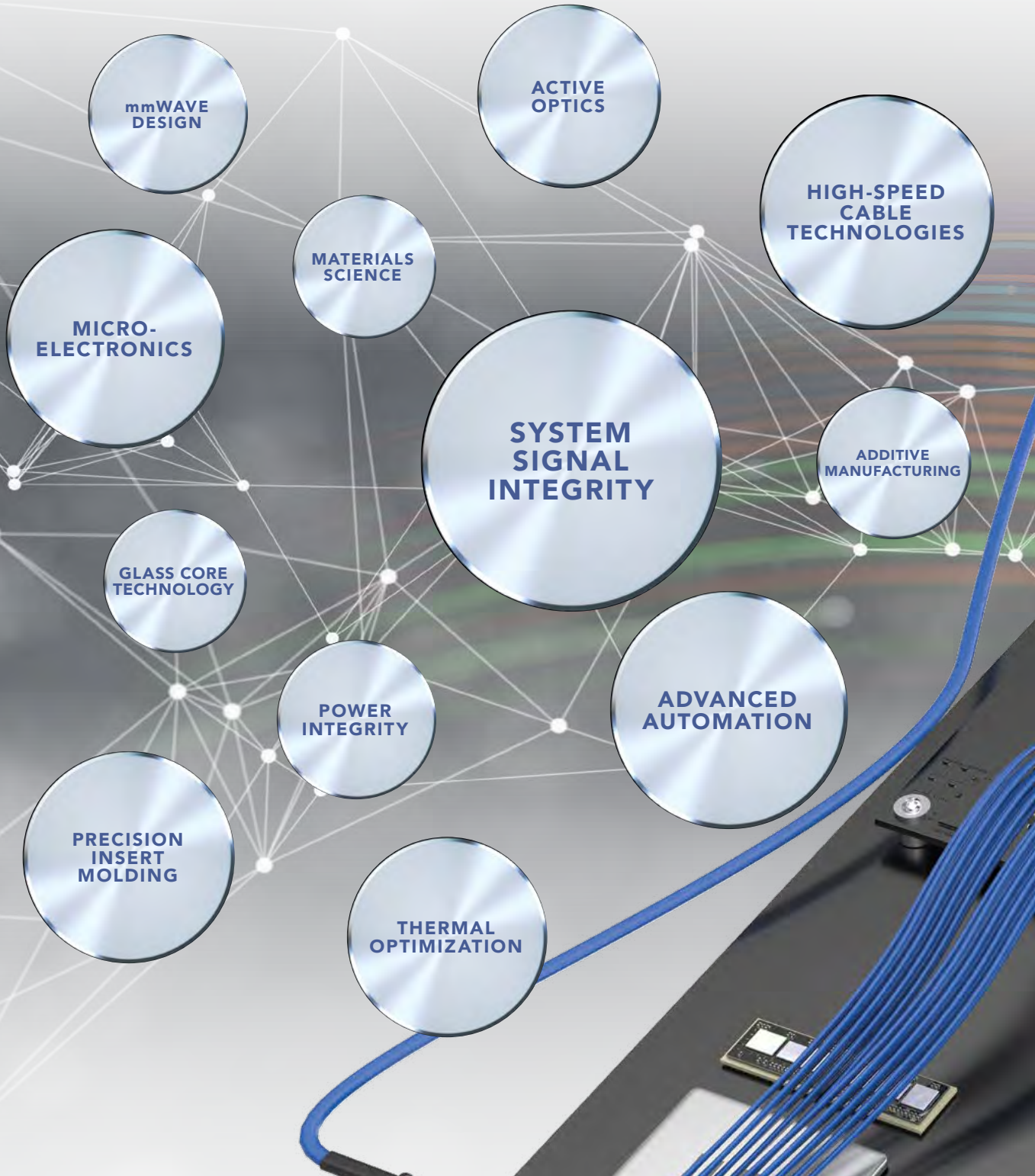
PROGRESS DEMANDS INNOVATION.
Development of technologies and products that can support these unprecedented performance demands requires next level thinking. At Samtec, **integration leads to innovation**. Global collaboration amongst all areas of technical expertise enables development of innovative and effective solutions for next generation challenges.

¹ Ray Kurzweil, from The Law of Accelerating Returns, By Alison E. Berman and Jason Dorrier © 2016 Singularity University
² Gary Dickerson, Applied Materials President and CEO from "Time for a New Playbook" by Dylan McGrath, EETAsia.com © 2019 eMedia Asia Ltd.

INTEGRATION LEADS TO INNOVATION

Samtec's integrated approach provides high-level design and development of advanced interconnect systems and **TECHNOLOGIES**, along with industry-leading expertise that allows us to offer effective strategies and support for **optimizing the entire signal channel of high-performance systems.**

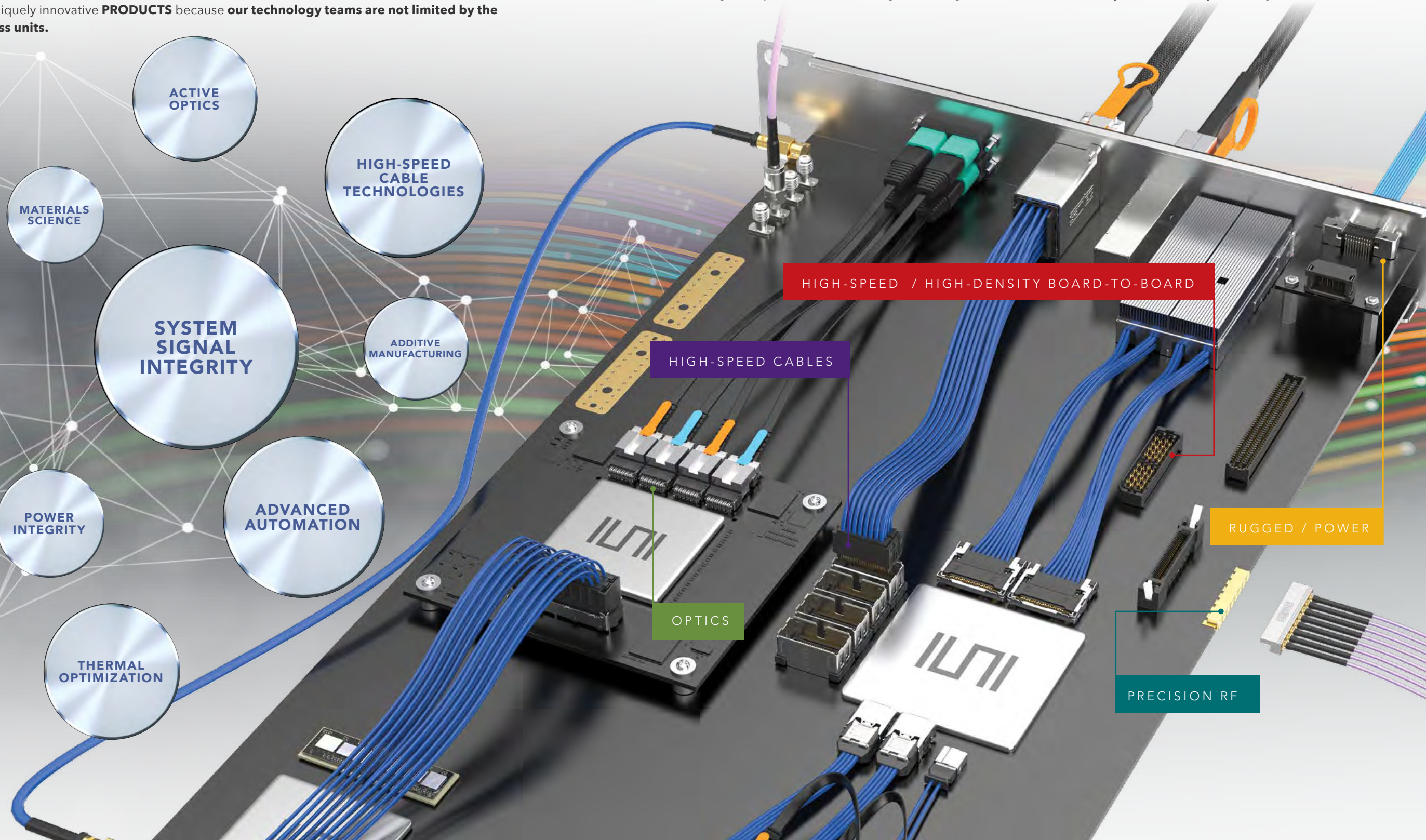
Samtec is structured like no other company in the interconnect industry. We work in a fully integrated capacity that enables true collaboration and results in uniquely innovative **PRODUCTS** because **our technology teams are not limited by the boundaries of traditional business units.**



SILICON-TO-SILICON™ SOLUTIONS

As bandwidth, scale and power requirements continue to challenge conventional engineering methods, we want to help **optimize the landscape of your entire system** - and develop solutions, together.

Samtec's industry-leading signal integrity expertise, full system optimization strategies and, innovative products and technologies help address the challenges of next gen data transmission for **a path to 224 Gbps and beyond.**



SILICON-TO-SILICON™ SOLUTIONS

Samtec is positioned to produce solutions quickly, with higher densities, faster speeds and smaller footprints to meet the demands of next generation systems. New series, as well as expansions to existing product lines, are added to the millions of solutions we offer weekly - if not daily.

Samtec's new *Technology & New Product Overview Guide* introduces some of our recently released series, and highlights future endeavors as we lead the way in products and support for complete system optimization from **Silicon-to-Silicon™**.



Samtec's **Silicon-to-Silicon™** solutions exceed today's connectivity demands, reaching **112 Gbps** with a path to **224 Gbps** and **beyond**.

THE TECHNICAL RENAISSANCE | 3-6

Next Gen System Design Challenges
Integration Leads to Innovation
Silicon-to-Silicon™ Solutions

TECHNOLOGY ROADMAP | 8-11

High-Speed Cables Optics
High-Speed Mezzanine Rugged/Power
High-Density Arrays Precision RF

HIGH-SPEED CABLE

Flyover® QSFP Cable System

800 Gbps Double Density System (FQSFP-D8) 12-13

AcceRate® HP High-Performance Cable System

112 Gbps High-Density System (ARP6/APF6-L) 14-15

NovaRay® I/O Extreme Performance Cable Assembly

Panel Mount Cable & Cage (NVACE/NVACP/NVC) 16-18

PCI Express® Compatible Cable Assemblies

PCI Express® 4.0 & 5.0 Systems (PCIEC-G4/G5) 19
Generate™ High-Speed Edge Card System (GC6)..... 20

SEARAY™ High-Speed, High-Density Cable System

Open-Pin-Field Array Cable Mate (SEAFCA) 21

RUGGED/POWER

URSA™ I/O Ultra Rugged Power Cable System

Socket & Panel Mount Terminal Cables (B1SD(T)/P1PD(T))... 22-24
Board Mount I/O Connector (P1M)..... 25

mPOWER® Ultra Micro Power Connectors

Socket (UMPS) & Terminal (UMPT) 26-28
Discrete Wire Cable/Components (UMPC(T)/IMPC/CC489)... 29

Ultra Rugged Technologies

SureWare™ Guide Post Standoff (GPSO) 30
SureCoat™ High-Reliability, High-Temp Palladium Plating 31

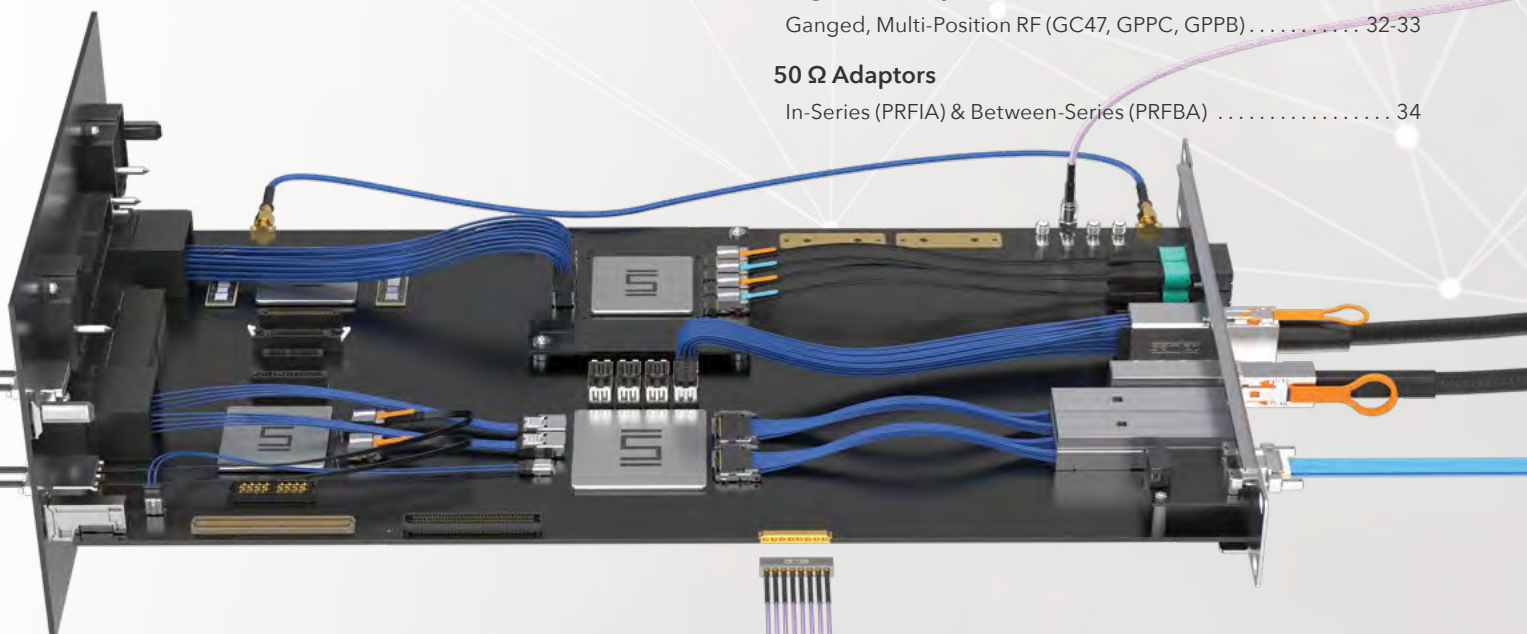
PRECISION RF

Magnum RF™ Systems

Ganged, Multi-Position RF (GC47, GPPC, GPPB) 32-33

50 Ω Adaptors

In-Series (PRFIA) & Between-Series (PRFBA) 34





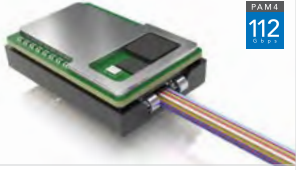

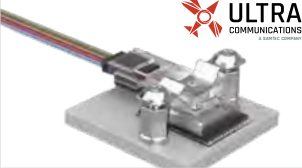
TECHNOLOGY ROADMAP








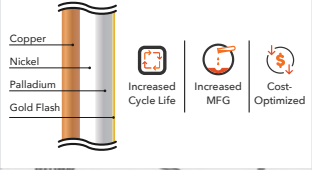

HIGH-SPEED CABLE SYSTEMS		FEATURES	RELEASED	IN DEVELOPMENT	ROADMAP	MATING / RELATED PRODUCTS
 <p>Si-FLY™ Ultra Low Profile, High-Density Cable System</p>	 <p>NRZ 56 PAM4 112</p>	<ul style="list-style-type: none"> Samtec's lowest profile Flyover® cable solution Direct attach to IC Package Enables 25.6 TB aggregate with a path to 51.2 TB 		<p>Copper Twinax System with up to 16 pairs (CPC/CPI)</p> <p>ASIC-adjacent rugged latching</p>	<p>Gen 2: 112G PAM4 with angled vertical launch for co-packaged applications</p>	
 <p>FLYOVER™ Flyover® QSFP Cable Systems</p> <p>see pg. 12-13</p>	 <p>PAM4 56 112</p>	<ul style="list-style-type: none"> Improved signal integrity and architectural flexibility Increased airflow with sideband signaling via press-fit contacts 	<p>QSFP (FQSFP)</p> <p>QSFP Double Density (FQSFP-DD)</p>	<p>800G QSFP Double Density (FQSFP-D8)</p>		<ul style="list-style-type: none"> FQSFP Cage (QSFP-C) FQSFP Light Pipe (LP-FQSFP)
<p>ACCELERATE® Slim Direct Attach Cables</p>	 <p>NRZ 25 PAM4 56</p>	<ul style="list-style-type: none"> Slimmest cable assembly in the industry High-density 2-row design PCIe® 5.0 compatible 	<p>8, 16, 24 Pairs (ARC6)</p>	<p>72 Pairs (ARC6)</p>		<ul style="list-style-type: none"> AcceleRate® Mating Board Level Sockets (ARF6, ARF6-RA)
<p>ACCELERATE® mini Extreme Performance 1 & 2 Pair Cable Systems</p>	 <p>PAM4 112</p>	<ul style="list-style-type: none"> Ultra Low Skew Thinax™ End 2 option for Flyover® assemblies with 1 or 2 Differential Pairs 		<p>1 or 2 Pairs</p> <p>Vertical & Right-Angle</p>		<ul style="list-style-type: none"> AcceleRate® Slim Direct Attach Cable Systems (ARC6)
<p>ACCELERATE® HP High-Density, High-Performance Cable System</p> <p>see pg. 14-15</p>	 <p>PAM4 112</p>	<ul style="list-style-type: none"> Industry's highest density 112 Gbps PAM4 cable-to-board system Ultra Low Skew Twinax 		<p>4, 6 or 8 Rows</p> <p>8 or 12 Twinax/Row</p> <p>12 or 18 Coax/Row (ARP6)</p>	<p>Gen 2: Up to 144 DP & Thinax™ Cable for co-packaged applications</p>	<ul style="list-style-type: none"> AcceleRate® HP Mating Connector (APF6-L)
<p>NOVARAY™ Extreme Density & Performance Cable Systems</p>	 <p>NRZ 56 PAM4 112</p>	<ul style="list-style-type: none"> 40% smaller than conventional cables Low crosstalk to 40 GHz+ Tight impedance control 		<p>8, 12, 16, 24, 32 Pairs; 34 AWG Twinax (NVAC)</p> <p>72 Pairs; 30 AWG Twinax</p>		<ul style="list-style-type: none"> NovaRay® Mating Terminal Connector (NVAM-C) NovaRay® IO 38999 IP67 Sealed Rugged Cable System
<p>NOVARAY™ High-Speed Micro Rugged Backplane System</p>	 <p>PAM4 112</p>	<ul style="list-style-type: none"> Reliable precision insert molded contact system with stub-free mating C2B, C2C & B2B systems in development 		<p>Socket Cable System (NVCF)</p>	<p>Terminal Cable System (NVCM)</p>	<ul style="list-style-type: none"> NovaRay® Backplane Sockets & Terminals (NVBF, NVBM-RA)
<p>NOVARAY™ I/O Extreme Performance Panel Mount Cable Systems</p> <p>see pg. 16-18</p>	 <p>PAM4 112</p>	<ul style="list-style-type: none"> Highest aggregate data rate on the market Internal & external cables PCIe® 6.0 Compatible 		<p>8, 16 & 32 Pairs (NVACE, NVACP)</p> <p>-RA Panel Mount Receptacle</p>		<ul style="list-style-type: none"> NovaRay® IO 38999 IP67 Sealed Rugged Cable System
<p>ExaMAX® High-Speed Backplane System</p>	 <p>NRZ 56 PAM4 112</p>	<ul style="list-style-type: none"> Cable Sockets & Terminals Traditional, coplanar, direct mate orthogonal High reliability differential pair contact system 	<p>4 & 6 Pairs/Column (EBCM, EBCF-VT & -RA)</p>	<p>8 Pairs/Column</p>	<p>112G PAM4 I/O System</p>	<ul style="list-style-type: none"> ExaMAX® C2B / B2B Interconnects (EBTM/EBTF-RA/EBDM-RA)

HIGH-SPEED CABLE SYSTEMS		FEATURES	RELEASED	IN DEVELOPMENT	ROADMAP	MATING / RELATED PRODUCTS
<p>PCI EXPRESS Edge Card Cable Systems</p> <p>see pg. 19</p>	<p>14 16 32</p>	<ul style="list-style-type: none"> 3.0, 4.0 & 5.0 compatible High-speed twinax jumper cables Breakout test cable with microwave coax & SMAs 	3.0 (PCIEC) 4.0 (PCIEC-G4) 5.0 (PCIEC-G5)	PCIe® 4.0 & 5.0 Test Cables in x1, x4, x8, x16 sizes (PCRF-G4/-G5)		<ul style="list-style-type: none"> PCIe® Edge Card Sockets (PCIE) PCIe® Low Loss Microwave Test Cable (PCRF)
<p>GENERATE High-Speed Differential Pair Edge Card Cable</p> <p>see pg. 20</p>	<p>PAM4 56</p>	<ul style="list-style-type: none"> SFF-TA-1002 & PCIe® 5.0 compatible Vertical & Right-Angle Edge Rate® contacts on 0.60 mm pitch 	1C (2x28), 2C (2x42) & 4C (2x70) configurations (GC6)	4C+ (2x84) configuration (GC6)		<ul style="list-style-type: none"> Generate™ Mating Socket (HSEC6) Generate™ 0.80 mm & 1.00 mm Sockets (HSEC8, HSEC1)

HIGH-SPEED BOARD-TO-BOARD		FEATURES	RELEASED	IN DEVELOPMENT	ROADMAP	MATING / RELATED PRODUCTS
<p>ACCELERATE® HD Ultra Dense Multi-Row Mezzanine Strips</p>	<p>PAM4 56</p>	<ul style="list-style-type: none"> 720 pins per square inch Low profile 5 mm stack, slim 5 mm width Up to 400 I/Os in 4-Rows Open-pin-field design 	5-16 mm Stack 4 Rows: 10 - 60 Positions/Row (ADM6/ADF6)	4 Row: 70 - 100 Positions/Row (ADM6/ADF6)		<ul style="list-style-type: none"> SureWare™ Rugged Guidepost Standoff (GPSO)
<p>ACCELERATE® mP High-Density Signal & Power Combo</p>	<p>PAM4 MAX 56 22</p>	<ul style="list-style-type: none"> Accelerate® HD Connector + mPOWER® Power Blades Rotated power blades for improved performance Flexible open-pin-field 		5 mm Stack Height 4 Power + 40 Signal Positions	Up to 16 mm Stack Heights 6, 8, 10 Power + up to 240 Signal Pos.	<ul style="list-style-type: none"> Accelerate® HD Mezzanine Strips (ADM6/ADF6) mPOWER® Ultra Micro Power Connector (UMPS/UMPT)
<p>ACCELERATE® HP Extreme Performance Open-Pin-Field Arrays</p>	<p>NBZ PAM4 56 112</p>	<ul style="list-style-type: none"> Low profile 5 mm stack height, up to 10 mm PCIe® 5.0/100 GbE compatible COM-HPC™ interconnects (4x100, APX6 Series) 	4 Rows: 20, 40, 60, 100 Positions/Row (APM6/APF6)	6 & 8 Rows Right-Angle & Cable Assembly	Up to 1,000+ Total Pins	<ul style="list-style-type: none"> Accelerate® HP Cable Systems (ARP6)
<p>NOVARAY® High-Speed Mezzanine Interconnects</p>	<p>NBZ PAM4 56 112</p>	<ul style="list-style-type: none"> 4.0 Tbps aggregate data rate High reliability with two points of contact Extremely low crosstalk, tight impedance control 	7, 9, 10, 12 mm Stack Heights 2, 3, 4 Rows 1, 2 Banks (NVAM/NVAF)	3 Banks Backplane System	Up to 20 mm Stack Heights 5 Rows Single-Ended Configurations	<ul style="list-style-type: none"> NovaRay® High-Speed Cable Systems (NVAC) NovaRay® I/O 38999 Sealed Cable System
<p>NOVARAY® Micro Rugged Backplane System</p>	<p>PAM4 112</p>	<ul style="list-style-type: none"> Board-to-Board & Cable-to-Board connectors Performance to 224G PAM4 		Vertical Socket (NVBF) Right-Angle Terminal (NVBM-RA)		<ul style="list-style-type: none"> NovaRay® Backplane Cable System (NVCF)
<p>GENERATE High-Speed Differential Pair Edge Card Connector</p>	<p>PAM4 56</p>	<ul style="list-style-type: none"> Rugged Edge Rate® contacts on 0.60 mm pitch PCIe® 5.0 compatible SFF-TA-1002 Compliant 	Vertical (HSEC6-DV)	Right-Angle (HSEC6-RA)		<ul style="list-style-type: none"> 0.60 mm Pitch Cable System (GC6) 0.80 mm Pitch Sockets (HSEC8, HSEC8-DP) & Cable System (ECDP) 1.00 mm Pitch Sockets (HSEC1)

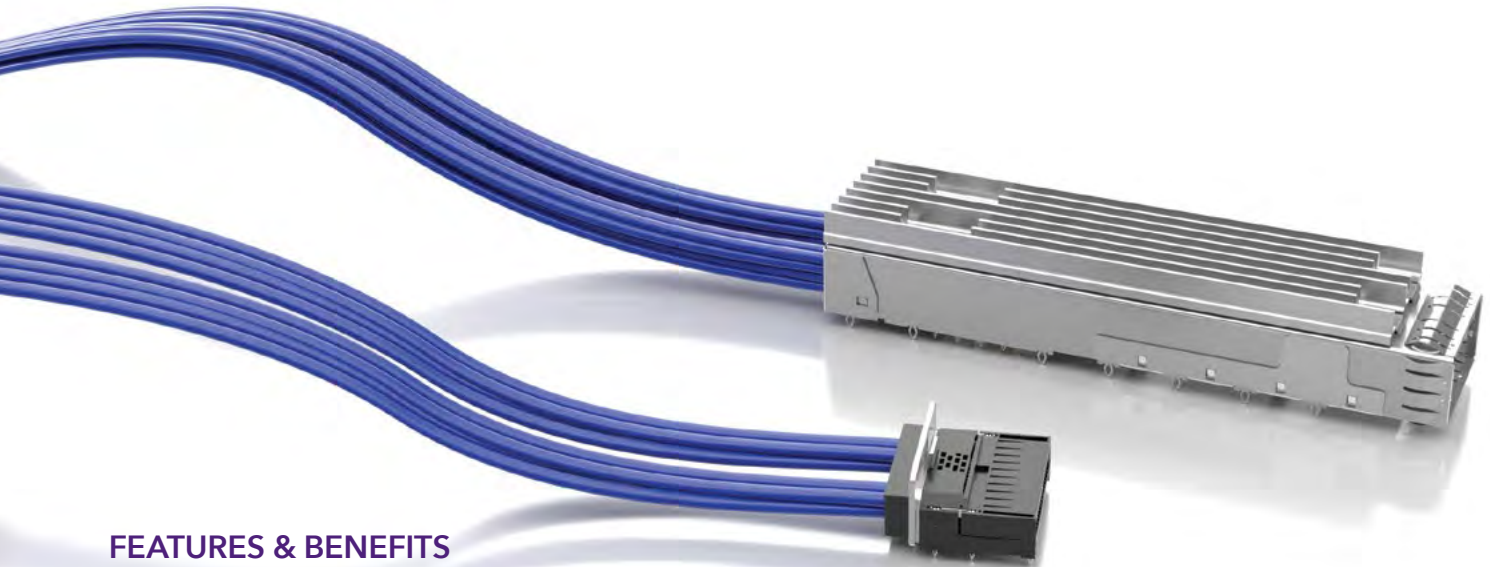
TECHNOLOGY ROADMAP

OPTICS	FEATURES	RELEASED	IN DEVELOPMENT	ROADMAP
 <p>Optical Micro Flyover System™</p>  <p>PCI EXPRESS</p> <p>NRZ 28 T/P</p>	<ul style="list-style-type: none"> Flyover® Technology enables simplified board layout and improved signal integrity Industry-leading miniature footprint, low profile Up to 28 Gbps per channel 	<p>Commercial (ECUO)</p> <p>Extended Temp (ETUO)</p> <p>PCIe®-Over-Fiber (PCUO)</p>	<p>Extreme Environment Sealed System: submersible with -40 to +85 °C temp range (ETMO)</p>	
<p>Halo™</p> <p>Next Gen Optics</p>  <p>PAM4 112 T/P</p>	<ul style="list-style-type: none"> Capable of 112 Gbps PAM4 per lane, up to 16 channels Low 6 mm profile with low center of gravity designed to withstand high shock & vibrate 		<p>Up to 16 Channels (8 Channel Bi-Directional)</p>	
 <p>Ultra Rugged Optics</p>  <p>ULTRA COMMUNICATIONS A SAMTEC COMPANY</p>	<ul style="list-style-type: none"> Industry's most compact fiber optics with solderable BGA attach for reliability Removable pigtail connector ideal for harsh environments 	<p>MT/MTP Ferrule Terminations</p> <p>MIL-Spec Custom Terminations</p> <p>Rad-Hard Optical Fiber</p>		

RUGGED / POWER	FEATURES	RELEASED	IN DEVELOPMENT	ROADMAP
 <p>Ultra Rugged Power Cable System</p> <p>see pg. 22-25</p>  <p>MAX 2.9 T/P</p>	<ul style="list-style-type: none"> Hyperboloid-type contact for extreme reliability and high mating cycles MIL-grade performance at commercial pricing 1 mm pitch; up to 40 pos/row 		<p>EMI Shielding</p> <p>Socket Cable (B1SD)</p> <p>Panel Mount Terminal Cable (P1PD)</p> <p>-VT & -RA Board Mount I/O Connector (P1M)</p>	<p>Additional Positions</p> <p>Slim Latching</p>
 <p>Ultra Micro Power Interconnect System</p> <p>see pg. 26-29</p>  <p>MAX 18 T/P</p>	<ul style="list-style-type: none"> Board-to-board & cable-to-cable solutions Design flexibility as power-only, or as power/signal when used with any signal connector 	<p>2 to 10 total Positions</p> <p>5 to 20 mm Stack Heights (UMPT/UMPS, UMPC)</p>	<p>Cable-to-Cable System</p>	
 <p>38999 Sealed Rugged Cable System</p> 	<ul style="list-style-type: none"> NovaRay® I/O High Data Rate Cable System Rugged 38999 style shell Salt fog resistant to 48 hours 	<p>16 Pairs</p>	<p>8 & 32 Pairs, Additional Shell Configurations</p>	
 <p>High Reliability Platings & Coatings</p> <p>see pg. 31</p>  <p>Copper Nickel Palladium Gold Flash</p> <p>Increased Cycle Life Increased MFG Cost-Optimized</p>	<ul style="list-style-type: none"> High-Reliability Palladium Plating for high-temp, high-cycle applications 	<p>Hi-Temp Plating for SEAM/SEAF</p>	<p>Next Gen, cost-optimized surface plating</p>	<p>Hi-Temp Plating for SEAX8, AP6X, HSEC8, HDTX, HPTX Series</p>
<p>Rugged I/O</p> <p>Cable & Connector Systems</p>  <p>ACCLIMATE</p>	<ul style="list-style-type: none"> AccliMate™ IP67/IP68 Sealed Circular & Rectangular Systems Single Pair Ethernet Cables and Connectors USB Connectors & Cables 	<p>AccliMate™ Systems (Mini Push-Pull, Bayonet Circulars, Ethernet, USB)</p> <p>USB & Mini USB Connectors & Cables</p>	<p>AccliMate™ IP67 Sealed USB Type-C System (USB 3.1 speeds)</p> <p>IEC 63171-6 Compliant Single Pair Ethernet</p>	

PRECISION RF	FEATURES	RELEASED	IN DEVELOPMENT	ROADMAP
<p>Ganged SMPM Solutions</p> <p>see pg. 32-33</p>	<p>DC TO 65 GHz</p>	<ul style="list-style-type: none"> • High-density, space-saving push-on design • Board-to-Board & Cable-to-Board • Custom pitch and row counts available 	<ul style="list-style-type: none"> • Edge Mount, .047" Low-Loss Flexible Cable • Mezzanine, Coplanar or Perpendicular • Single-Row design 	<ul style="list-style-type: none"> • Vertical Surface Mount • Right-Angle Surface Mount • .086" Low-Loss Flexible Cable
<p>High-Performance Test Systems</p>	<p>DC TO 90 GHz, PAM4 224 Gbps</p>	<ul style="list-style-type: none"> • High-density, space-saving • Enables smaller eval boards and shorter trace lengths • Compression interface • Microstrip or stripline PCB transmission types 	<ul style="list-style-type: none"> • 50 GHz, 70 GHz Systems 	<ul style="list-style-type: none"> • 90 GHz System with improved density
<p>High-Frequency Micro Waveguide Technology</p>		<ul style="list-style-type: none"> • High-frequency (mmWave) • Extremely flexible cable construction; maintains dynamic stability • Ultra Small Form Factor • Low loss dielectric 	<ul style="list-style-type: none"> • -V Band, -E Band 	
<p>Broadcast Video Solutions</p>	<p>HD-BNC</p>	<ul style="list-style-type: none"> • Proprietary balanced, right-angle design • Low profile • Pick-and-place options • Meets SMPTE 2082 12G-SDI specifications 	<ul style="list-style-type: none"> • BNC, High-Density BNC, DIN 1.0/2.3 in a variety of orientations • Belden 4694R & 4855R cable assemblies 	
<p>VITA 90 VNX™ + RF Backplane Solution</p>	<p>DC TO 110 GHz</p>	<ul style="list-style-type: none"> • Modular, SFF design with FireFly™ Optics & SEARAY™ Right-Angle Array • Supports 110 GHz • COTS or modified COTS solution saves time & cost 	<ul style="list-style-type: none"> • Size 20 RF Contact System • Blind Mate Optical Connector 	<ul style="list-style-type: none"> • Size 16 RF Contact System
<p>Precision RF Connectors</p>	<p>DC TO 110 GHz</p>	<ul style="list-style-type: none"> • Cable connectors with bayonet, threaded and push-on coupling features • Cable-to-Board and Board-to-Board Systems • Variety of orientations 	<ul style="list-style-type: none"> • SMA (18 GHz), SMP, SMPM • PCB Compression 1.85 mm, 2.40 mm, 2.92 mm • 1.35 mm Stripline 	<ul style="list-style-type: none"> • 1.35 mm Microstrip • Edge Launch 1.85 mm, 2.92 mm • SMPM Spring-Loaded Bullets • SMP 40 GHz (-EM, -TH, -MT) • Edge Launch 2.40 mm SMA (26.5 GHz) • Edge Mount • Compression Edge Launch • Through-Hole & Mixed Technology
<p>Precision RF Cables</p>	<p>DC TO 90 GHz</p>	<ul style="list-style-type: none"> • Low-loss microwave/mmWave, 12G-SDI, RG Type, High-Density Ganged, and Samtec-optimized cables • Wide variety of industry standard interfaces 	<ul style="list-style-type: none"> • MHF4, 1.85 mm, SMPM, 2.40 mm, 2.92 mm assemblies • RF180: N Type, TNC & SMA • RF280: SMA 	<ul style="list-style-type: none"> • RF280; N Type, TNC & SMA • 1.35 mm, 1.00 mm, SMA (26.5 GHz), SMP (40 GHz) assemblies • Next Gen Precision Cable Assemblies: phase & insertion loss stable, extended frequency range
<p>Precision RF Between-Series & In-Series Adaptors</p> <p>see pg. 34</p>		<ul style="list-style-type: none"> • Designed for well-performing VSWR and insertion loss • Test & Measurement applications • Board-to-board SMPM applications 	<ul style="list-style-type: none"> • In-Series (PRFIA) for 1.85 mm, 2.40 mm & 2.92 mm • Between-Series (PRFBA) for 2.92 mm & SMPM 	<ul style="list-style-type: none"> • In-Series for 1.00 mm, 3.50 mm, N Type, SMA, TNCA & SMP • Between Series for 1.85 mm, 2.40 mm, 2.92 mm & SMP

FLYOVER® QSFP CABLE ASSEMBLIES



FEATURES & BENEFITS

QSFP28, QSFP-DD and QSFP-D8 systems utilize Samtec Flyover® technology to route data above lossy PCB, simplifying board layout and extending signal reach. The modular design enables optimized systems that improve heat management, increase signal integrity performance, build in scalability for future upgrades and reduces costs by creating a multifunction board.

NRZ	PAM4
56 Gbps	112 Gbps

FLYOVER® QSFP SYSTEM

- 4 Channels (x4 bidirectional, 8 differential pairs)
- Up to 400 Gbps aggregate (112 Gbps PAM4)
- Compatible with all MSA QSFP pluggables
- Multiple heat sink options available for optimal dissipation
- Eye Speed® 30 or 34 AWG twinax cable
- Multiple end 2 options for design flexibility
- Evaluation Kits available (REF-205303-X.XX-XX and REF-200471-X.XX-XX), visit samtec.com/kits



Localized press-fit control and power contacts eliminate the need for a secondary cable and connector



High-speed contacts directly soldered to Eye Speed® ultra low skew twinax

FLYOVER® QSFP DOUBLE DENSITY

- 8 Channels (x8 bidirectional, 16 differential pairs)
- Up to 400 Gbps aggregate (56 Gbps PAM4)
- Belly-to-belly mating for maximum density
- Backward compatible with QSFP modules
- Multiple heat sink options available for optimal dissipation
- Variety of end 2 options
- Evaluation Kits available (REF-205605-X.XX-XX and REF-203423-X.XX-XX), visit samtec.com/kits

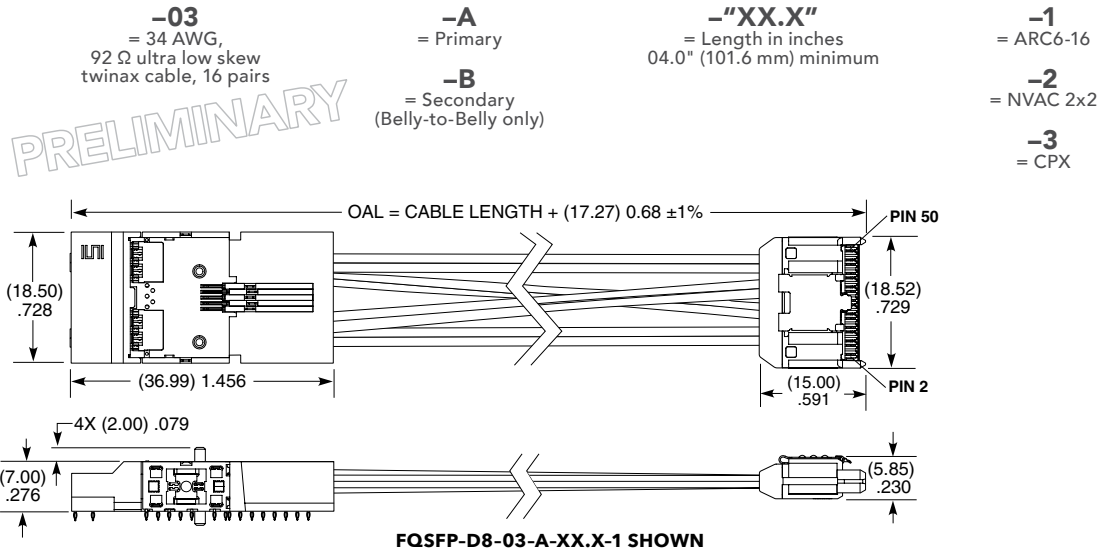
800G FLYOVER® DOUBLE DENSITY

- 8 Channels (x8 bidirectional, 16 differential pairs)
- Up to 800 Gbps aggregate (112 Gbps PAM4)
- Belly-to-belly mating for maximum density
- Backward compatible with QSFP & QSFP-DD modules
- Multiple heat sink options available for optimal dissipation
- Variety of end 2 options

800G FLYOVER® QSFP DOUBLE DENSITY

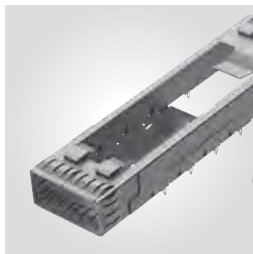
FQSFP	D8	CABLE TYPE	FOOTPRINT	CABLE LENGTH	END 2 OPTION
-------	----	------------	-----------	--------------	--------------

FQSFP-D8



QSFP	D8	STACK	NO. OF PORTS	OPTION	STYLE
------	----	-------	--------------	--------	-------

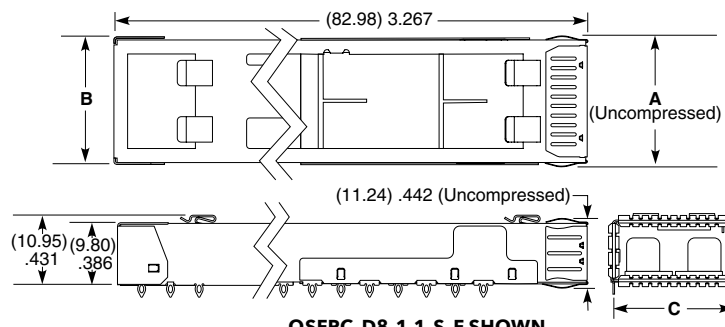
QSFP-D8



- 1**
= Single Stack
- 1**
= One Port
- 2**
= Two Ports
- S**
= Spring Fingers
- F**
= Flyover

PRELIMINARY

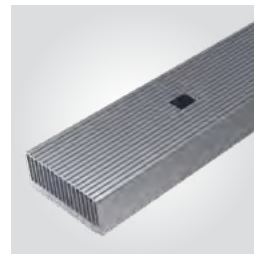
NO. OF PORTS	A	B	C
-1	(20.96) .825	(19.87) .782	(19.00) .748
-2	(39.96) 1.573	(38.87) 1.530	(38.00) 1.496



Note:
Some sizes, styles and options are non-standard, non-returnable.

HS-QSFP	D8	HEAT SINK HEIGHT
---------	----	------------------

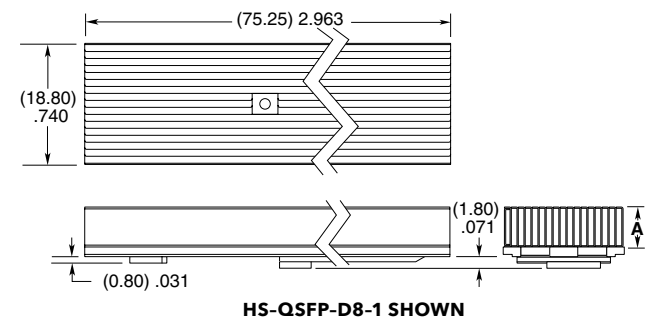
HS-QSFP-D8



- 1**
= (6.20 mm) .244" height
- 2**
= (12.00 mm) .472" height

PRELIMINARY

HEAT SINK HEIGHT	A
-1	(6.29) .244
-2	(12.00) .472



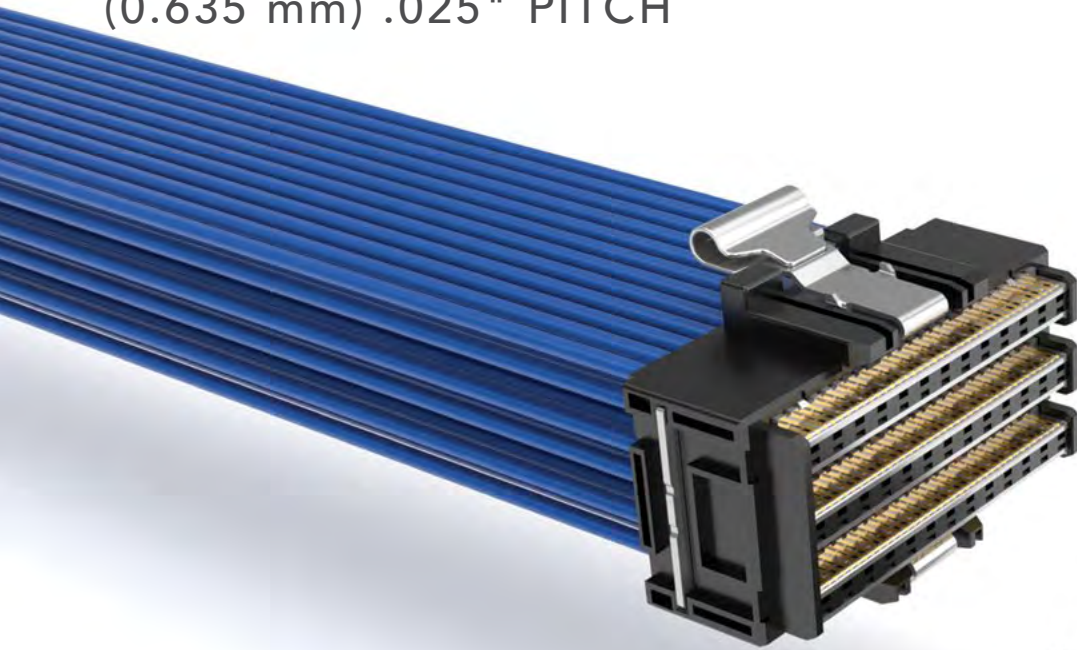
ACCELERATE[®]HP

EXTREME DENSITY CABLE-ON-SUBSTRATE

(0.635 mm) .025" PITCH

PAM4

112
G b p s

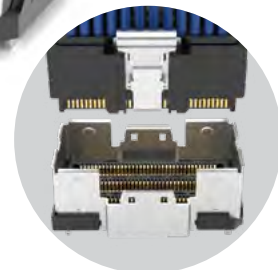


FEATURES & BENEFITS

- Industry's highest density 112G PAM4 cable system
- BGA solder ball attach
- 34 AWG ultra-low skew twinax
- 0.635 mm contact pitch; 2.20 x 2.40 mm row-to-row pitch
- 4 to 6 rows (8 rows in development)
- Up to 96 twinax cables
- Squeeze latch or extraction tool configuration
- Single-ended micro coax configuration in development



Locking for maximum density
(removal tool required)



Squeeze Latching

KEY SPECIFICATIONS

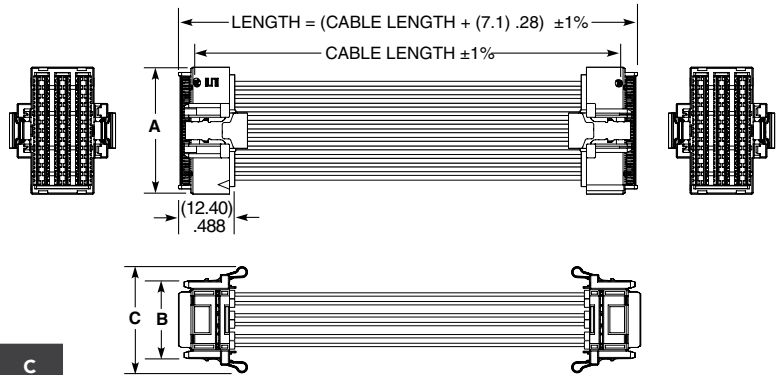
PITCH	CABLE	SIGNAL ROUTING	INSULATOR MATERIAL	CONTACT MATERIAL	PLATING	OPERATING TEMP RANGE
(0.635 mm) .025"	34 AWG ultra-low skew twinax	92 Ω Differential	Black LCP	Copper Alloy	Au or Sn over 50 μ" (1.27 μm) Ni	-40 °C to +125 °C

(0.635 mm) .025" • HIGH-DENSITY/PERFORMANCE CABLE

ARP6	STYLE	NO. OF PAIRS	NO OF ROWS	CABLE LENGTH	END 2 ORIENTATION	END 1 OPTION	END 2 OPTION
	-DP = Twinax Cable	-008, -012	-04, -06	-“XX.X” = Length in Inches 03.0” (76.2 mm) minimum	-T = Top -B = Bottom	-L = Squeeze Latch	-L = Squeeze Latch

PRELIMINARY

ARP6
Board Mates:
APF6-L



ARP6-DP-012-06-XX.X-B-L-L SHOWN

NO. OF PAIRS	A
-008	(20.34) .801
-012	(27.96) 1.101

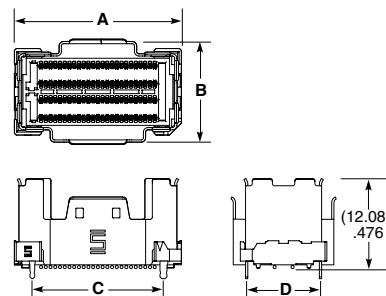
NO. OF ROWS	B	C
-04	(12.54) .494	(18.58) .731
-06	(17.14) .675	(23.39) .921

View complete specifications at: samtec.com?ARP6

APF6	NO. OF POSITIONS	LEAD STYLE	PLATING	ROW	SOLDER TYPE	OPTION	“X”R
	-025, -037 (Per Row)	-03.5 = (3.5 mm) .138"	-L = 10 μ" (0.25 μm) Gold on contact area, Matte Tin on tail -S = 30 μ" (0.76 μm) Gold on contact area, Matte Tin on tail	-04 = Four Row -06 = Six Row	-2 = Lead-Free Solder Balls	-L = Squeeze Latch	-TR = Tape & Reel -FR = Full Reel Tape & Reel (must order maximum quantity per reel; contact Samtec for quantity breaks)

PRELIMINARY

APF6-L
Cable Mates:
ARP6



NO. OF POSITIONS PER ROW	A	C
-025	(22.39) .881	(17.59) .693
-037	(30.01) 1.181	(25.21) .993

NO. OF ROWS	B	D
-04	(13.50) .531	(9.90) .390
-06	(18.10) .713	(14.50) .571

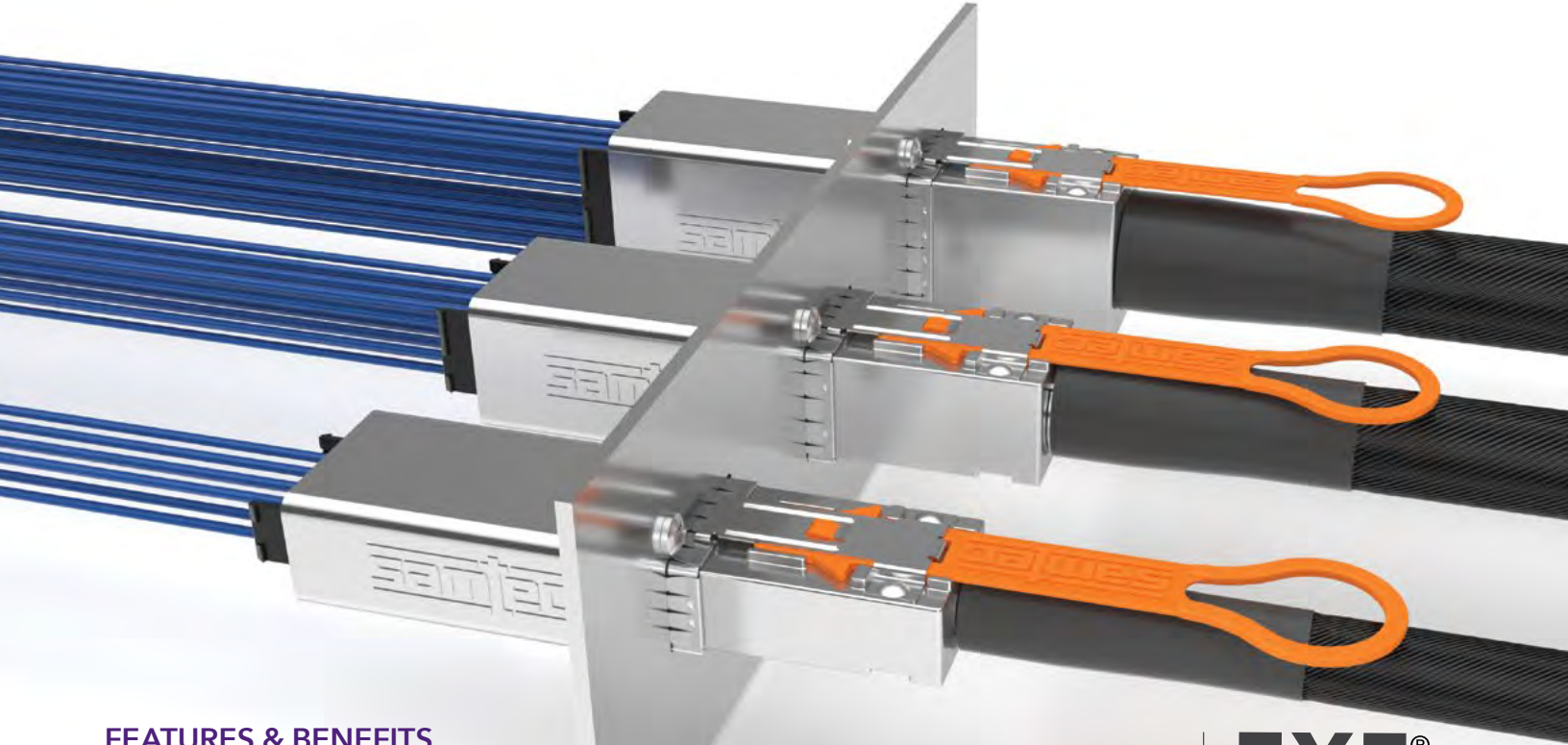
APF6-025-03.5-XX-04-2-L SHOWN

Note:
Some sizes, styles and options are non-standard, non-returnable.

View complete specifications at: samtec.com?APF6

NOVARAY[®] I/O

EXTREME PERFORMANCE PANEL MOUNT I/O ASSEMBLIES



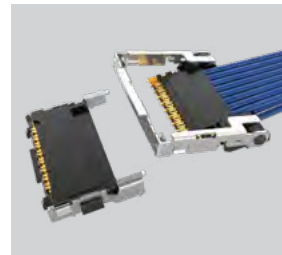
FEATURES & BENEFITS

- 16 & 32 differential pair configurations
– Accommodates x4 or x8 plus sidebands
- Cable-to-Cable bulkhead panel connection using Flyover[®] Cable Technology
- External Cable: 28, 30 or 34 AWG twinax
- Internal Cable: 34 AWG twinax
- Single-Ended coax options also available
- Full external EMI shielding
- Multiple end 2 high-speed connector options

NOVARAY[®] I/O

EYE[®]
SPEED
CABLE

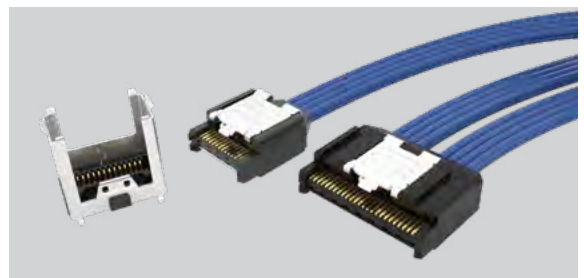
VARIOUS END 2 OPTIONS AVAILABLE



Si-Fly[™]



NovaRay[®]



AcceleRate[®]

PAM 4
112
Gbps

TARGETED CONFIGURATIONS	AGGREGATE DATA RATE
8 Pair (In Development)	896 Gbps
16 Pair	1792 Gbps
32 Pair	3584 Gbps
x4 (8 Pair + PCIe [®] Sidebands)	512 Gbps
x8 (16 Pair + PCIe [®] Sidebands)	1024 Gbps

PCI EXPRESS[®]
GEN 6 COMPATIBLE

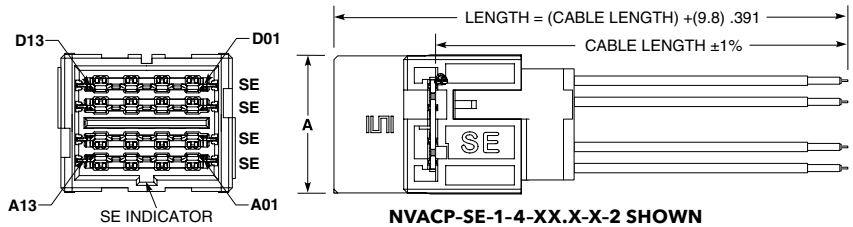
EXTREME PERFORMANCE PANEL MOUNT CABLE

NVACP	SIGNAL TYPE	CABLE STYLE	ROWS	CABLE LENGTH	END 2	PIN OUT	SPEED
	-DP = Differential (twinax pairs only)	-1 = 34 AWG 100 Ω twinax	-4 = 4 row -8 = 8 rows	-XX.X = Length in inches 06.0" (152.4 mm) minimum	(Leave blank for -SE) -A = 1 ARC6	-1 = Pin A01 to Pin A01 -4 = Pin A01 to Pin AN (N equals last position)	(Differential twinax pairs only) -1 = 56G PAM4 -2 = 112G PAM4

NVACP
Cable Mates:
NVACE
Panel Cage:
NVC



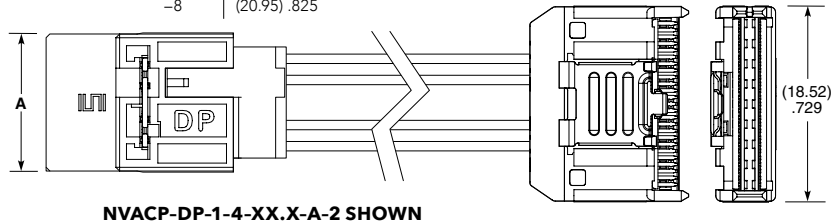
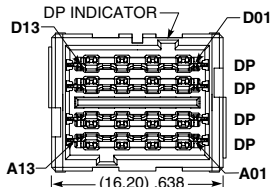
PRELIMINARY



ROW	A
-4	(12.95) .510
-8	(20.95) .825

Notes:
Cable lengths longer than 40.00" (1 meter) are not supported with S.I. test data.

Some sizes, styles and options are non-standard, non-returnable.



DIE CAST PANEL CAGE

View complete specifications at: samtec.com?NVACP

NVC	NO. OF PORTS	ROWS	PACKAGING
-----	--------------	------	-----------

PRELIMINARY

NVC
Mates:
NVACP, NVACE



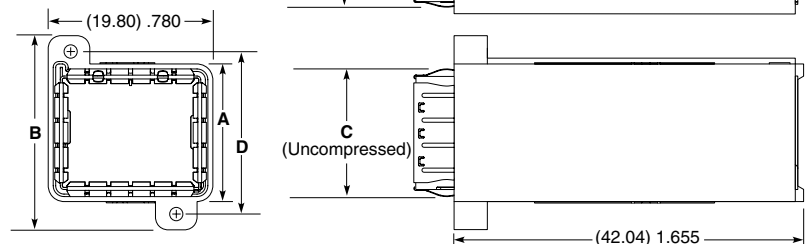
- 1
= 1 Port
- 2
= 2 Ports (8 row only)
- 4
= 4 Ports (8 row only)

- 04
= 4 rows
- 08
= 8 rows

- TY
= Trays

ROW	A	B	C	D
-04	(16.55) .652	(23.35) .919	(15.36) .605	(19.56) .770
-08	(24.55) .967	(31.35) 1.234	(23.36) .920	(27.56) 1.084

Note:
Some sizes, styles and options are non-standard, non-returnable.



View complete specifications at: samtec.com?NVC

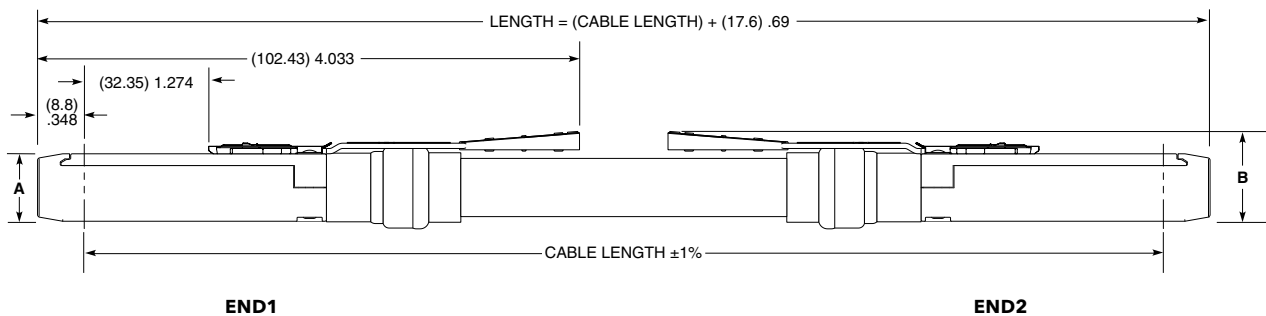
EXTREME PERFORMANCE I/O CABLE

NVACE	SIGNAL TYPE	CABLE TYPE	ROWS	CABLE LENGTH	END 2	PIN OUT	SPEED
	-DP = Differential (twinax pairs only)	-1 = 34 AWG, 100 Ω twinax	-4 = 4 row	-X.X = Length in meters 0.5 meters (19.68") minimum	-A = NVACE	-1 = Pin A01 to Pin A01	(Differential twinax pairs only)
	-SE = Single ended (coax signals only)	-5 = 28 AWG, 100 Ω twinax	-8 = 8 rows			-2 = Pin A01 to Pin N	-1 = 56G PAM4
		-6 = 34 AWG, 50 Ω coax (-SE only)					-2 = 112G PAM4

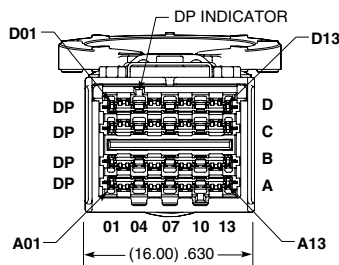
PRELIMINARY

NVACE

Cable Mates: NVACP
Panel Cage: NVC

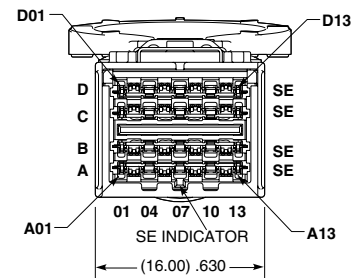


NVACE-XX-X-4-X-X-A-X-2 SHOWN



-DP SHOWN

ROW	A	B
-4	(12.75) .502	(17.00) .669
-8	(20.75) .817	(25.00) .984



-SE SHOWN

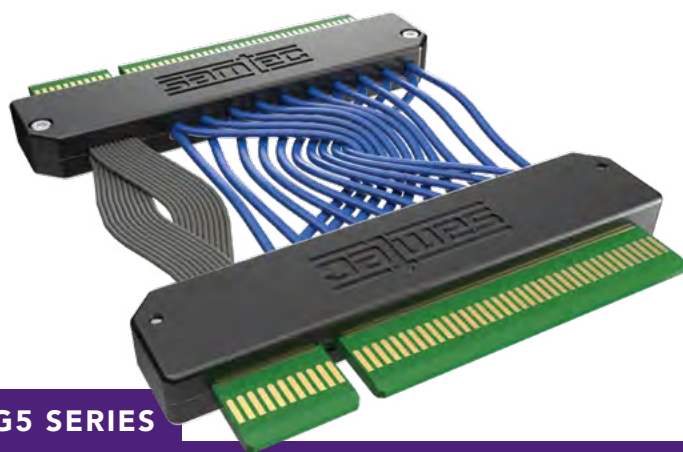
Notes:
Cable lengths longer than 3 meters (118") are not supported with S.I. test data.

Some sizes, styles and options are non-standard, non-returnable.

View complete specifications at: samtec.com?NVACE

PCI EXPRESS® CABLE ASSEMBLY

(1.00 mm) .0394" PITCH • PCIEC-G4/PCIEC-G5 SERIES



PCIEC-G4

Mates:
PCIE-G4

PCIEC-G5

Mates:
PCIE-G5

SPECIFICATIONS

Cable:
Eye Speed® 34 AWG Twinax;
30 AWG insulated ribbon

Operating Temp:
-25 °C to +105 °C

Contact:
Copper Alloy

Plating:
Au or Sn over 50 μ" Ni

Performance:
Supports PCIe® 4.0 & 5.0

Bend Radius:
(3.18 mm) .125"

Notes:
Cable lengths longer than 1015 millimeters are not supported with S.I. test data.

Design your full cable assembly with Samtec's High-Speed Cable Builder at www.samtec.com/cablebuilder

PCI-SIG®, PCI Express® and PCIe® design marks are registered trademarks and/or service marks of PCI-SIG

This Series is non-standard, non-returnable.

PCIEC	GENERATION	NO. OF POSITIONS	WIRE LENGTH	END NO. 2	CABLE OPTION	IMPEDANCE
-------	------------	------------------	-------------	-----------	--------------	-----------

-G4
= PCIe® 4.0

-036 (x1),
-064 (x4),
-098 (x8),
-164 (x16)

-"XXXX"
= Wire Length in millimeters
0076 mm minimum

-C1
= PCIe® Edge Card (Tx to Tx extender)

Leave blank for no power

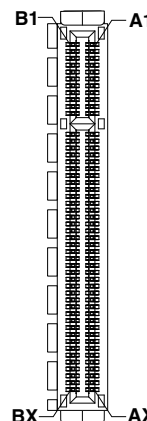
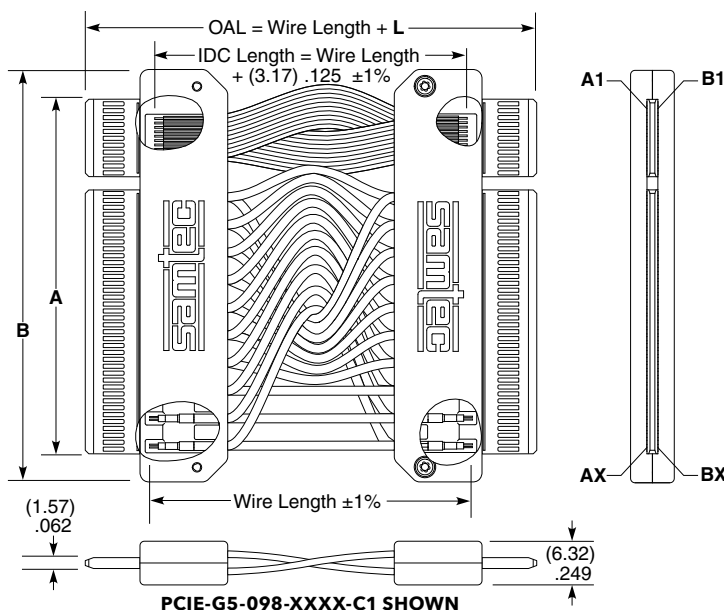
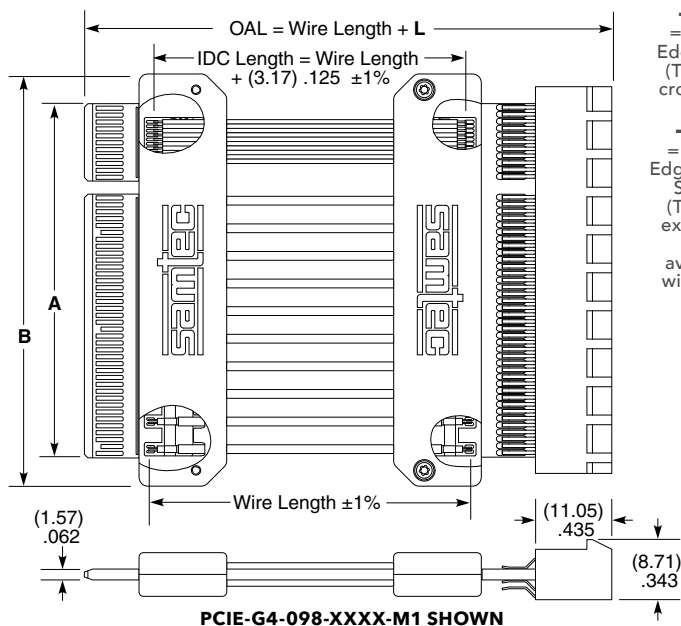
Leave blank for 100 Ω

-G5
= PCIe® 5.0

-C2
= PCIe® Edge Card (Tx to Rx crossover)

-P
= Power

-M1
= PCIEC Edge Mount Socket (Tx to Tx extender) (Not available with -G5)



CABLE OPTION	IMPEDANCE	
	85 Ω	100 Ω
BLANK	34 AWG Taped Shield	
-P (With Power Lines)	34 AWG Taped Shield	

* Contact hdr@samtec.com for information

END TO END	L
-C1 to -C1	(18.60) .732
-C1 to -C2	(42.69) 1.68
-C1 to -M1	(29.64) 1.167

NO. OF POSITIONS	X	A	B
-036 (x1)	18	(20.30) .800	(28.69) 1.13
-064 (x4)	32	(34.30) 1.35	(42.69) 1.68
-098 (x8)	49	(51.30) 2.02	(59.69) 2.35
-164 (x16)	82	(84.30) 3.32	(92.69) 3.65

HIGH-SPEED EDGE CARD CABLE ASSEMBLIES

(0.60 mm) .024" PITCH • GC6 SERIES



GC6

Mates:
HSEC6-DV
(Shield (-S) option
required for mating)

SPECIFICATIONS

Cable:
34 AWG Eye Speed®
ultra low skew twinax

Signal Routing:
100 Ω Differential

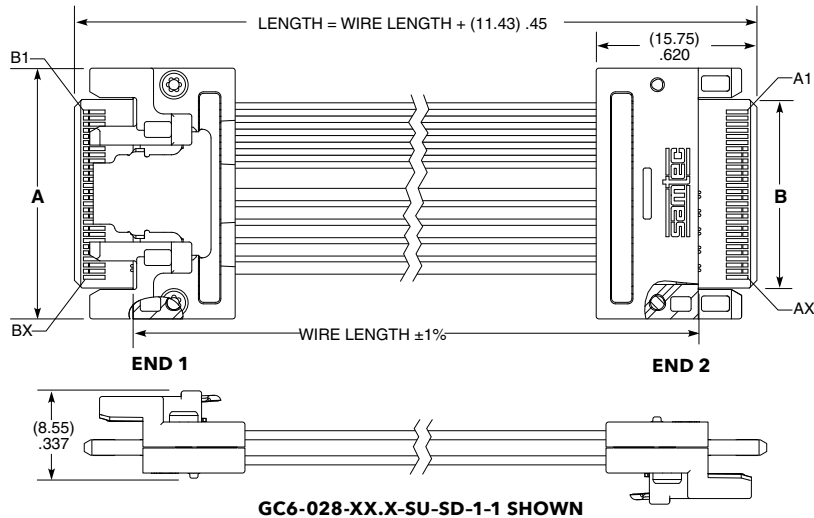
Plating:
Au over 50 μ" (1.27 μm) Nickel

Operating Temp Range:
Testing Now!

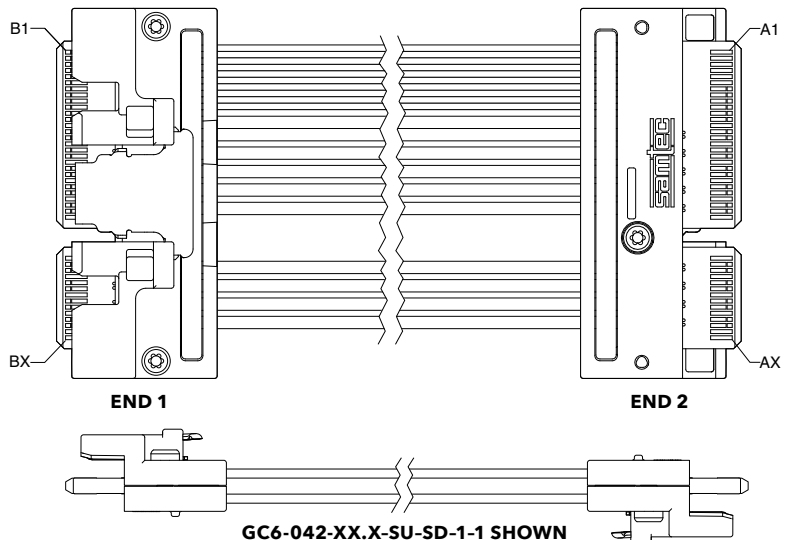
Current Rating:
Testing Now

Protocols:
SFF-TA-1002 Compatible

GC6	NO. OF POSITIONS	WIRE LENGTH	END NO. 1	END NO. 2	WIRE MAPPING	CABLE TYPE
	-028 = 28 positions (1C)	-"XX.X" = Wire Length in Inches 06.0" (152.4 mm) minimum	-SU = Straight, Latch Up	-SD = Straight, Latch Down	-1 = Pin A1 to Pin A1	-2 = 34 AWG 100 Ω Twinax cable
	-042 = 42 positions (2C)		-RU = Right- angle, Latch Up	-RD = Right- angle, Latch Down (Not available with -SU option)		
	-070 = 70 positions (4C)					



POSITIONS PER ROW	A	B	X
-028	(24.57) .967	(18.480) .728	28
-042	(36.29) 1.429	(30.170) 1.188	42
-070	(57.71) 2.272	(51.280) 2.019	70



Notes:
Cable lengths longer than 40.00" (1 meter) are not supported with S.I. test data.

Design your full cable assembly with Samtec's High-Speed Cable Builder at www.samtec.com/cablebuilder

Some lengths, styles and options are non-standard, non-returnable.

OPEN-PIN-FIELD CABLE SOCKET ARRAY



(1.27 mm) .050" PITCH • SEAF C SERIES

SEAF C	NO. OF POSITIONS	LEAD STYLE	PLATING OPTION	NO. OF ROWS	SOLDER TYPE	OPTION	K	PACKAGING
	-20, -30, -40, -50 (Per Row)	Specify LEAD STYLE from chart	-L = 10 μ" (0.25 μm) Gold on contact area, Matte Tin on tail -S = 30 μ" (0.76 μm) Gold on contact area, Matte Tin on tail	-04 -06 -08 -10	-1 = Tin/Lead Alloy Solder Charge -2 = Lead-Free Solder Charge	(Leave blank for latch post) (Only available with -5.0 lead style, -04, -06, -08, & -10 row) -N = No Latch		-TR = Tape & Reel -FR = Full Reel Tape & Reel (must order max. quantity per reel; contact Samtec for quantity breaks)

SEAF C

Cable Mates:
SEAC

SPECIFICATIONS

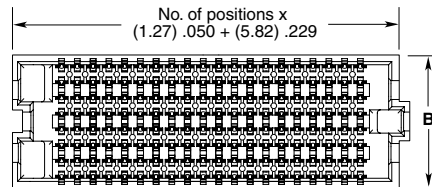
Insulator Material:
Black LCP

Contact Material:
Phosphor Bronze

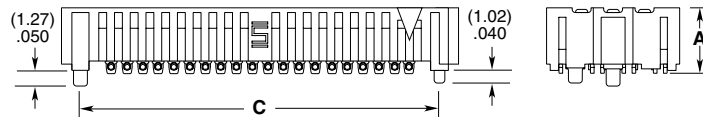
Plating:
Au or Sn over 50 μ" (1.27 μm) Ni
Operating Temp Range:
-55 °C to +125 °C

PROCESSING

Lead-Free Solderable:
Yes

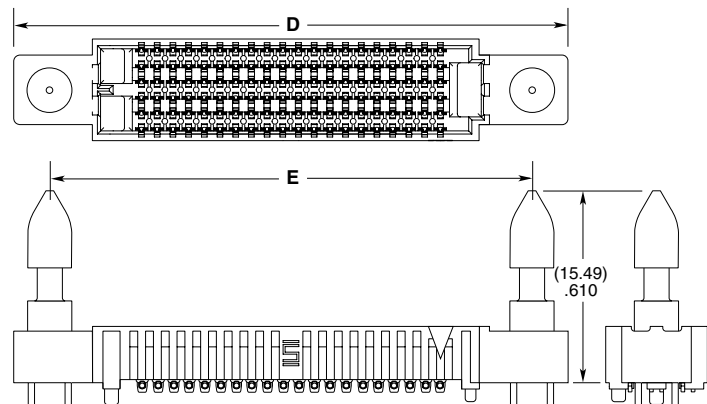


NO. OF ROWS	LEAD STYLE	A	NO. OF ROWS	B
-04	-5.0	(5.41) .213	-04	(5.66) .223
	-6.5	(6.91) .272	-06	(8.20) .323
-06, -08, -10	-5.0	(5.28) .208	-08	(10.74) .423
	-6.5	(6.78) .267	-10	(13.28) .523



SEAF C-20-5.0-X-08-1-N-K-XX SHOWN

NO. OF POSITIONS	C	D	E
-20	(28.981) 1.1410	(44.75) 1.762	(38.94) 1.533
-30	(35.331) 1.3910	(57.45) 2.262	(51.64) 2.033
-40	(48.031) 1.8910	(70.15) 2.762	(64.34) 2.533
-50	(60.731) 2.3910	(82.85) 3.262	(77.04) 3.033



SEAF C-20-5.0-X-06-1-K-XX SHOWN

Note:
Some lengths, styles and options are non-standard, non-returnable

View complete specifications at: samtec.com?SEAF C

ULTRA RUGGED I/O SYSTEMS

(1.00 mm) .0394" PITCH



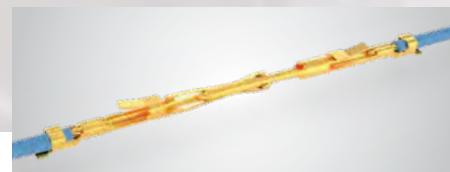
FEATURES & BENEFITS

MAX
2.9
A m p s

- Small form factor
- Four points of contact for an extremely reliable connection
- Up to 40 positions per row
- Cable-to-cable & cable-to-board solutions
- EMI shielding in development to reduce noise generated and protect sensitive lines
- Through-hole or surface mount
- 28 & 30 AWG cable



Shown actual size at 20 total positions



Hyperboloid-type contact for extreme high mating cycles



Extreme density with up to 1,450 total I/Os in a 1RU panel (29 cables at 50 total I/Os each)

KEY SPECIFICATIONS (P1PD(X), B1SD(X) & P1M)

PITCH	INSULATOR MATERIAL	CONTACT MATERIAL	SHIELD MATERIAL	PLATING	OPERATING TEMP RANGE	CURRENT RATING	VOLTAGE RATING
1.00 mm	Liquid Crystal Polymer	Beryllium Copper	Zinc Alloy	Au over 50 μ" (1.27 μm) Ni	-10 °C to +80 °C (PVC) -40 °C to +125 °C (*Teflon™ Fluoropolymer)	2.9 A per pin (2 pins powered)	253 VAC

*Teflon™ is a trademark of The Chemours Company FC, LLC used under license by Samtec.

(1.00 mm) .0394" PITCH • NON-PANEL MOUNT I/O CABLE/COMPONENTS

SERIES	NO. OF POSITIONS	WIRE GAUGE	COLOR CODE	PLATING	ASSEMBLED LENGTH	PINOUT
--------	------------------	------------	------------	---------	------------------	--------

B1SD
= Double Row
Non-Panel Mount
PVC Cable

B1SDT
= Double Row
Non-Panel Mount
Blue *Teflon™
Fluoropolymer Cable

**-10, -15,
-25, -30**
(Per Row)

-28
= 28 AWG

-30
= 30 AWG

(Leave blank for standard wire)

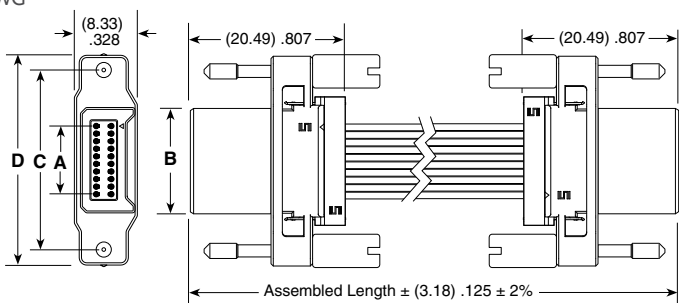
C
= Color Code Wire
(Not available with B1SDT)

-H
= 30 μ" (0.76 μm)
Gold on contact area,
Gold flash on tail

-"XX.X"
= Length in inches
06.0" (152.4 mm)
minimum

(Leave blank for
single ended)

- 1**
= Pin 1 to
Pin 1
- 2**
= Pin 1 to
Pin 2
- 3**
= Pin 1 to
Pin N
- 4**
= Pin 1 to
Pin N-1



B1SDX-10-XXX-H-XX.X-3 SHOWN

NO. OF POSITIONS	A	B	C	D
-10	(9.00) .354	(13.94) .549	(23.75) .935	(27.75) 1.093
-15	(14.00) .551	(18.94) .746	(28.75) 1.132	(32.75) 1.289
-25	(24.00) .945	(28.94) 1.139	(38.75) 1.526	(42.75) 1.683
-30	(29.00) 1.142	(33.94) 1.336	(43.75) 1.722	(47.75) 1.880

*Teflon™ is a trademark of The Chemours Company FC, LLC used under license by Samtec.

Notes:
Teflon™ Fluoropolymer Cable is intended for crimp only. Contact Samtec for solderable cable applications.

Some lengths, styles and options are non-standard, non-returnable.

B1SD, B1SDT
Cable Mates:
P1PD, P1PDT
Board Mates:
P1M



B1SD CABLE HOLDER (Required for use with IBT1)

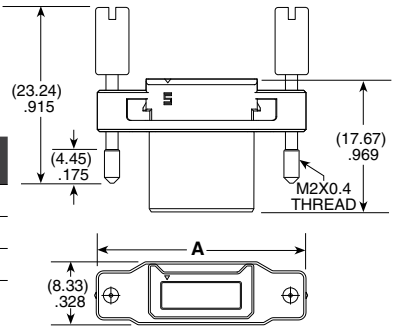
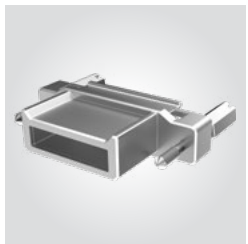
SERIES	NUMBER OF POSITIONS
B1SDR	-10, -15, -25, -30

View complete specifications at: samtec.com?B1SD & samtec.com?B1SDT

B1SDS	NO. OF POSITIONS	N	OPTION
-------	------------------	---	--------

-10, -15, -25, -30

-CS
= Captive
Screw



NO. OF POSITIONS	A
-10	(27.75) 1.093
-15	(32.75) 1.289
-25	(42.75) 1.683
-30	(47.75) 1.880

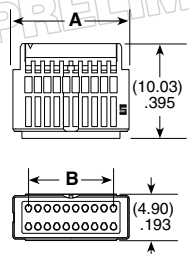
Note:
Some lengths, styles and options are non-standard, non-returnable.

TOOLING

Hand Tool: TBD Mini Applicator: TBD

IBT1	NO. OF POSITIONS	1
------	------------------	---

-10, -15, -25, -30



NO. OF POSITIONS	A	B
-10	(12.290) .484	(9.00) .354
-15	(17.290) .681	(14.00) .551
-25	(27.290) 1.074	(24.00) .945
-30	(32.290) 1.271	(29.00) 1.143

CC508	01	PLATING	PACKAGING
-------	----	---------	-----------

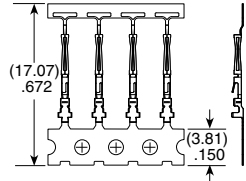


-H
= 30 μ" (0.76 μm)
Gold on contact area,
Gold flash on tail

-R
= Full Reel
(25,000 Contacts
Per Reel)

-M
= Mini Reel
(1,000 to 5,000
Contacts Per Reel)

-B
= Bubble Bag
(35 Contacts)



View complete specifications at: samtec.com?B1SDS, samtec.com?IBT1 & samtec.com?CC508

(1.00 mm) .0394" PITCH • PANEL MOUNT I/O CABLE/COMPONENTS

SERIES	NO. OF POSITIONS	WIRE GAUGE	COLOR CODE	PLATING	ASSEMBLED LENGTH	END OPTION	PINOUT
--------	------------------	------------	------------	---------	------------------	------------	--------

P1PD
Double Row
Panel Mount
PVC Cable

**-10, -15,
-25, -30**
(Per Row)

-28
= 28 AWG

(Leave blank for standard wire)

-H
= 30 μ" (0.76 μm)
Gold on contact area,
Gold flash on tail

-"XX.X"
= Length in inches
06.0" (152.4 mm)
minimum

(Leave blank for single ended)

(Leave blank for single ended)

P1PDT
Double Row
Panel Mount
Blue *Teflon™
Fluoropolymer
Cable

-30
= 30 AWG

C
= Color Code Wire
(Not available
with P1PDT)

-B
= B1SD

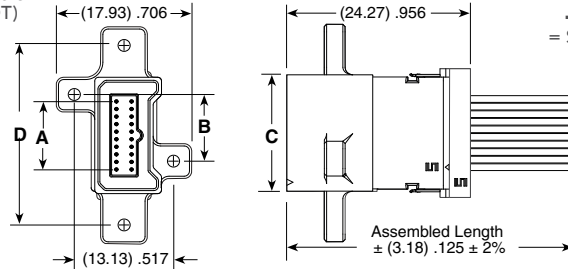
1
= Pin 1 to
Pin 1

2
= Pin 1 to
Pin 2

3
= Pin 1 to
Pin N

4
= Pin 1 to
Pin N-1

P1PD, P1PDT
Cable Mates:
B1SD, B1SDT



P1PDX-10-XXX-H-XX.X SHOWN

NO. OF POSITIONS	A	B	C	D
-10	(9.00) .354	(8.79) .346	(15.39) .606	(23.75) .935
-15	(14.00) .551	(13.79) .543	(20.39) .803	(28.75) 1.132
-25	(24.00) .945	(23.79) .937	(30.39) 1.196	(38.75) 1.526
-30	(29.00) 1.142	(28.79) 1.133	(35.39) 1.393	(43.75) 1.722

*Teflon™ is a trademark of The Chemours Company FC, LLC used under license by Samtec.

Notes:
Teflon™ Fluoropolymer Cable is intended for crimp only. Contact Samtec for solderable cable applications.

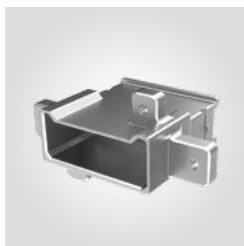
Some lengths, styles and options are non-standard, non-returnable.

**P1PD CABLE HOLDER
(Required for use with IPP1)**

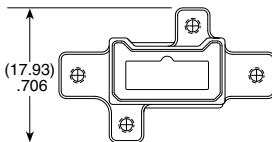
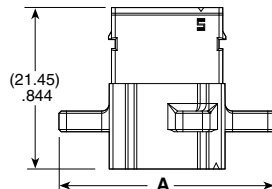
SERIES	NUMBER OF POSITIONS
P1PDR	-10, -15, -25, -30

View complete specifications at: samtec.com?P1PD & samtec.com?P1PDT

P1PDS	NO. OF POSITIONS	N
	-10, -15, -25, -30	



PRELIMINARY



NO. OF POSITIONS	A
-10	(28.75) 1.132
-15	(33.75) 1.329
-25	(43.75) 1.722
-30	(48.75) 1.920

Note:
Some lengths, styles and options are non-standard, non-returnable.

TOOLING

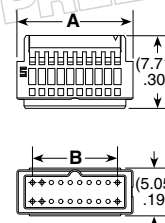
Hand Tool: TBD

Mini Applicator: TBD

IPP1	NO. OF POSITIONS	1
	-10, -15, -25, -30	



PRELIMINARY



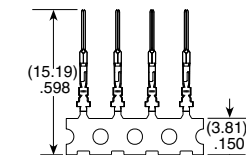
NO. OF POSITIONS	A	B
-10	(12.290) .484	(9.00) .354
-15	(17.290) .681	(14.00) .551
-25	(27.290) 1.074	(24.00) .945
-30	(32.290) 1.271	(29.00) 1.142

TC145	01	PLATING	PACKAGING
-------	----	---------	-----------



-H
= 30 μ" (0.76 μm)
Gold on contact area,
Gold flash on tail

-R
= Full Reel
(25,000 Terminals
Per Reel)



-M
= Mini Reel
(1,000 to 5,000
Terminals Per Reel)

-B
= Bubble Bag
(35 Terminals)

View complete specifications at: samtec.com?P1PDS, samtec.com?IPP1 & samtec.com?TC145

(1.00 mm) .0394" PITCH • I/O BOARD MOUNT

P1M	NO. OF POSITIONS	LEAD STYLE	PLATING	D	RA	PIN LENGTH	"X"R
-----	------------------	------------	---------	---	----	------------	------

**-10, -15,
-25, -30**
(Per Row)

-01
= Surface Mount

-02
= Through-hole
(1.57 mm PCB)

-03
= Through-hole
(2.36 mm PCB)

-S
= 30 μ" (0.76 μm)
Gold on contact area,
Matte Tin on tail

-STL
= 30 μ" (0.76 μm)
Gold on contact area,
Tin/Lead on tail

(Leave blank for standard)

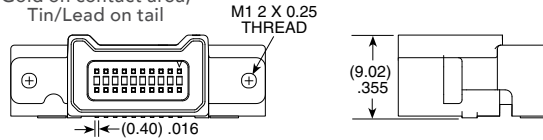
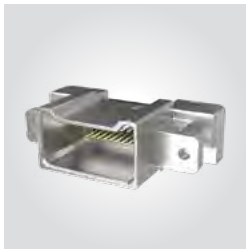
-H
= Hot Swap

-TR
= Tape & Reel

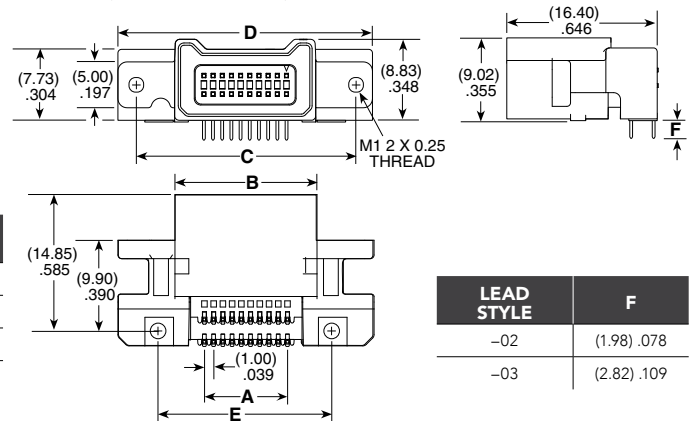
-FR
= Full Reel
Tape & Reel
(must order max.
quantity per reel;
contact Samtec for
quantity breaks)

PRELIMINARY

P1M
Cable Mates:
B1SD, B1SDT



**P1M-10-01-S-D-RA SHOWN
(SURFACE MOUNT)**



**P1M-10-02-S-D-RA SHOWN
(THROUGH-HOLE)**

NO. OF POSITIONS	A	B	C	D	E
-10	(9.00) .354	(15.39) .606	(23.75) .935	(27.75) 1.093	(18.80) .740
-15	(14.00) .551	(20.39) .803	(28.75) 1.132	(32.75) 1.289	(23.80) .9379
-25	(24.00) .945	(30.39) 1.196	(38.75) 1.526	(42.75) 1.683	(33.80) 1.331
-30	(29.00) 1.142	(35.39) 1.393	(43.75) 1.722	(47.75) 1.880	(38.80) 1.528

LEAD STYLE	F
-02	(1.98) .078
-03	(2.82) .109

Note:
Some lengths, styles and options are non-standard, non-returnable.

View complete specifications at: samtec.com?P1M

P1M	NO. OF POSITIONS	LEAD STYLE	PLATING	DV	PIN LENGTH	PICK & PLACE OPTION	"X"R
-----	------------------	------------	---------	----	------------	---------------------	------

**-10, -15, -25,
-30**
(Per Row)

-01
= Surface Mount

-02
= Through-hole
(1.57 mm PCB)

-03
= Through-hole
(2.36 mm PCB)

-S
= 30 μ" (0.76 μm)
Gold on contact area,
Matte Tin on tail

-STL
= 30 μ" (0.76 μm)
Gold on contact area,
Tin/Lead on tail

(Leave blank for standard)

-H
= Hot Swap

(Leave blank for no pad)

-K
= (8.25 mm) .315"
DIA Polyimide
Film Pick &
Place Pad

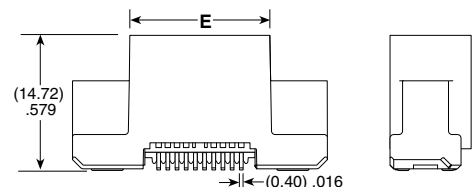
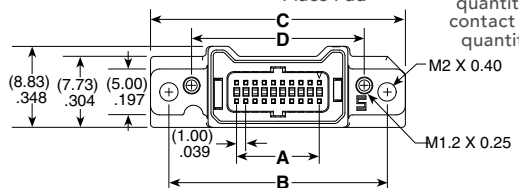
-TR
= Tape & Reel

-FR
= Full Reel
Tape & Reel
(must order max.
quantity per reel;
contact Samtec for
quantity breaks)

P1M
Cable Mates:
B1SD, B1SDT



PRELIMINARY



P1M-10-01-S-DV SHOWN

NO. OF POSITIONS	A	B	C	D	E
-10	(9.00) .354	(23.75) .935	(27.75) 1.093	(18.80) 740	(15.22) .599
-15	(14.00) .551	(28.75) 1.132	(32.75) 1.289	(23.80) .9379	(20.22) .796
-25	(24.00) .945	(38.75) 1.526	(42.75) 1.683	(33.80) 1.331	(30.22) 1.190
-30	(29.00) 1.142	(43.75) 1.722	(47.75) 1.880	(38.80) 1.528	(35.22) 1.387

Note:
Some lengths, styles and options are non-standard, non-returnable.

View complete specifications at: samtec.com?P1M

ULTRA MICRO POWER SYSTEM

(2.00 mm) .0787" PITCH



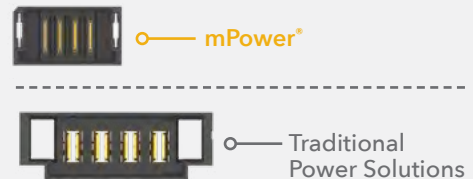
FEATURES & BENEFITS

- Up to 18 A per blade (1 blade powered)
- Design flexibility as a power-only system or a two-piece system for power/signal applications
- Use with Samtec's high-speed connector systems for a unique power/signal system
- Choice of 2 to 10 positions
- 5 mm to 20 mm stack heights available
- Tin or 10 μ" Gold plated power blades; 30 μ" Gold plating available to meet specific regulations
- Optional weld tabs
- Cable-to-board and cable-to-cable systems in development

KEY SPECIFICATIONS

PITCH	STACK HEIGHTS	INSULATOR MATERIAL	CONTACT MATERIAL	PLATING	OPERATING TEMP RANGE	VOLTAGE RATING	LEAD-FREE SOLDERABLE
2.00 mm	5 to 16, 18, 20 mm	Black LCP	Copper Alloy	Sn or Au over 50 μ" (1.27 μm) Ni	-55 °C to +105 °C with Tin -55 °C to +125 °C with Gold	460 VAC/ 650 VDC	Yes

UMPT/UMPS compared to another small form factor power solution



CREEPAGE & CLEARANCE

UMPT/UMPS	
CREEPAGE	2.20 mm
CLEARANCE	1.65 mm

Selectively loading contacts achieves customer specific creepage and clearance requirements.

MAX
18
A m p s

ULTRA MICRO POWER SOCKET

UMPS	NO. OF POSITIONS	LEAD STYLE	PLATING OPTION	V	S	OPTION	"X"R
	-02, -03, -04, -05, -06, -07, -08, -09, -10	-03.5 = (03.5 mm) .138" -05.5 = (05.5 mm) .217" -07.5 = (07.5 mm) .295"	-L = 10 μ" (0.25 μm) Gold on contact, Matte Tin on tail -S = 30 μ" (0.76 μm) Gold on contact, Matte Tin on tail -T = Matte Tin			-W = Weld Tab Through-hole (Leave blank for no weld tab)	-TR = Tape & Reel -FR = Full Reel Tape & Reel (must order max. quantity per reel; contact Samtec for quantity breaks)

UMPS
Board Mates:
UMPT

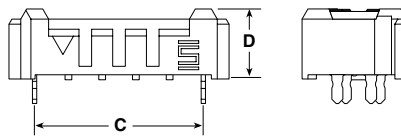
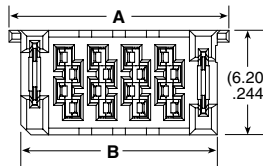


UMPT/UMPS CURRENT RATING (PER CONTACT)

PINS	-T	-L
1	18.3 A	16.2 A
2	14.5 A	14.6 A
3	14.2 A	12.6 A
4	12.9 A	12.3 A
5	12.9 A	N/A
10	N/A	9.4 A

Ratings are derated 20% with 30 °C rise to maximum allowable temperature.

NO. OF POSITIONS	A	B	C
-02	(9.05) .356	(7.65) .301	(6.00) .236
-03	(11.05) .435	(9.65) .380	(8.00) .315
-04	(13.05) .514	(11.65) .459	(10.00) .394
-05	(15.05) .593	(13.65) .537	(12.00) .472
-06	(17.05) .671	(15.65) .616	(14.00) .551
-07	(19.05) .750	(17.65) .695	(16.00) .630
-08	(21.05) .829	(19.65) .774	(18.00) .709
-09	(23.05) .907	(21.65) .852	(20.00) .787
-10	(25.05) .986	(23.65) .931	(22.00) .866



UMPS-04-03.5-X-V-S-W SHOWN

LEAD STYLE	D
-03.5	(4.15) .163
-05.5	(6.15) .242
-07.5	(8.15) .321

View complete specifications at: samtec.com?UMPS

SIGNAL CONNECTOR	MATED HEIGHT													
	5 mm	6 mm	7 mm	8 mm	9 mm	10 mm	11 mm	12 mm	13 mm	14 mm	15 mm	16 mm	18 mm	20 mm
ADM6/ADF6	X													
BTE/BSE	X			X										
BTH/BSH, BTS/BSS	X													
ERM5/ERF5			X		X	X	X	X						
ERM6/ERF6	X													
ERM8/ERF8			X		X	X	X	X	X	X	X	X	X	
LPAM/LPAF	X													
QMS/QFS						X	X	X	X	X		X		
QRM8/QRF8			X		X	X		X		X				
QTE/QSE, QTH/QSH	X			X			X			X				
QTS/QSS	X			X										
SEAM/SEAF			X	X	X	X	X	X	X	X	X	X		X
SEAM8/SEAF8			X			X								
ST4/SS4	X	X												
ST5/SS5	X													
TEM/SEM		X	X			X								

Notes:
Some lengths, styles and options are non-standard, non-returnable

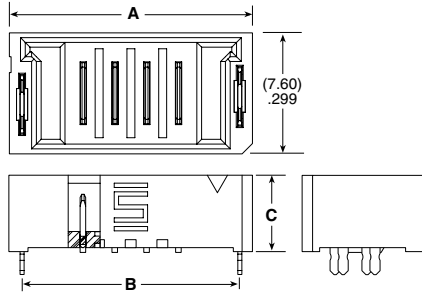
ULTRA MICRO POWER TERMINAL

UMPT	NO. OF POSITIONS	LEAD STYLE	PLATING OPTION	V	S	WELD TAB	LATCH OPTION	"X"R
------	------------------	------------	----------------	---	---	----------	--------------	------

UMPT
Board Mates:
UMPS
Cable Mates:
UMPC*
(*UMPT requires -P or -M option for mating)



- 02, -03, -04, -05, -06, -07, -08, -09, -10
- 01.5 = (01.5 mm) .059"
- 02.5 = (02.5 mm) .098"
- 06.5 = (06.5 mm) .256"
- 07.5 = (07.5 mm) .295"
- 12.5 = (12.5 mm) .492"
- L = 10 μ" (0.25 μm) Gold on contact, Matte Tin on tail
- S = 30 μ" (0.76 μm) Gold on contact, Matte Tin on tail
- T = Matte Tin



UMPT-04-01.5-X-V-S-W SHOWN

Note:
Some lengths, styles and options are non-standard, non-returnable.

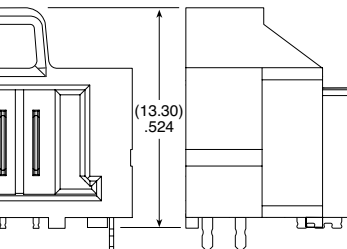
View complete specifications at: samtec.com?UMPT

- (Leave blank for no weld tab)
- W = Weld Tab Through-hole
- (Leave blank for no latch)
- (Only available on -02.5 lead style) (Weld tab required)
- P = Plastic top latch
- M = Metal side latches
- TR = Tape & Reel
- FR = Full Reel Tape & Reel (must order max. quantity per reel; contact Samtec for quantity breaks)

LEAD STYLE	C	NO. OF POSITIONS		A		B	
		(-P & No latch)	B	(-M latch)	A	B	
-02	(4.80) .189	(11.30) .445	(9.70) .382	(13.30) .524	(11.60) .457		
-03	(5.80) .228	(13.30) .524	(11.70) .460	(15.30) .602	(13.60) .535		
-04	(9.55) .376	(15.30) .602	(13.70) .539	(17.30) .681	(15.60) .614		
-05	(10.80) .425	(17.30) .681	(15.70) .618	(19.30) .760	(17.60) .693		
-06	(15.80) .622	(19.30) .760	(17.70) .697	(21.30) .839	(19.60) .772		
-07		(21.30) .839	(19.70) .776	(23.30) .917	(21.60) .850		
-08		(23.30) .917	(21.70) .854	(25.30) .996	(23.60) .929		
-09		(25.30) .996	(23.70) .933	(27.30) 1.075	(25.60) 1.007		
-10		(27.30) 1.075	(25.70) 1.012	(29.30) 1.154	(27.60) 1.087		

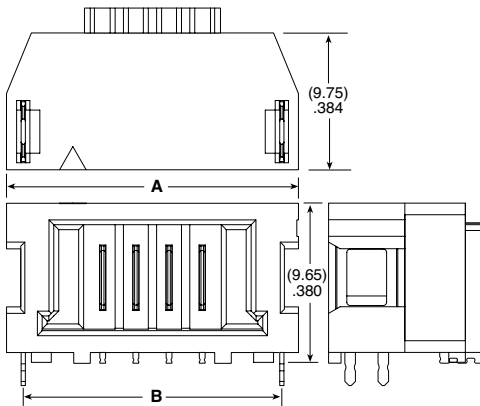
UMPT	NO. OF POSITIONS	01	PLATING OPTION	RA	WELD TAB	LATCH OPTION	"X"R
------	------------------	----	----------------	----	----------	--------------	------

UMPT-RA
Board Mates:
UMPS
Cable Mates:
UMPC*
(*UMPT requires -P or -M option for mating)



UMPT-04-01-X-RA-WT-P SHOWN

- 02, -03, -04, -05, -06, -07, -08, -09, -10
- L = 10 μ" (0.25 μm) Gold on contact, Matte Tin on tail
- S = 30 μ" (0.76 μm) Gold on contact, Matte Tin on tail
- T = Matte Tin



UMPT-04-01-X-RA-WT-M SHOWN

Note:
Some lengths, styles and options are non-standard, non-returnable.

View complete specifications at: samtec.com?UMPT-RA

- (Leave blank for no latch)
- P = Plastic top latch
- M = Metal side latches
- TR = Tape & Reel
- FR = Full Reel Tape & Reel (must order max. quantity per reel; contact Samtec for quantity breaks)

NO. OF POSITIONS	A	B	
		(-P & No latch)	(-M latch)
-02	(13.60) .535	(11.10) .437	(11.55) .455
-03	(15.60) .614	(13.10) .516	(13.55) .533
-04	(17.60) .693	(15.10) .594	(15.55) .612
-05	(19.60) .772	(17.10) .673	(17.55) .691
-06	(21.60) .850	(19.10) .752	(19.55) .770
-07	(23.60) .929	(21.10) .831	(21.55) .848
-08	(25.60) 1.008	(23.10) .909	(23.55) .927
-09	(27.60) 1.087	(25.10) .988	(25.55) 1.006
-10	(29.60) 1.165	(27.10) 1.067	(27.55) 1.085

ULTRA MICRO POWER CABLE



SERIES	NO. OF POSITIONS	PLATING OPTION	WIRE GAUGE	LATCH OPTION	LENGTH	PINOUT
UMPC = Ultra Micro PVC Cable	-02, -03, -04, -05, -06, -07, -08, -09, -10	-L = 10 μ" (0.25 μm) Gold on contact, Tin on tail	-16 = 16 AWG	(Latching required)	-"XX.X" = Assembled Length in Inches	(Leave blank for Single ended)
UMPCT = Ultra Micro Blue *Teflon™ Fluoropolymer Cable		-S = 30 μ" (0.76 μm) Gold on contact, Tin on tail	-16C = Color Coded Cable (UMPC only)	-P = Plastic top latch	PVC Cable Single ended = (76.2 mm) 03.0" min. Double ended = (101.6 mm) 04.0" min. (2-4 positions) Double ended = (127.0 mm) 05.0" min. (5-10 positions)	-1 = Pin 01 to Pin 01
UMPC(T) Board Mates: UMPT (Plastic (-P) or metal (-M) latch required)		-T = Tin	-18 = 18 AWG	-M = Metal side latches	Teflon™ Fluoropolymer Double ended = (228.6 mm) 09.0" min. (2-4 positions) Double ended = (254.0 mm) 10.0" min. (5-10 positions)	-2 = Pin 01 to Pin N
			-18C = Color Coded Cable (UMPC only)			

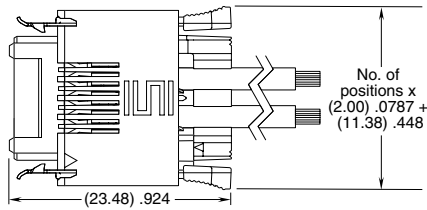
UMPCT PRELIMINARY

UMPC/UMPT (TIN PLATING)	
PINS	CURRENT RATING (PER CONTACT)
1	16.8 A
2	14.6 A
3	12.6 A
4	11.6 A
10	8.8 A

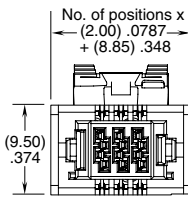
CABLE COLOR CODING	
PIN	COLOR
1	BROWN
2	RED
3	ORANGE
4	YELLOW
5	GREEN
6	BLUE
7	VIOLET
8	GRAY
9	WHITE
10	BLACK

SPECIFICATIONS

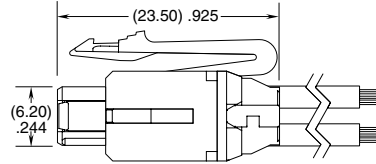
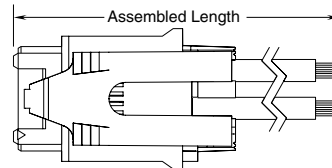
Insulator Material: Black LCP
Contact Material: Copper Alloy
Plating: Sn or Au over 50 μ" (1.27 μm) Ni
Wire: 16 or 18 AWG
Voltage Rating: 300V PVC



UMPC-04-X-XX-M-XX.X SHOWN



UMPC-03-X-XX-P-XX.X SHOWN



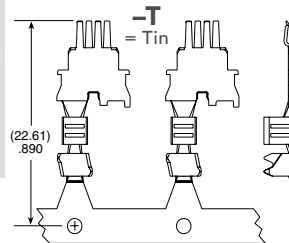
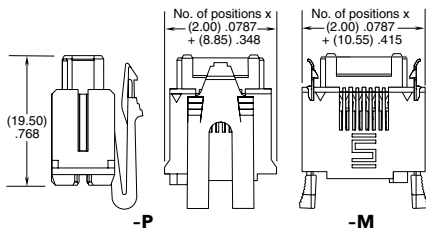
*Teflon™ is a trademark of The Chemours Company FC, LLC used under license by Samtec.

Note: For wiring option information refer to drawings on web.

View complete specifications at: samtec.com?UMPC & samtec.com?UMPCT

UMPC CABLE HOLDER (Required for use with IMPC)		
SERIES	NUMBER OF POSITIONS	LEAD STYLE
IMPC	-02, -03, -04, -05, -06, -07, -08, -09, -10	01 = 16 AWG
		02 = 18 AWG

IMPC	NO. OF POSITIONS	LATCH OPTION	CC489	01	PLATING	PACKAGING
	-02, -03, -04, -05, -06, -07, -08, -09, -10	-P = Plastic top latch			-L = 10 μ" (0.25 μm) Gold on contact, Tin on tail	-R = Full Reel (5,000 Contacts)
		-M = Metal side latches			-S = 30 μ" (0.76 μm) Gold on contact, Tin on tail	-M = Mini Reel (1,000 Contacts)
					-T = Tin	-B = Bubble Bag (35 Contacts)



TOOLING

Hand Tool: CAT-HT-489-1618-13

Mini Applicator: CAT-MC-489-1618-XX-01

Note: Some lengths, styles and options are non-standard, non-returnable.

View complete specifications at: samtec.com?IMPC & samtec.com?CC489

BOARD-TO-BOARD GUIDE POST STANDOFF

GPSO SERIES



SPECIFICATIONS	GPSO	BOARD STACK HEIGHT	LEAD STYLE	MATERIAL	KIT OPTION
----------------	------	--------------------	------------	----------	------------

Locking Compound:
Nylon

Specify BOARD STACK HEIGHT from chart

-01
= Press-In

-02
= Press-In with Nut

-01
= 303 Stainless Steel with MIL-C-13924 black oxide finish

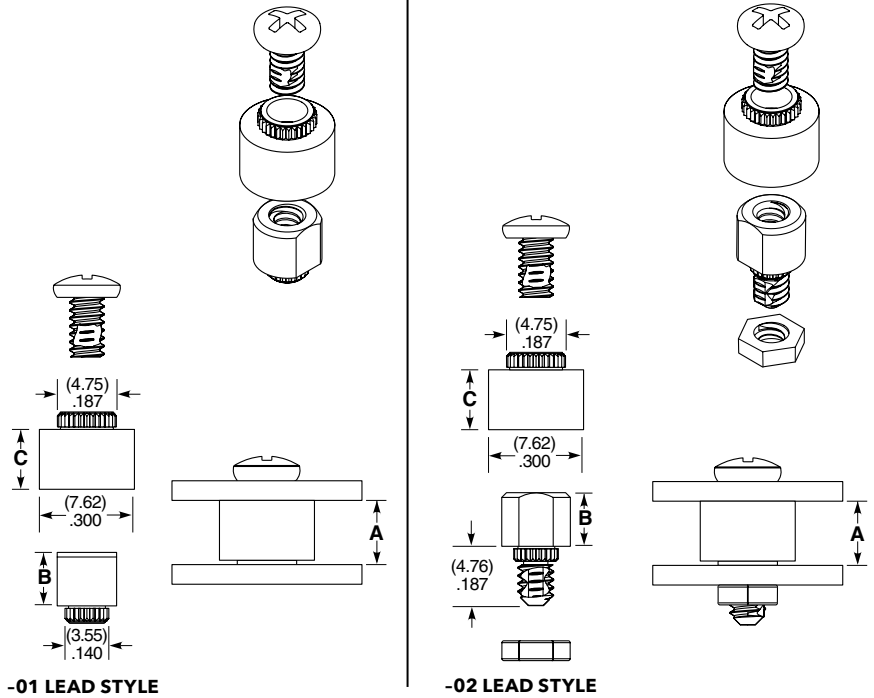
-N
= No hardware (Standoff only)
Leave blank for kit

BOARD STACK HEIGHT	A	B	C
-0500	(5.00) .197	(4.15) .163	(4.65) .183
-0515	(5.15) .203	(4.30) .169	(4.80) .189
-0700	(7.00) .276	(6.15) .242	(6.65) .262
-0715	(7.15) .281	(6.30) .248	(6.80) .268
-0865	(8.65) .341	(7.80) .307	(8.30) .327
-0900	(9.00) .354	(8.15) .321	(8.65) .341
-0915	(9.15) .360	(8.30) .327	(8.80) .346
-1000	(10.00) .394	(9.15) .360	(9.65) .380
-1015	(10.15) .400	(9.30) .366	(9.80) .386
-1115	(11.15) .439	(10.30) .406	(10.80) .425
-1200	(12.00) .472	(11.15) .439	(11.65) .459
-1215	(12.15) .478	(11.30) .445	(11.80) .465
-1315	(13.15) .518	(12.30) .484	(12.80) .504
-1415	(14.15) .557	(13.30) .524	(13.80) .543
-1515	(15.15) .596	(14.30) .563	(14.80) .583
-1524	(15.24) .600	(14.39) .567	(14.89) .586
-1615	(16.15) .636	(15.30) .602	(15.80) .622

Notes:
Standoffs to be used with (1.57 mm) .062" min thick boards.
Threaded options PCB max thickness of (3.16 mm) .124".

Standoffs are designed, 0.15 mm longer than fully mated connector stack height to allow for processing variables.

Some sizes, styles and options are non-standard, non-returnable.



Components are to be packaged in separate bags unassembled.

APPLICATIONS



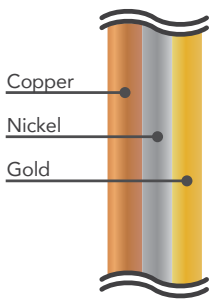
ULTRA RUGGED COATINGS

HIGH-TEMP • HIGH CYCLE LIFE • COST-OPTIMIZED

SURECOAT™

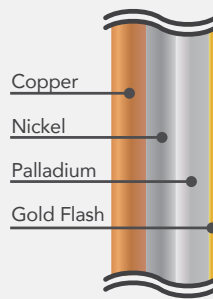
HIGH-RELIABILITY PLATING

- New Samtec palladium plating with flash gold for high-temp applications
- Qualified up to 150 °C ambient; 200 °C on roadmap
- Increased mating cycles
- Ideal for ATE applications
- Available on SEARAY™ 1.27 mm pitch high-density arrays (SEAF/SEAM) - up to 3,000 mating cycles
- Product roadmap includes SEARAY™ 0.80 mm, AcceleRate® HP, LP Array™ and Generate™ 0.80 mm



STANDARD PLATING

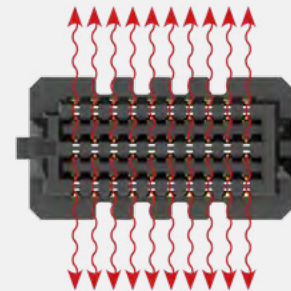
10 μ" or 30 μ" Gold on contact area, Matte Tin on solder tail



NEW PALLADIUM PLATING

40 to 50 μ" Palladium with Flash Gold on top, Matte Tin on solder tail

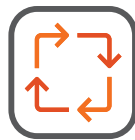
Ideal for high-temp and high cycle applications



IN DEVELOPMENT

NEXT GEN SURFACE PLATING

Cost optimized solution by decreasing gold thickness while providing increased reliability and life cycles for ultra rugged applications.



INCREASED MATING CYCLE LIFE



INCREASED MIXED FLOW GAS

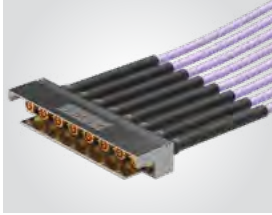


COST OPTIMIZED

SMPM TO 65 GHZ

SMPM Ganged Cable: GC47

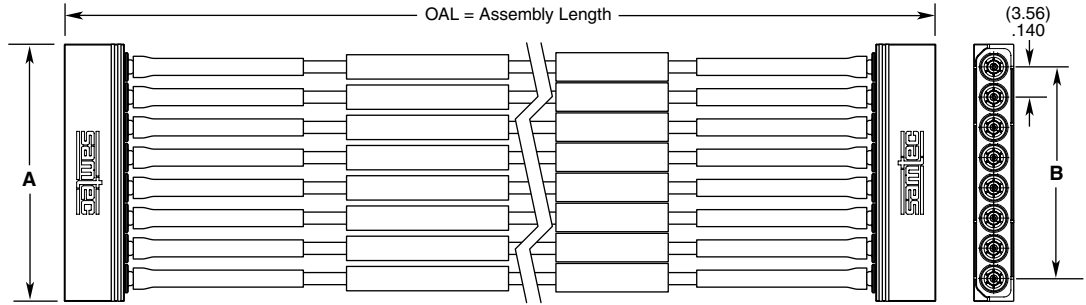
Mates With:
GPPC



-1

-02, -04,
-06, -08, -10

-"XXXX"
= Assembly Length
in millimeters
0152 mm min.



GC47-1-08-XXXX SHOWN

NO. OF POSITIONS	A	B
-02	(8.89) .350	(3.56) .140
-04	(16.00) .630	(10.67) .420
-06	(22.10) .870	(17.78) .700
-08	(30.23) 1.190	(24.89) .980
-10	(37.34) 1.470	(32.00) 1.260

Notes:
Cable lengths longer than 1000 mm (39.37") are not supported with S.I. test data.

Some sizes, styles and options are non-standard, non-returnable.

SMPM Ganged Block: GPPC

Mates With:
GC47



-PF
= Plug
Full Detent

-PS
= Plug
Smooth Bore

-PC
= Catcher Mitt
(-SL only)

-04, -06,
-08, -10
(Per Row)

-EG
= 50 μm (1.27 μm)
heavy Gold
center contact,
10 μm (0.25 μm)
extra Gold
outer body
(-EM only)

-HG
= 30 μm (0.76 μm)
Gold center
contact,
10 μm (0.25 μm)
Gold outer body
(-SL only)

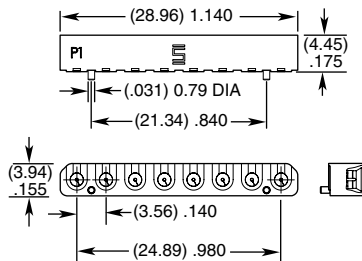
-EM
= Edge Mount

-SL
= Stub Latch
(8 positions only)

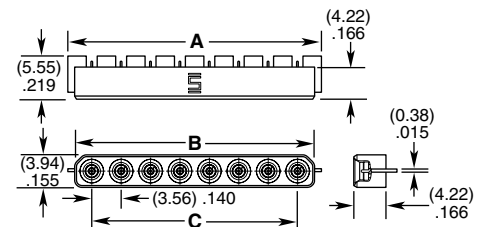
Leave blank
for -SL

-PC & -SL
PRELIMINARY

NO. OF POSITIONS	A	B	C
-04	(16.46) .648	(14.81) .583	(10.67) .420
-06	(23.57) .928	(21.92) .863	(17.78) .700
-08	(30.68) 1.208	(29.03) 1.143	(24.89) .980
-10	(37.80) 1.488	(36.14) 1.423	(32.00) 1.260



GPPC-PS-1-08-HG-ST-SL SHOWN



GPPC-PS-1-08-EG-ST-EM-1N SHOWN

IN DEVELOPMENT

2 Positions (GPPC)
Compression Mount
Contact RFGroup@samtec.com

Notes:
Some sizes, styles and options are non-standard, non-returnable.

SMPM TO 65 GHz

SMPM Ganged Block:
GPPB

Mates With:
PRFIA



GPPB	GENDER	NO. OF ROWS	NO. OF POSITIONS	PLATING	ST	SM	CHANNEL PITCH
------	--------	-------------	------------------	---------	----	----	---------------

-PF
= Plug
Full Detent

-PS
= Plug
Smooth Bore

-PC
= Catcher's
Mitt

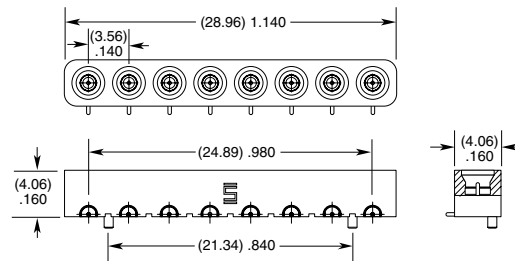
-1

-08

-EG
= 50 μ" (1.27 μm)
heavy Gold
center contact,
10 μ" (0.25 μm)
Gold outer body

-1N
= 3.56 mm
(.140") Pitch

-PC
PRELIMINARY



-PF-1-08-EG-ST-SM-1N SHOWN

ALSO AVAILABLE

2, 4, 6, 10 Positions Counts
(8.33 mm) .328" Pitch
(5.08 mm) .200" Pitch
Edge Mount termination
Contact RFGroup@samtec.com

SMPM In-Series Adaptor:
PRFIA

Mates With:
SMPM, GPPB, GPPC



PRFIA	SMPM	GENDER	GENDER	ORIENTATION	OPTION
-------	------	--------	--------	-------------	--------

-J
= Jack

-J
= Jack

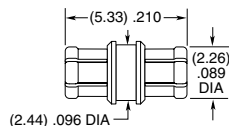
-S
= Straight

-1
= (5.33) .210

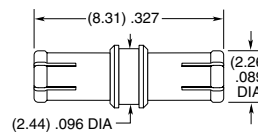
-2
= (8.31) .327

-3
= (12.70) .500

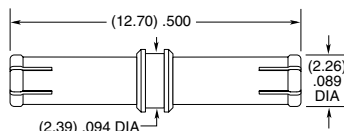
-4
= (4.22) .166



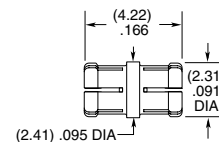
OPTION 1



OPTION 2



OPTION 3



OPTION 4

VSWR

1.50 max.

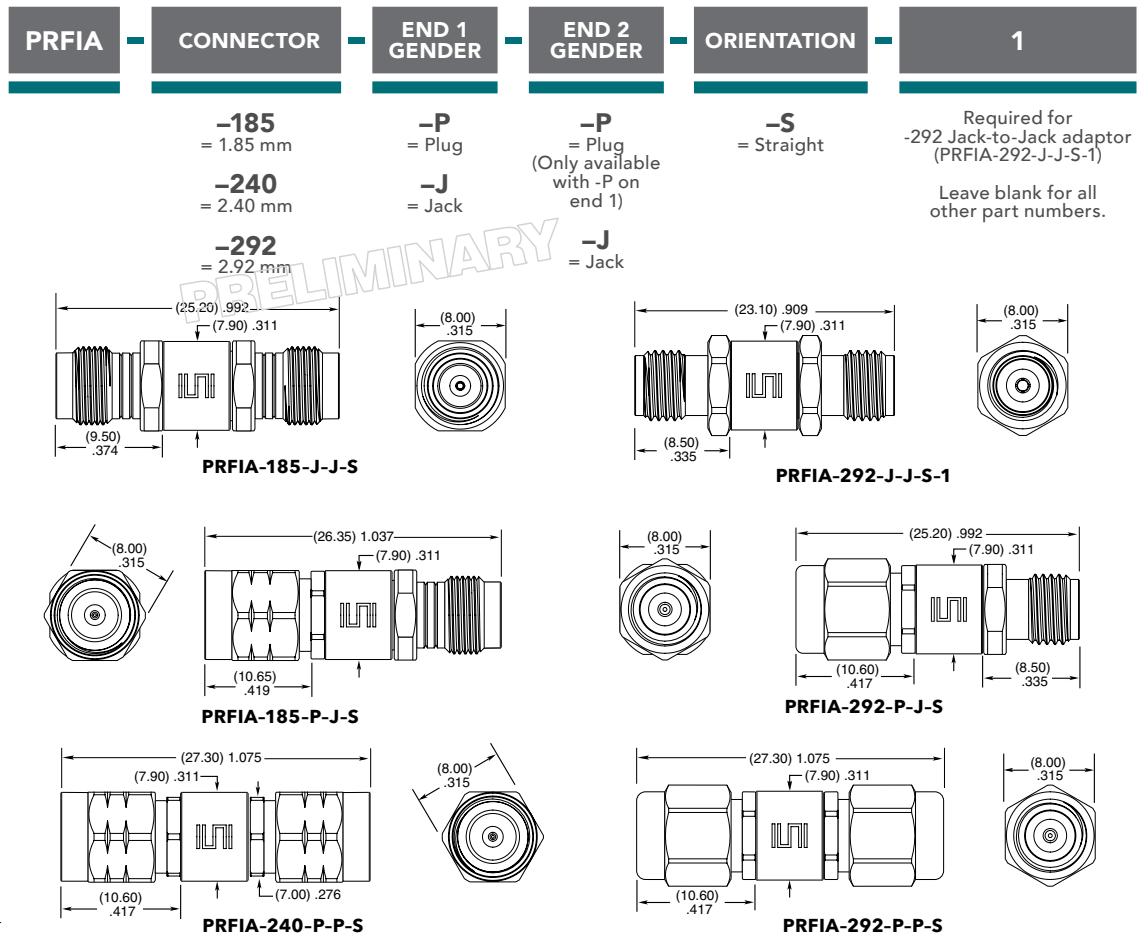
PRECISION RF ADAPTORS

In-Series Adaptors PRFIA



VSWR

-185: 1.25 max.
-240: 1.15 max.
-292: 1.15 max.



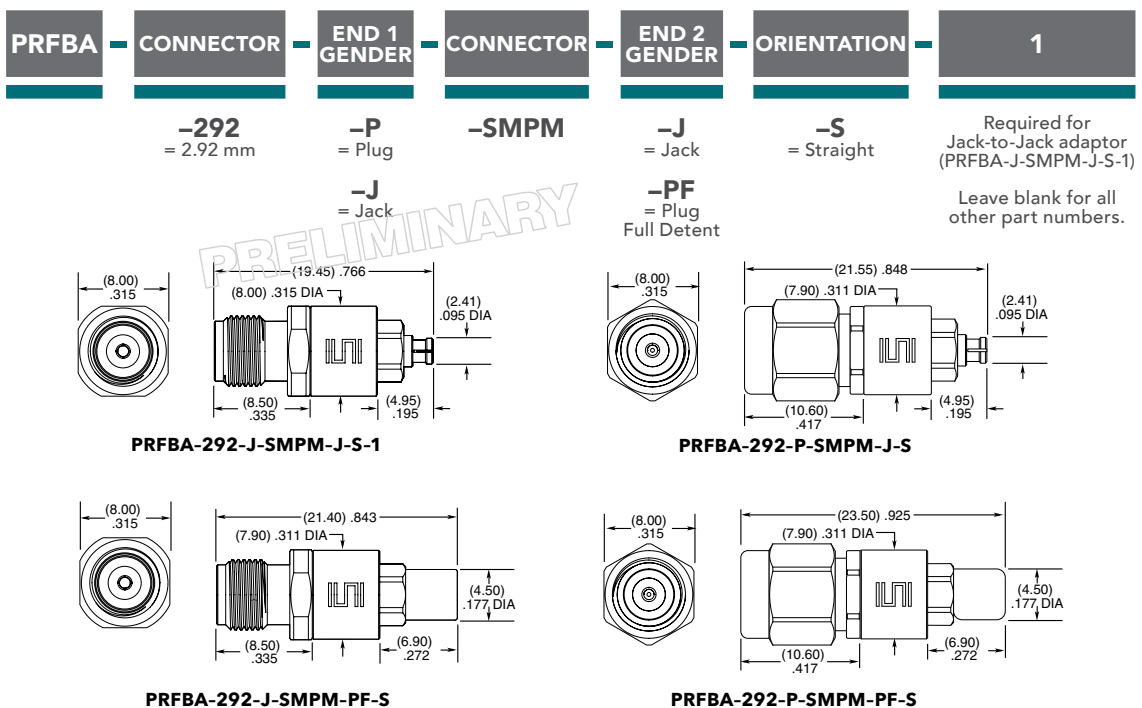
* SMPM in-series PRFIA adaptors available. See SMPM section, or visit samtec.com/SMPM

Between-Series Adaptors PRFBA



VSWR

1.30 max.



INDEX

SERIES	DESCRIPTION	PAGE	SERIES	DESCRIPTION	PAGE
APF6-L	0.635 mm AcceleRate® HP Latching Socket for ARP6.....	15	NVACE	NovaRay® I/O Extreme Performance Cable Assembly.....	18
ARP6	0.635 mm AcceleRate® HP High-Density/Performance Cable.....	15	NVACP	NovaRay® I/O Panel Mount Cable Assembly.....	17
B1SD(T)	URSA™ I/O Ultra Rugged Socket Cable Assembly.....	23	NVC	NovaRay® I/O Die Cast Panel Cage.....	17
B1SDS	URSA™ I/O Metal Shell for IBT1.....	23	P1M	URSA™ I/O Ultra Rugged Board Mount Connector.....	25
CC489	mPOWER® Contact for IMPC.....	29	P1PD(T)	URSA™ I/O Ultra Rugged Terminal Cable Assembly.....	24
CC508	URSA™ I/O Contact for IBT1.....	23	P1PDS	URSA™ I/O Metal Shell for IPP1.....	24
FQSF-D8	800 Gbps Flyover® QSFP Double Density Cable System.....	13	PCIEC-G4	1.00 mm PCI Express® 4.0 Cable Assembly.....	19
GC47	50 Ω Magnum RF™ Ganged SMPM Cable Assembly.....	32	PCIEC-G5	1.00 mm PCI Express® 5.0 Cable Assembly.....	19
GC6	0.60 mm Generate™ High-Speed Edge Card Cable Assembly.....	20	PRFBA	50 Ω Precision Between-Series Adaptors.....	34
GPPB	50 Ω Magnum RF™ Ganged SMPM Block, Board-to-Board.....	33	PRFIA	50 Ω Precision In-Series Adaptors.....	33, 34
GPPC	50 Ω Magnum RF™ Ganged SMPM Block, Cable-to-Board.....	32	QSFPC-D8	Cage for FQSF-D8.....	13
GPSO	SureWare™ Ultra Rugged Guide Post Standoff.....	30	SEAFC	.050" SEARAY™ Open-Pin-Field Board Mate for SEAC.....	21
HS-QSFP-D8	Heat Sink for FQSF-D8.....	13	TC145	URSA™ I/O Terminal for IPP1.....	24
IBT1	URSA™ I/O Ultra Rugged Cable Socket Housing.....	23	UMPC(T)	2.00 mm mPOWER® Ultra Micro Power Cable Assembly.....	29
IMPC	2.00 mm mPOWER® Discrete Wire Socket Housing.....	29	UMPS	2.00 mm mPOWER® Ultra Micro Power Socket.....	27
IPP1	URSA™ I/O Ultra Rugged Cable Terminal Housing.....	24	UMPT	2.00 mm mPOWER® Ultra Micro Power Terminal.....	28

GENERAL POLICY INFORMATION

Unless otherwise agreed by Samtec in writing, all sales of Samtec products are subject to Samtec's Terms and Conditions of Sale located at <https://www.samtec.com/about/legal#samtecterms>.

Federal Supply Code: 55322

Additional Resources

Samtec offers a vast library of resources and engineering support to help optimize your high-performance system. These include Design Guides, Catalogs, Application Notes, White Papers, Prints, Search & Design Tools and more. Scan the Codes to start exploring.



Downloadable Literature & Catalogs



Online Technical Library



Picture Search
"You'll know it when you see it."



Full System Signal Integrity Support



Silicon-to-Silicon™ Solutions



Scan the Code to Find Your
Samtec Location or Visit:
[samtec.com/locations](https://www.samtec.com/locations)

samtec
SUDDEN SERVICE®

www.samtec.com

ISO-9001 and/or IATF 16949 Certified

© NOVEMBER 2022, SAMTEC INC.