



# PRODUCT OVERVIEW



# A DIFFERENT BREED OF CAT

INNOVATIVE TECHNOLOGIES • SUDDEN SERVICE®

Founded in 1976, 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.

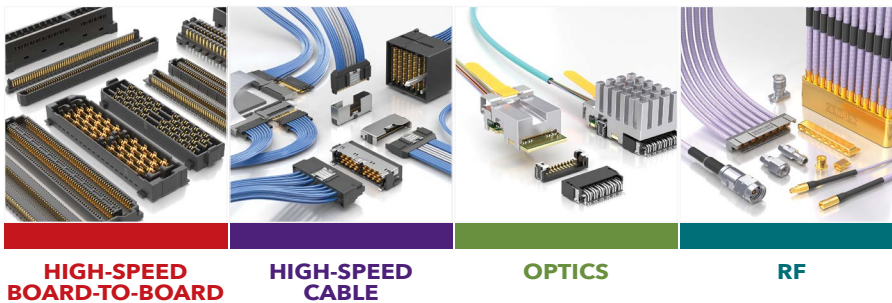
We believe that taking care of our customers and our employees is paramount in how we approach our business, and this belief is deeply ingrained throughout Samtec worldwide.

## INNOVATIVE TECHNOLOGIES

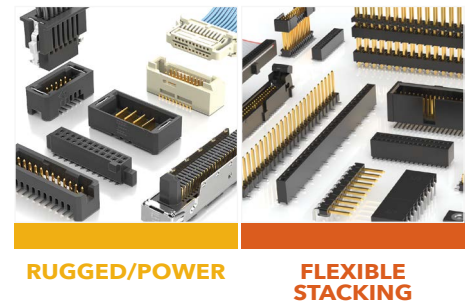
At Samtec, integration leads to innovation. We are leading the way in high-performance system design and support for complete system optimization from **SILICON-TO-SILICON™**. Samtec is positioned to produce solutions quickly, with higher densities, faster speeds and smaller footprints to meet the demands of next generation systems.

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



### Core Board-to-Board



## 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.



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

## HIGH-SPEED BOARD-TO-BOARD

10-15

High-Density Arrays • Ground Plane & Edge Rate® Strips • Ultra Micro Interconnects  
Edge Card Systems • Backplane Systems

## HIGH-SPEED CABLE

16-21

Flyover® Technology & Cable Systems • Micro Coax & Twinax Assemblies

## OPTICS

22-23

FireFly™ Micro Flyover System™ • Passive Optical System • Test & Development Kits

## RF SOLUTIONS

24-27

Precision RF Cable Assemblies & Connectors • Bulls Eye® High-Performance Test Systems  
Standard 50  $\Omega$  & 75  $\Omega$  Systems • Original Solutions

## RUGGED/POWER

28-31

Rugged Board-to-Board Systems • Rugged High-Speed Systems • Power Systems  
Discrete Wire Assemblies • Rugged I/O Systems • Ultra Rugged Solutions

## FLEXIBLE STACKING

32-35

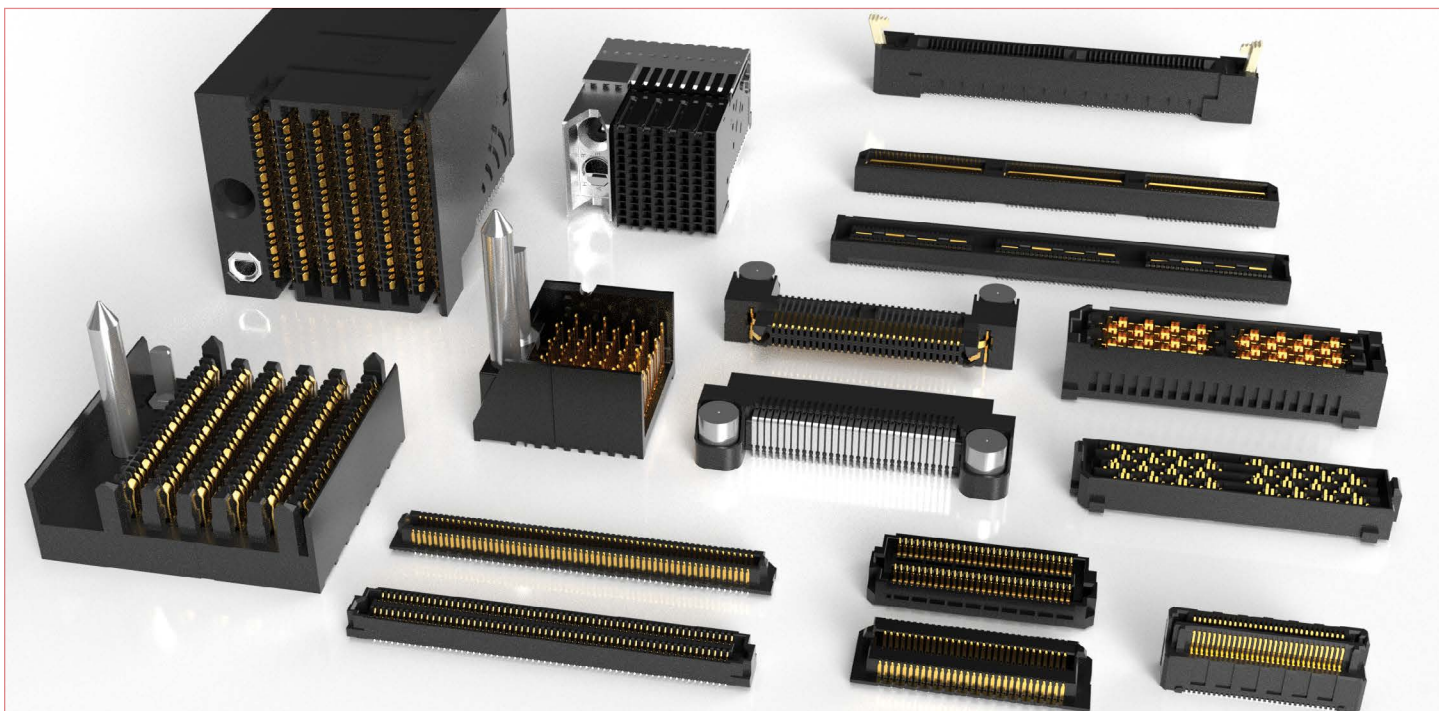
Flexible Board Stackers • Contact Flexibility • IDC Cable Systems • Modified & Custom Solutions

## GLOBAL SUPPORT NETWORK





# SOLUTION BLOCKS



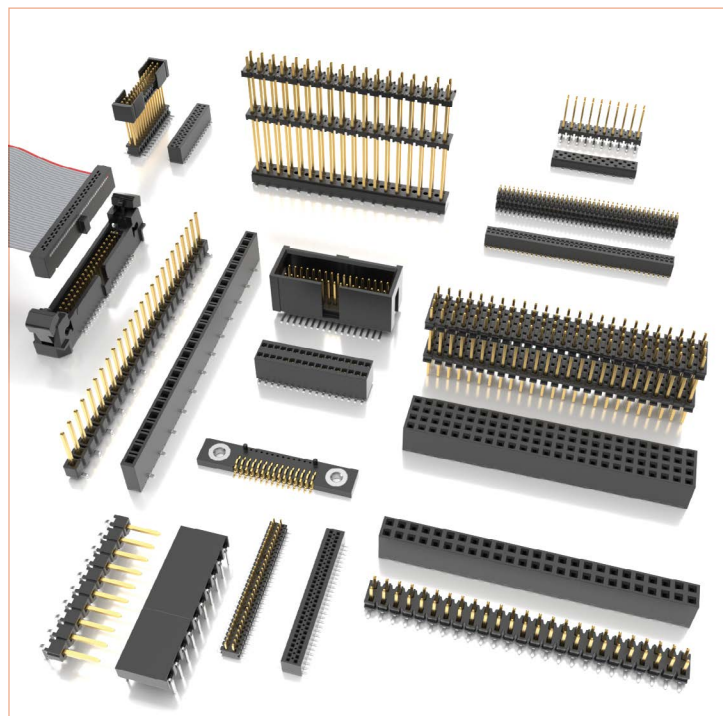
## HIGH-SPEED BOARD-TO-BOARD

OPEN-PIN-FIELD ARRAYS | GROUND PLANE STRIPS | EDGE CARDS | ULTRA-MICRO | BACKPLANE



## RUGGED/POWER

RUGGED BOARD-TO-BOARD | BLADE POWER  
MICRO DISCRETE WIRE | RUGGED I/O | ULTRA RUGGED



## FLEXIBLE STACKING

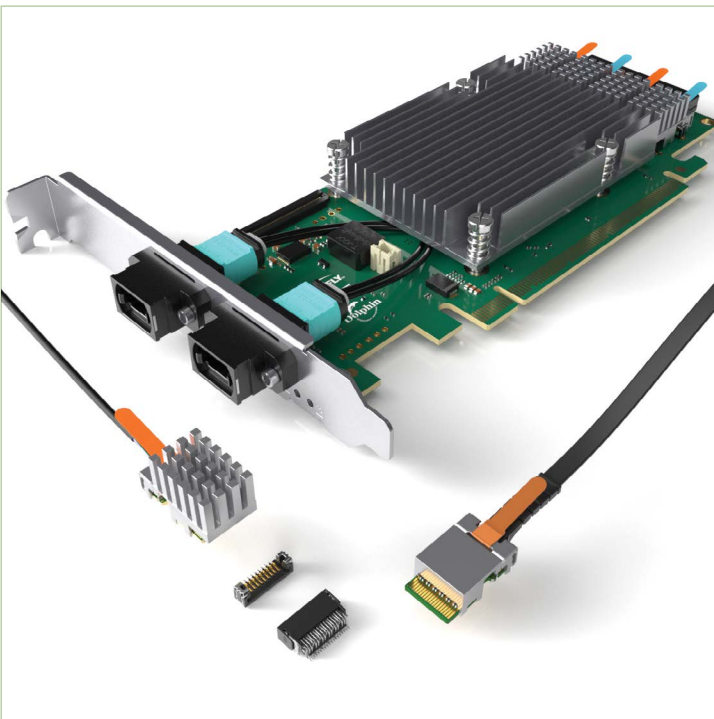
LOW PROFILE | PASS-THROUGH | ONE-PIECE  
SKYSCRAPERS | SHROUDED HEADERS | IDC SYSTEMS





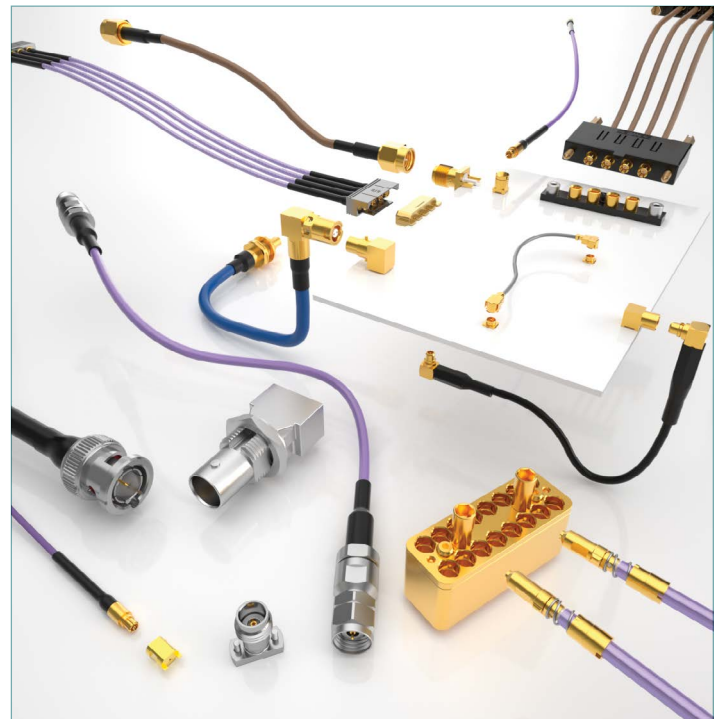
## HIGH-SPEED CABLES

FLYOVER® | MID-BOARD & PANEL | BACKPLANE | MICRO COAX & TWINAX



## OPTICS

MICRO FLYOVER SYSTEM™ | EXTENDED TEMP  
PCI EXPRESS®-OVER-FIBER



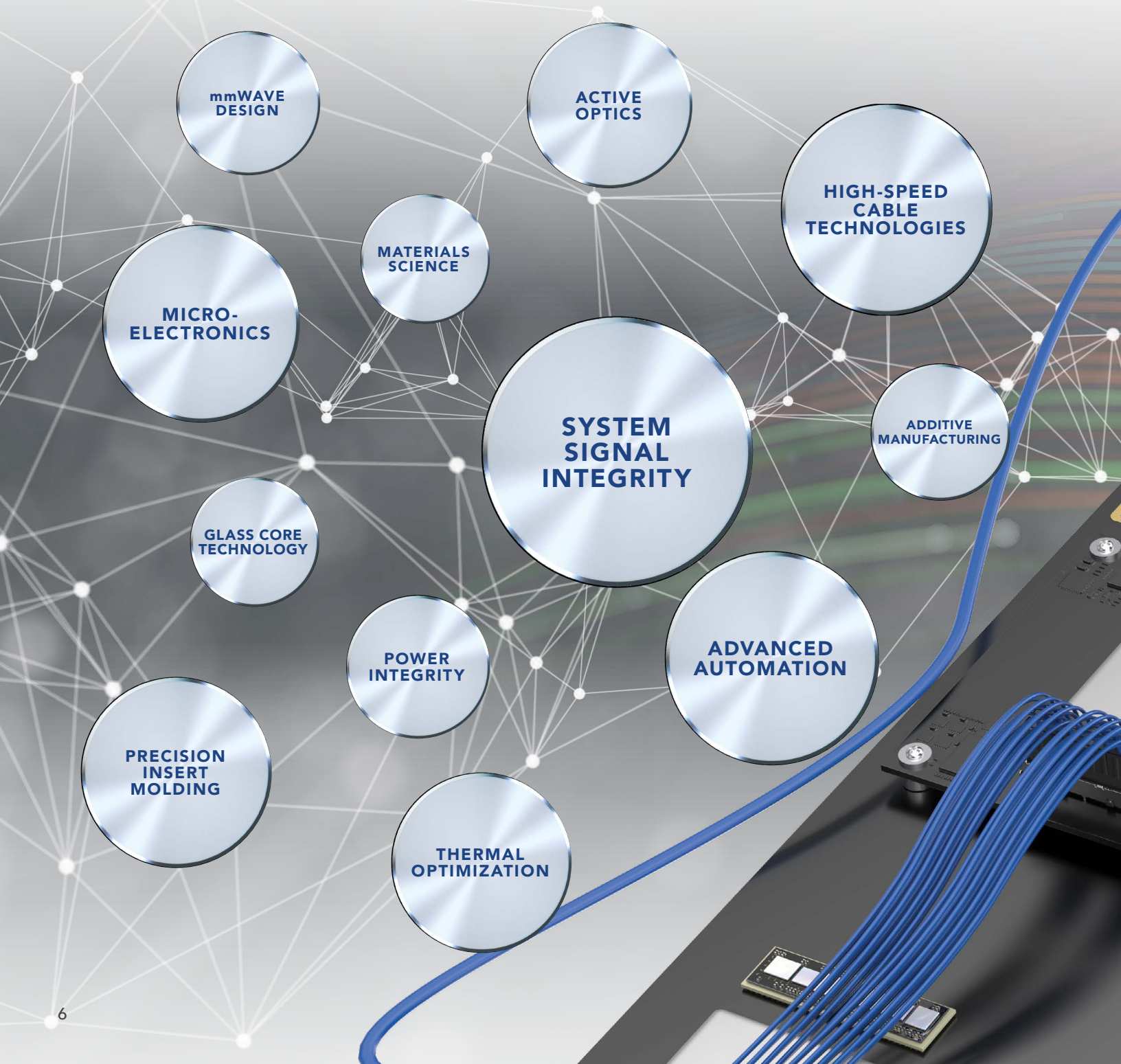
## RF

PRECISION RF | 50  $\Omega$  SOLUTIONS  
75  $\Omega$  SOLUTIONS | ORIGINAL SOLUTIONS

# 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.**

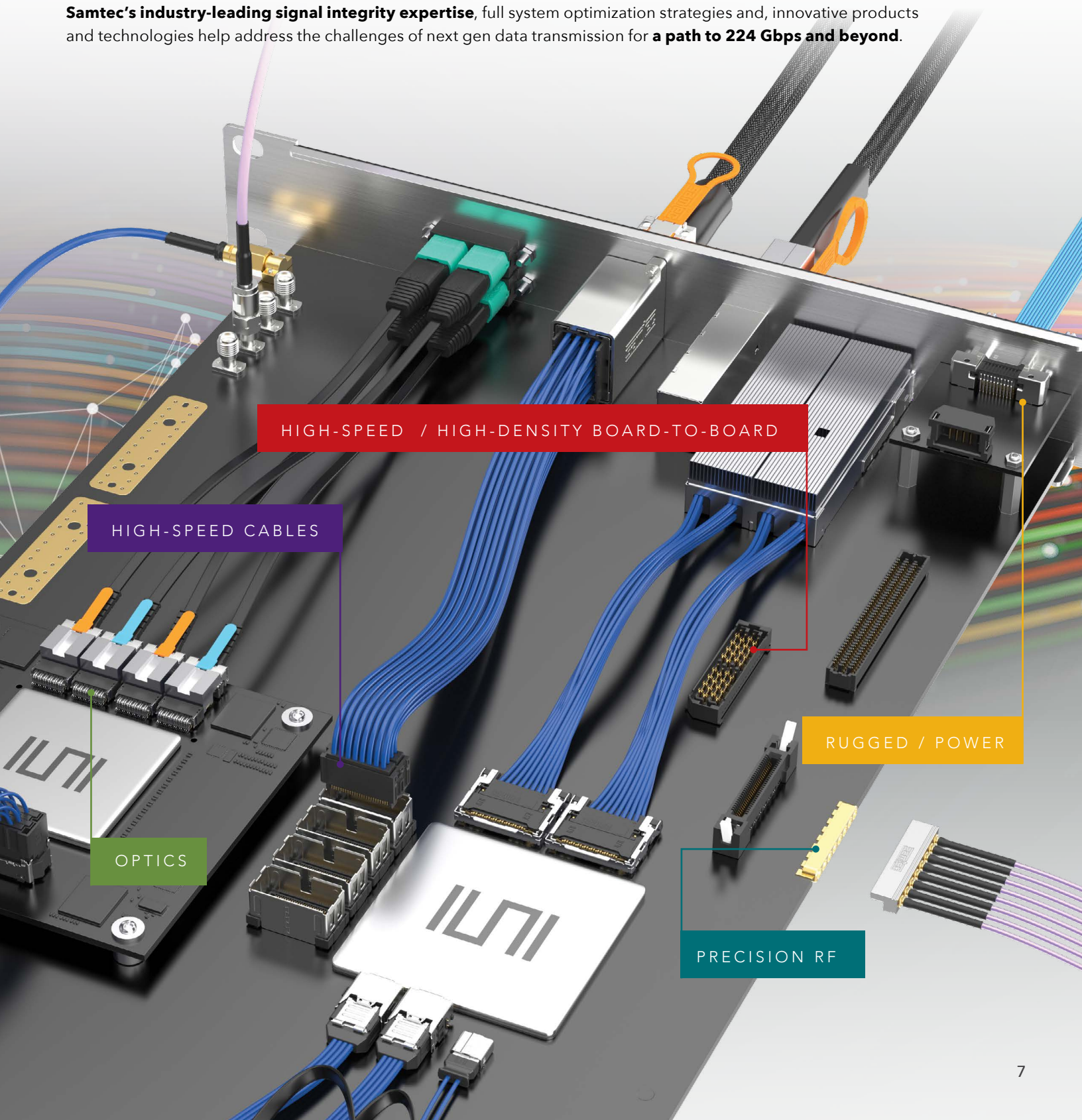




# SILICON-TO-SILICON™ SOLUTIONS

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.**



HIGH-SPEED / HIGH-DENSITY BOARD-TO-BOARD

HIGH-SPEED CABLES

OPTICS

RUGGED / POWER

PRECISION RF



# SUDDEN SERVICE®

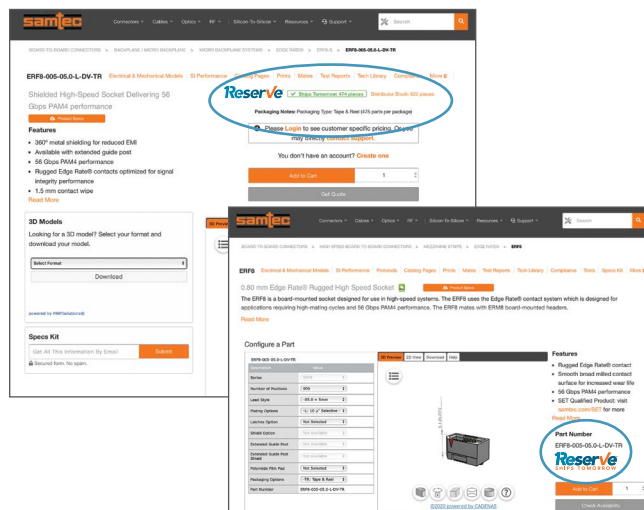
UNMATCHED LEAD-TIMES

Innovative Programs & Systems Enable Deliveries in Days, Not Weeks.

**Reserve**  
SHIPS TOMORROW

This designation allows customers to **quickly and easily identify availability of over 200,000 of Samtec's most popular connectors and cables** - guaranteed to ship in 1-day.

Look for the **Reserve** badge throughout **samtec.com** to quickly determine if your part number is eligible, along with current availability, quantity breaks and pricing. Hundreds of part numbers are being added daily!



**24HOUR**  
SUDDEN SAMPLE™

Free product samples, shipped in **24-hours** or less have been a cornerstone of Samtec Sudden Service® since the company was founded. Visit **samtec.com** to quickly request your sample.

**2DAYS**  
WORLD DIRECT™

An innovative shipping program that **bridges the gap between manufacturing facilities and customers**, allowing for manufacturing flexibility without increased costs, and with even faster lead-times. Contact **ecustomerservice@samtec.com** to learn more.

24/7 WORLDWIDE ACCESS

Samtec is the Electronics Industry's Service & Technology Leader.

## Technical Support

Signal Integrity Group: **sig@samtec.com**

Application Support Group: **asg@samtec.com**

Interconnect Processing Group: **ipg@samtec.com**

## Supply Chain Support

MySamtec™ Real-Time Account Access: **account.samtec.com**

Personal Account Managers & CSRs: **ecustomerservice@samtec.com**

Upfront, Aggressive 24-Hour Quotes: **pricing@samtec.com**

**MYSAMTEC™**

A Personalized Web Experience for Easy Ordering.

**mySamtec**  
account.samtec.com

Samtec's user-friendly eCommerce platform allows you to quickly and easily check product availability and pricing, as well as place and manage your orders online.

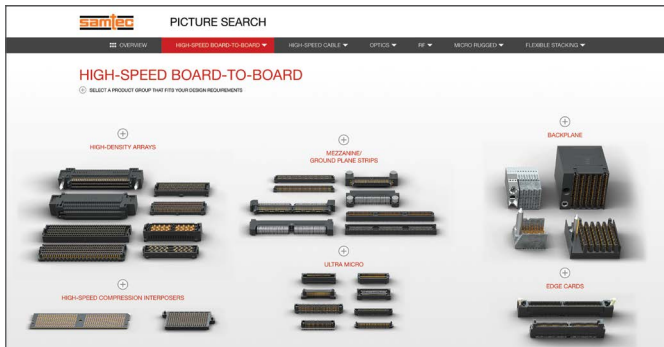
# ONLINE TOOLS



FIND, DESIGN & VALIDATE YOUR SOLUTION

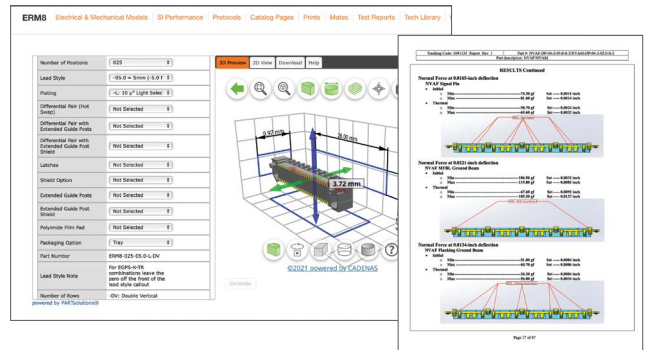
## PICTURE SEARCH

Browse through a highlight reel of Samtec's most popular products to find the ideal solution for your application, view specifications, check availability, order samples and more. To find your solution, visit [samtec.com/picturesearch](http://samtec.com/picturesearch).



## DOWNLOADS

Samtec offers immediate and unlimited access to all the documentation you need to select the right solution for your application from 3D models, prints and footprints to test reports, white papers and so much more. Visit [samtec.com](http://samtec.com) to start exploring.



## SOLUTIONATOR®

Quickly build mated connector sets or design full cable assemblies using a wide variety of user-defined search parameters and filters, view specs and order samples in Samtec's online design tools.



# HIGH-SPEED BOARD-TO-BOARD & BACKPLANE

Samtec offers the largest variety of high-speed board-to-board and backplane interconnects in the industry with full engineering support, online tools and an unmatched service attitude.

## HIGH-DENSITY ARRAYS

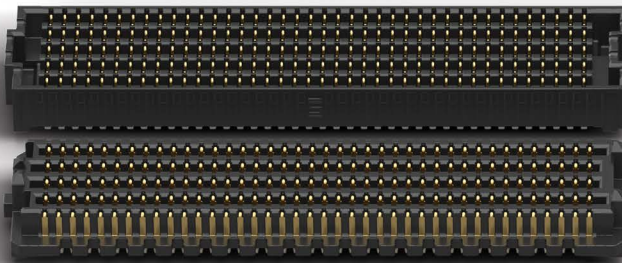
- Up to 560 pins; roadmap to 1,000+
- Open-pin-field arrays for maximum grounding and routing flexibility
- 0.635 mm, 0.80 mm and 1.27 mm pitch; stack heights from 4 to 40 mm
- Supports high-speed protocols such as Ethernet, PCI Express®, Fibre Channel and InfiniBand™
- Vertical and right-angle, press-fit tails, standoffs and mating cable assemblies available for increased design flexibility

NRZ	PAM4
56 Gbps	112 Gbps

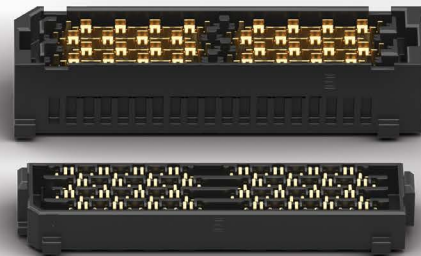


[samtec.com/arrays](https://www.samtec.com/arrays)

### SEARRAY™



### NOVARRAY®



### ACCELERATE®HD

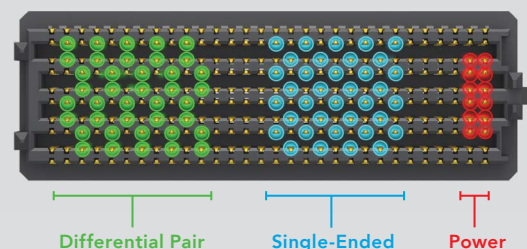


### ACCELERATE®HP



### LPARRAY™

#### OPEN-PIN-FIELD FLEXIBILITY



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



## BUILD IT YOURSELF

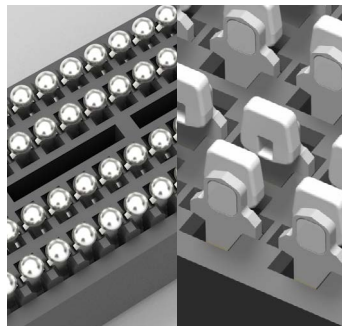
Check out the High-Speed Board-to-Board Solutionator® to quickly build a mated set for your specific application. Visit [samtec.com/hsb2b-solutionator](http://samtec.com/hsb2b-solutionator)

## VARIETY OF OPTIONS

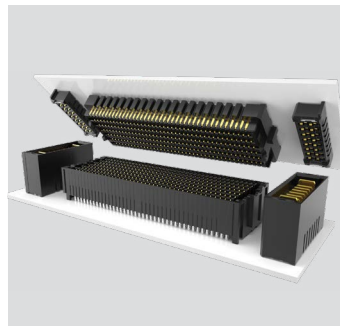
Brand/Series	Pitch	Stack Height	Pin Count
<b>NovaRay®</b> (NVAM/NVAF)	0.80 mm x 1.80 mm	7, 9, 10 & 12 mm	8, 12, 16, 24, 32 pairs
<b>AcceleRate® HP</b> (APM6/APF6)	0.635 mm	5 & 10 mm	80, 160, 240, 400, 800
<b>AcceleRate® HD</b> (ADM6/ADF6)	0.635 mm	7, 9, 10, 11, 12, 14 & 16 mm	40-400
<b>SEARAY™</b> (SEAM/SEAF)	1.27 mm x 1.27 mm	7-18.5 mm	40-560
<b>SEARAY™ 0.80 mm</b> (SEAM8/SEAF8)	0.80 mm	7 & 10 mm	40-500
<b>LP Array™</b> (LPAM/LPAF)	1.27 mm x 1.27 mm	4, 4.5 & 5 mm	40-400



NovaRay® offers two points of contact for a reliable connection



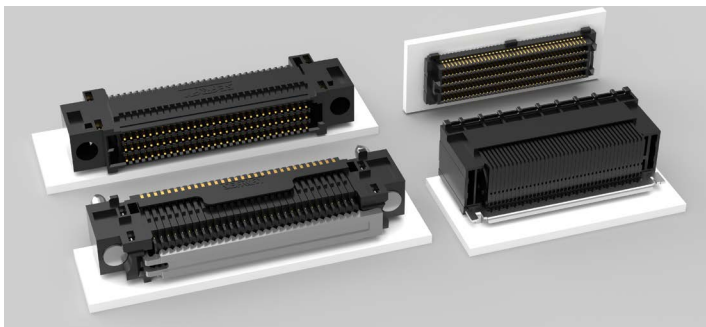
Solder ball/charge/crimp technology for simplified processing



Compatible with mPOWER® for power/signal flexibility



Guide post (GPSO) & jack screw (JSO) standoffs for mating/unmating assistance



Right-angle for coplanar and perpendicular applications

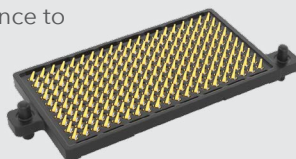


Mating high-speed cable assemblies with micro coax and ultra low skew twinax

## ALSO AVAILABLE

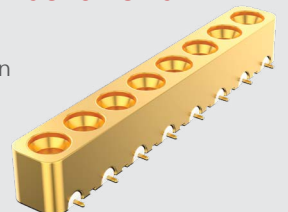
### COMPRESSION INTERPOSERS

Dual compression with performance to 56 Gbps PAM4 in a low 1.27 mm body height (GMI)



### PRECISION RF BOARD-TO-BOARD SOLUTIONS

SMP, SMPM and Ganged SMPM with a push-on design for quick installation and frequency to 65 GHz (GPPC, GPPB, SMPM, PRFIA, SMP).



# HIGH-SPEED BOARD-TO-BOARD & BACKPLANE

## HIGH-SPEED BOARD-TO-BOARD

- Edge Rate® contacts optimized for speed and high cycles; designed at 85  $\Omega$  for PCIe® data rates
- Integral ground plane for power to 25 Amps
- 0.50 mm, 0.635 mm and 0.80 mm pitch; 5 to 25 mm stack heights
- Space-saving designs and ruggedizing features
- Vertical, right-angle and edge mount

**Q**SERIES®

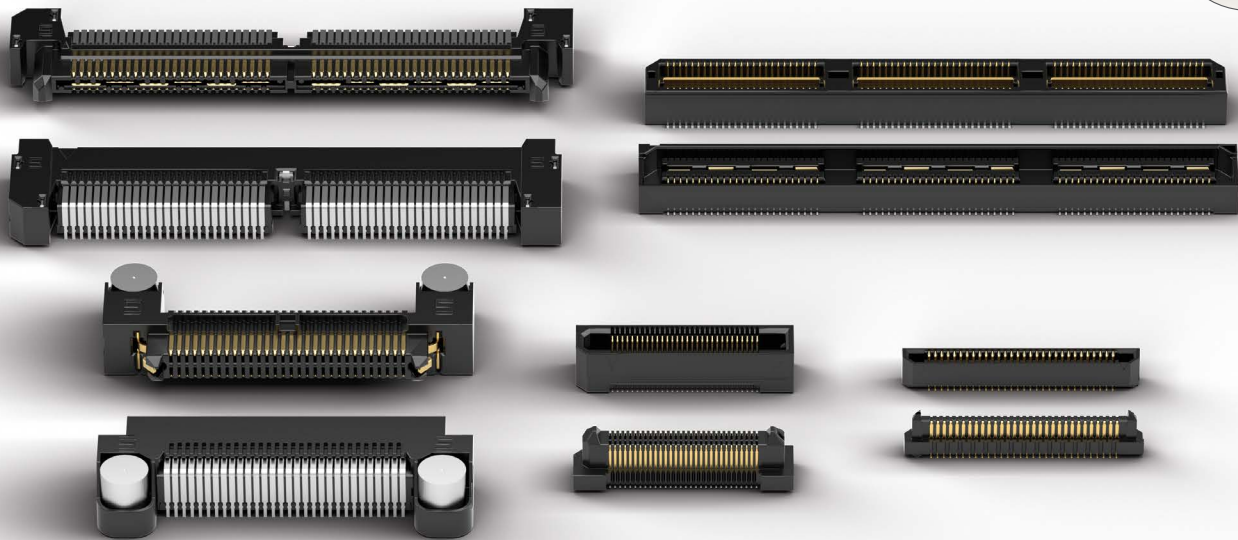
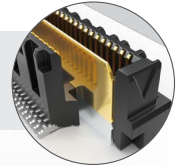
PAM4  
**56**  
G b p s

MAX  
**25**  
A m p s



[samtec.com/mezzanine](http://samtec.com/mezzanine)

Integral ground plane  
improves electrical performance  
and reduces crosstalk



**EDGE**  
**RATE**  
SYSTEM

## ULTRA MICRO INTERCONNECTS

- Slim body designs for increased PCB savings; low profile 2 to 12 mm stack heights
- Up to 160 total pins on a choice of pitch from ultra-fine 0.40 mm to 0.80 mm
- Hermaphroditic connectors reduce inventory costs
- EMI shielding with rugged latching for higher retention forces
- Right-angle and standoff options

**RAZOR**  
**BEAM**  
SYSTEM

PAM4  
**56**  
G b p s



[samtec.com/ultra-micro](http://samtec.com/ultra-micro)

Razor Beam™ contacts  
for high-speed and  
fine pitch systems



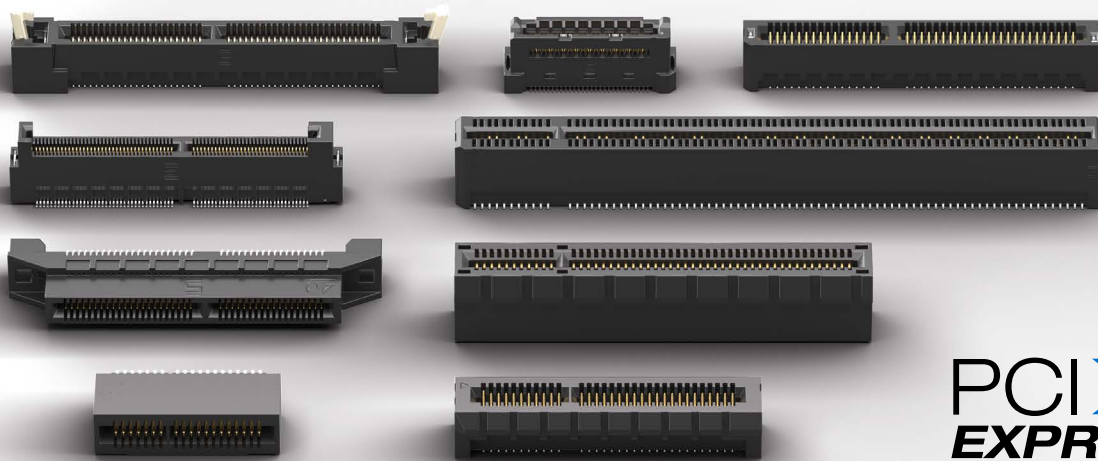
## HIGH-SPEED EDGE CARDS

- Generate™ high-speed edge card sockets with Edge Rate® contacts for decreased crosstalk
- PCI Express® 3.0/4.0/5.0/6.0 solutions
- Choice of pitch with up to 300 total positions
- Vertical, right-angle, edge mount and pass-through
- Power/signal combo, press-fit tails, rugged tucked beam technology, weld tabs, locks, latches and mating cable assemblies
- Designs for misalignment mitigation

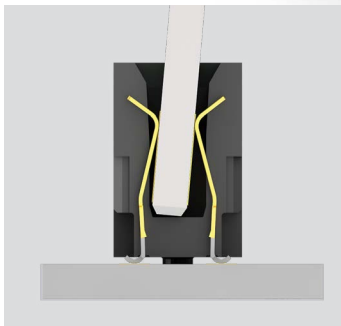


[samtec.com/edgecard](https://samtec.com/edgecard)

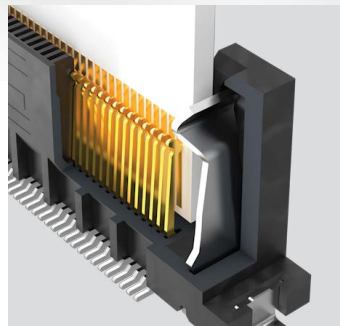
# GENERATE™



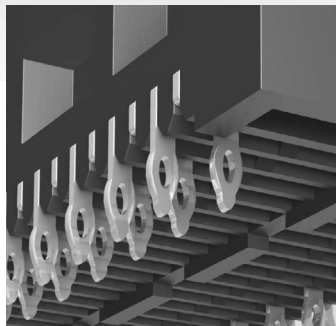
## PCI EXPRESS®



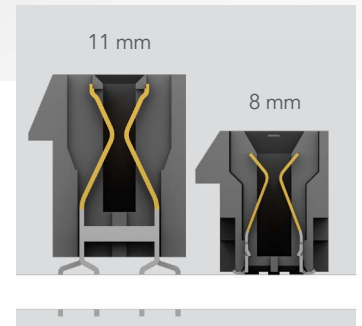
Custom designs aid with misalignment (HSEC1-DV)



Justification beam enables use of standard PCB tolerance (MEC5)



Staggered press-fit tails (MEC8-VP)



Low profile versions for space savings (PCIE-LP)

## EDGE RATE® CONTACT SYSTEM

- Smooth milled mating surface reduces wear and increases durability
- Lower insertion and withdrawal forces
- Robust when “zippered” during unmating
- Minimized parallel surface area reduces broadside coupling and crosstalk
- Designed, simulated and optimized for 50  $\Omega$  and 100  $\Omega$  systems

## EDGE RATE® CONTACT





# HIGH-SPEED BOARD-TO-BOARD & BACKPLANE

## HIGH-SPEED BACKPLANE

- Variety of configurations: traditional backplane, direct-mate orthogonal, coplanar, cable systems
- Up to 72 differential pairs total
- ExaMAX® provides two points of contact for a reliable electrical connection
- XCede® HD features a small form factor and modular design for space savings and flexibility
- Guidance, keying and power modules

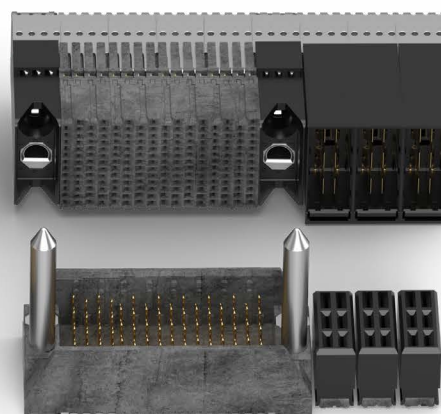


[samtec.com/backplane](http://samtec.com/backplane)

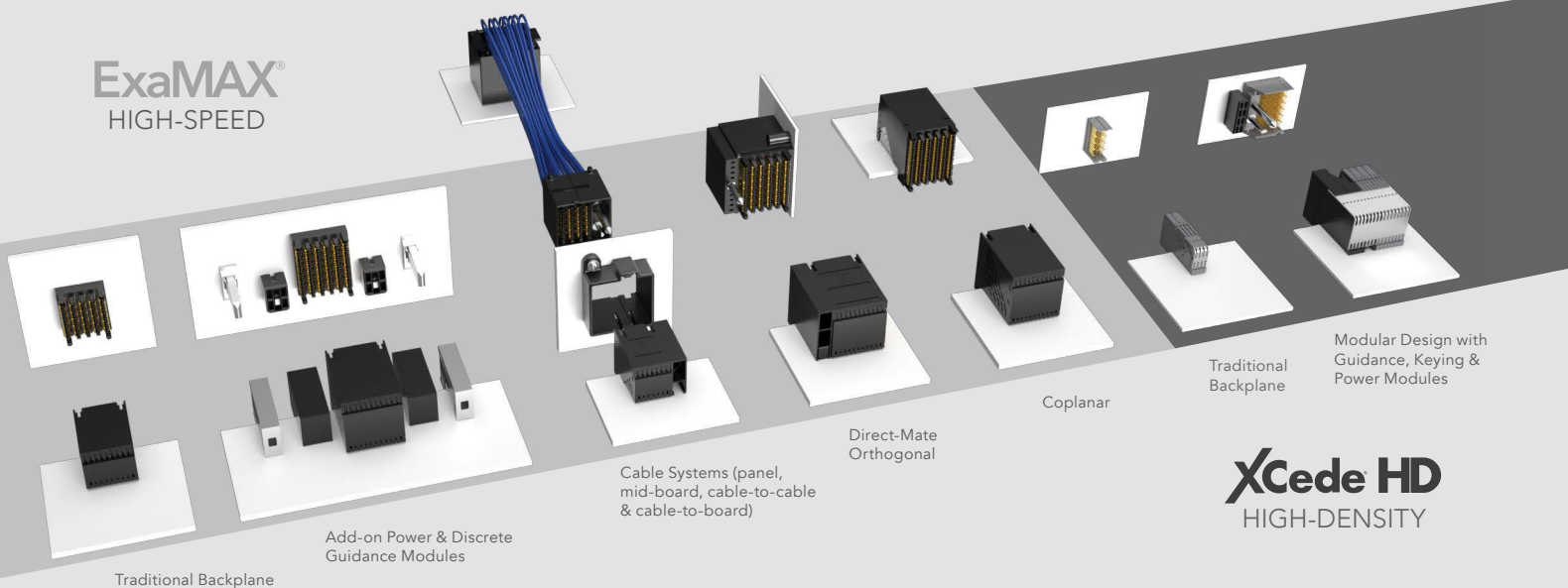
## ExaMAX®



## XCede® HD



ExaMAX®  
HIGH-SPEED



Traditional Backplane

Add-on Power & Discrete  
Guidance Modules

Cable Systems (panel,  
mid-board, cable-to-cable  
& cable-to-board)

Direct-Mate  
Orthogonal

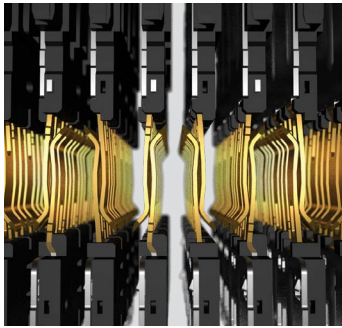
Coplanar

Traditional  
Backplane

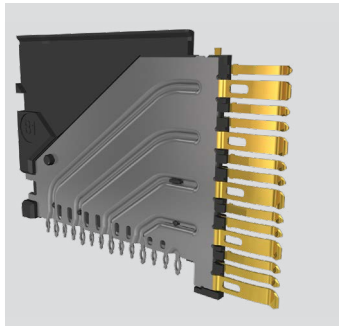
Modular Design with  
Guidance, Keying &  
Power Modules

XCede® HD  
HIGH-DENSITY

## EXAMAX®

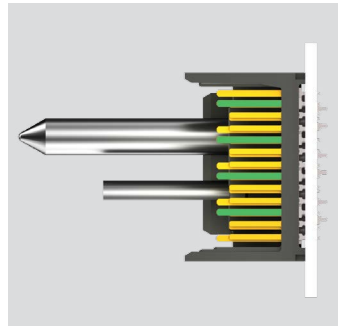


Reliable mating with guaranteed two points of contact

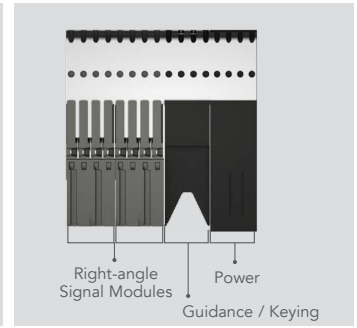


Staggered differential pair design with embossed ground structure reduces crosstalk

## XCEDE® HD



Signal/ground pin staging for hot plugging



Modular design for flexibility and customizable to meet specific requirements

## EXAMAX® BACKPLANE CABLE ASSEMBLIES

- 30 and 34 AWG Eye Speed® ultra low skew twinax cable technology for improved signal integrity
- Reduced costs due to lower layer counts
- Reliable mating with guaranteed two points of contact
- 16 - 96 differential pairs
- Multiple end 2 options available



**HIGH-DENSITY APPLICATION**  
Increases architectural flexibility by overcoming the limitations of traditional connector-to-connector backplane

# ExaMAX®

PAM 4

**112**  
G b p s



## ROADMAP: HIGH-SPEED BOARD-TO-BOARD & BACKPLANE



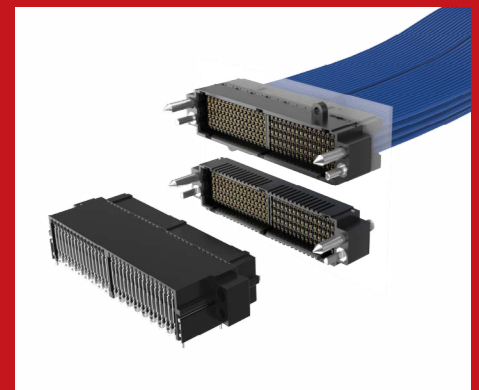
### AcceleRate® HP Right-Angle

High-performance 0.635 mm pitch arrays with a right-angle option for design flexibility



### AcceleRate® mP Signal and Power

Power and signal solution with up to 10 power and 240 signal positions for 56 Gbps PAM4 performance in an open-pin-field design



### NovaRay® Backplane

High-speed backplane system featuring NovaRay® contacts with extremely low crosstalk (beyond 40 GHz) and tight impedance control to support 224 Gbps PAM4 data rates

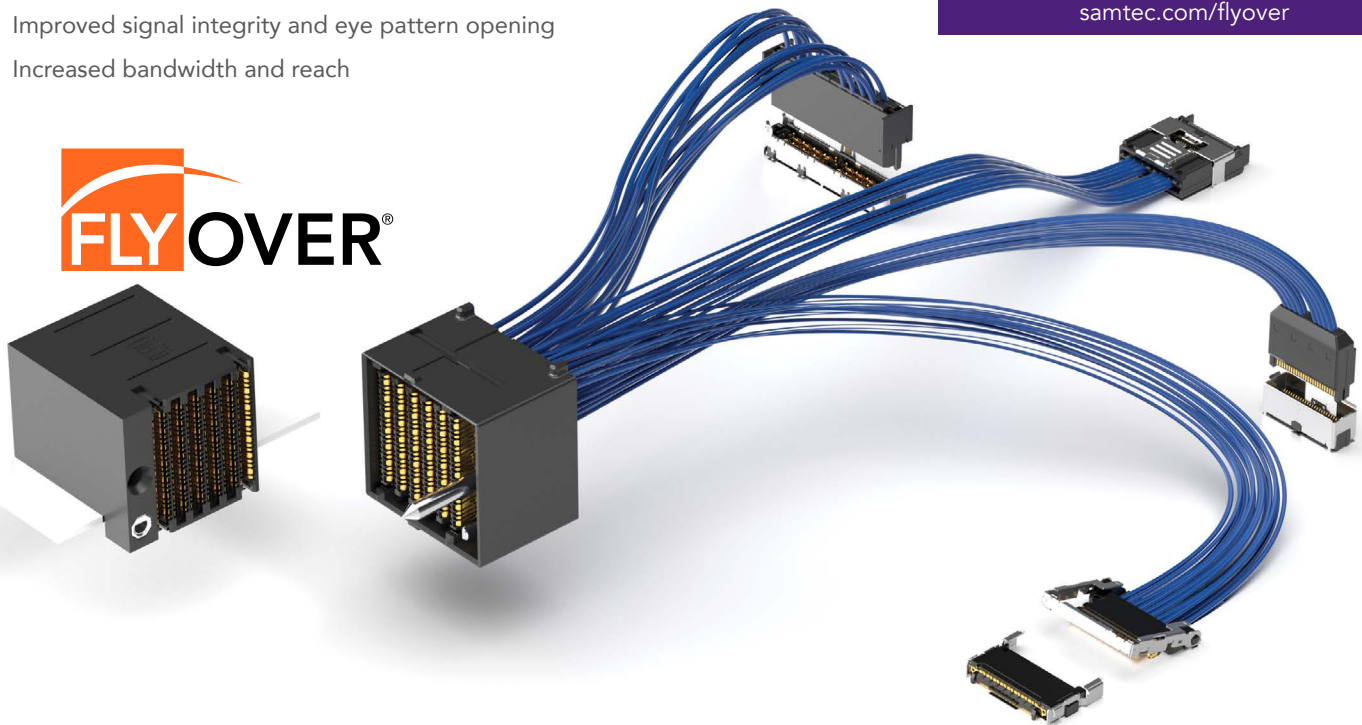
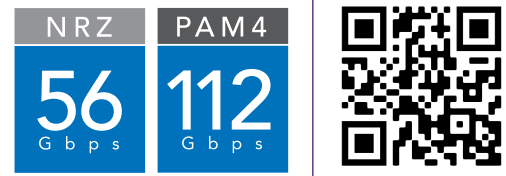
# FLYOVER® CABLE SYSTEMS

Samtec Flyover® technology breaks the constraints of traditional signaling substrate and hardware offerings by routing signals via ultra low skew twinax cable versus through lossy PCB. This results in a cost-effective, high-performance and heat efficient answer to the challenges of 56 Gbps bandwidths and beyond.

## FLYOVER® TECHNOLOGY

### ULTRA LOW SKEW TWINAX CABLE TECHNOLOGY

- Ideal for 28 - 112+ Gbps applications
- Tight coupling between signal conductors
- Ultra low skew twinax < 3.5 ps/meter (intrapair)
- Improved signal integrity and eye pattern opening
- Increased bandwidth and reach



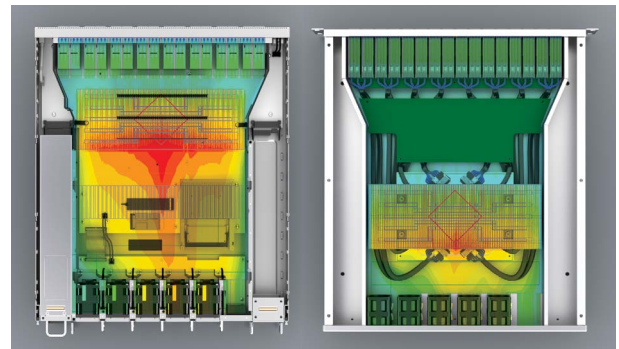
### PERFORMANCE & COST ADVANTAGES

- Up to 112 Gbps PAM4 and beyond
- Simplified board layout
- Less expensive PCB materials, fewer PCB layers
- Eliminates expensive re-timers

### SUPPORT

Fully integrated Technology Centers for full system optimization from Silicon-to-Silicon, including Samtec's High-Speed Cable Group.

### THERMAL IMPROVEMENT



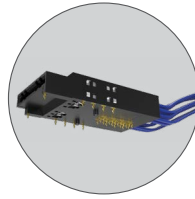
Standard Network Switch vs. Samtec Flyover® Technology



## PANEL ASSEMBLIES

### FLYOVER® QSFP CABLE SYSTEMS

- Up to 800 Gbps PAM4 aggregate data rate (112 Gbps PAM4 per channel; 4 or 8 channels)
- Double density versions feature belly-to-belly mating for maximum density
- Modular design improves heat management, increases SI performance, provides scalability and reduces costs by creating a multifunction board
- Variety of end 2 options including AcceleRate®, NovaRay®, Si-Fly™, FireFly™ and ExaMAX®



Sideband signals are routed through press-fit contacts for increased airflow

NRZ	PAM4
56 Gbps	112 Gbps



### NOVARAY® I/O EXTREME PERFORMANCE CABLE SYSTEM

- Highest aggregate data rate on the market – up to 3,584 Gbps PAM4
- Cable-to-cable bulkhead panel connection; right-angle panel mount and sealed 38999 in development
- 16 and 32 differential pairs, accommodates PCIe® 6.0 in x4 or x8 configurations plus sidebands
- Reduced thermal load at the panel requires no heat sinks, saving valuable panel space
- Variety of end 2 options including AcceleRate®, NovaRay® and Si-Fly™

NOVARAY® I/O

PAM4
112 Gbps



## BACKPLANE ASSEMBLIES

### EXAMAX® HIGH-SPEED BACKPLANE CABLE SYSTEM

- Cable-to-cable, cable-to-board, mid-board and panel applications
- 30 and 34 AWG Eye Speed® ultra low skew twinax for improved signal integrity, increased flexibility and routability
- Staggered differential pair design with embossed ground structure reduces crosstalk
- Highly customizable with modular flexibility and a wide variety of end 2 options



Cable-to-DMO  
(Direct Mate Orthogonal)

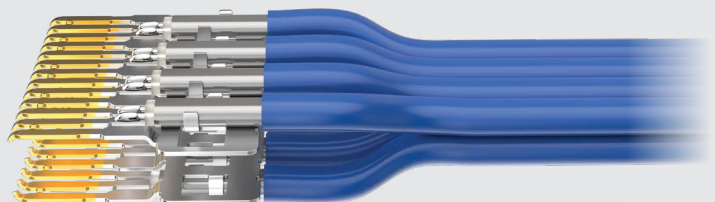
ExaMAX®

NRZ	PAM4
56 Gbps	112 Gbps



### DIRECT ATTACH

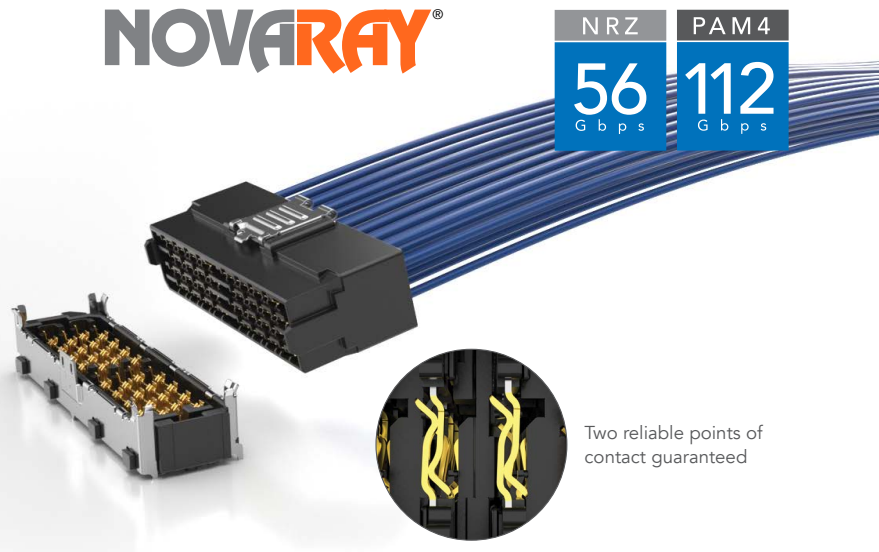
- High-density contacts directly soldered to the Eye Speed® ultra low skew twinax cable
- Improved signal integrity by eliminating the transition board and its variability
- Achieves tighter tolerances



## MID-BOARD ASSEMBLIES

### NOVARAY® EXTREME PERFORMANCE CABLE SYSTEM

- 4.0 Tbps aggregate data rate – 9 IEEE 400G channels (112 Gbps PAM4 per channel)
- Proprietary pin to ground configuration enables very low crosstalk (beyond 40 GHz), very tight impedance control and minimal variance in data rate as stack height increases
- 8 to 32 signal pairs with two reliable points of contact guaranteed; 72 pairs in development
- Industry leading aggregate data rate density – 2x the data rate in 60% of the space vs. traditional arrays

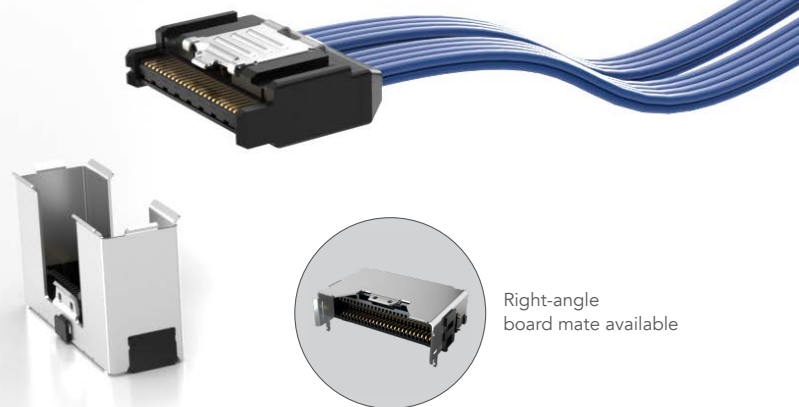


### ACCELERATE® SLIM, DIRECT ATTACH CABLE SYSTEM

- Slimmest cable assembly in the industry – 7.6 mm width
- 8, 16 and 24 differential pair configurations in a high-density 2-row design
- Contacts directly soldered to the cable improves signal integrity by eliminating the transition board and its variability
- Rugged metal latching and shielding
- “Reversed Polarity” pinout option for reduced Far-End Crosstalk

### ACCELERATE®

NRZ	PAM4
28 Gbps	56 Gbps

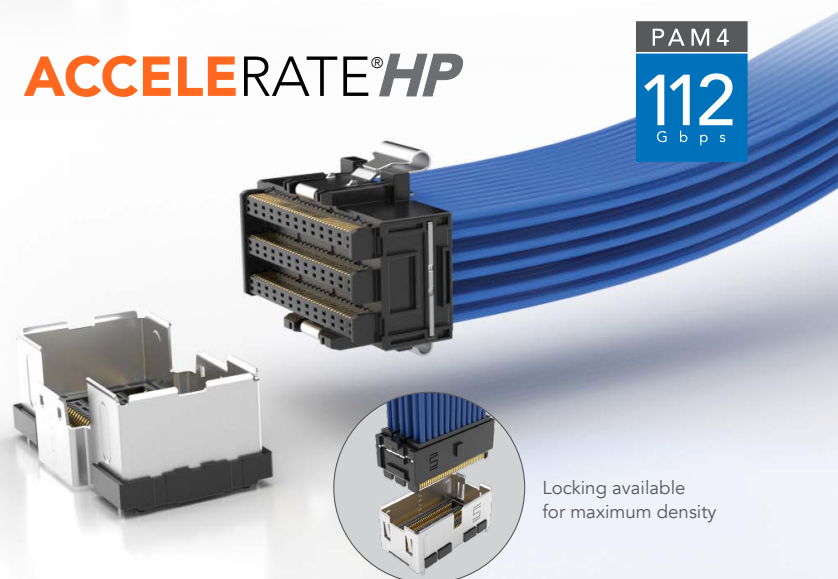


### ACCELERATE® HP EXTREME DENSITY CABLE SYSTEM

- Industry's highest density 112 Gbps PAM4 cable-to-board system
- 32 to 72 differential pairs; up to 96 pairs in development
- Staggered row-to-row spacing of 2.2 mm x 2.4 mm allows adequate routing lanes for optimized traces
- Cable-on-substrate solution provides greater flexibility with the assembly directly mating with the connector on the chip package or transition card

### ACCELERATE® HP

PAM4
112 Gbps



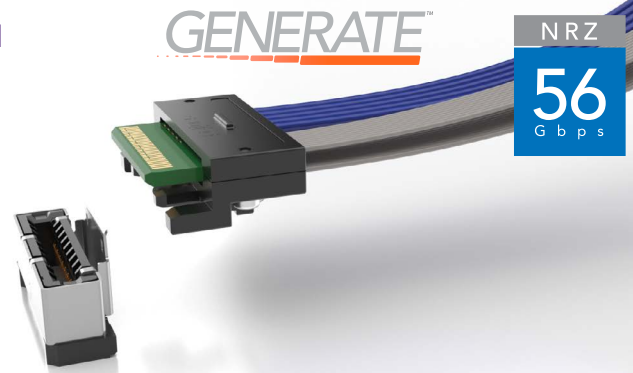
## SI-FLY™ LOW PROFILE CABLE SYSTEM

- Up to 16 pairs in an extremely low 3.8 mm profile for placement adjacent to the IC package, under heat sinks or other cooling hardware
- 112 Gbps PAM4 per lane enabling 25.6 TB aggregate with a path to 51.2 TB
- Co-packaged configuration for advanced 112G+ data rate requirements

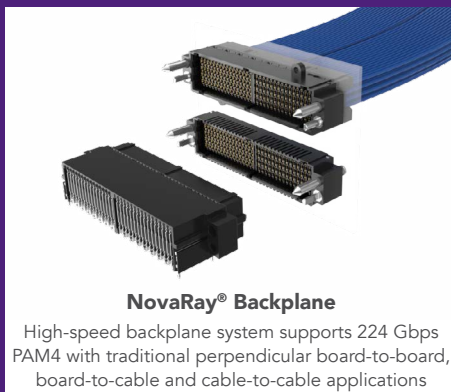
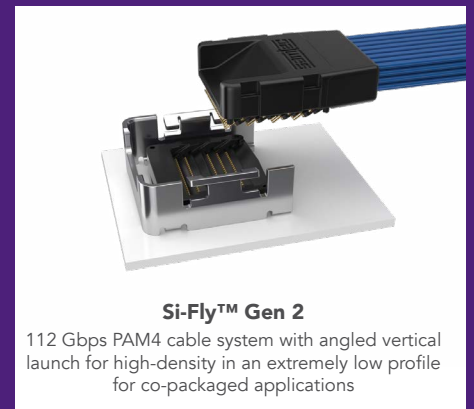
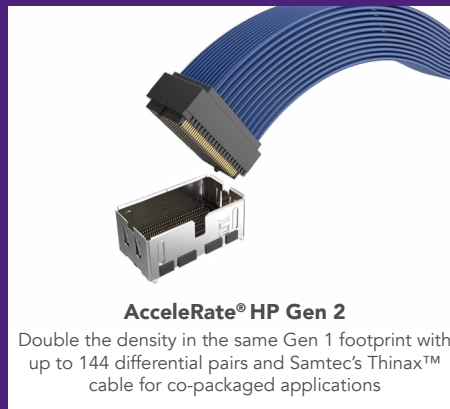


## GENERATE™ HIGH-SPEED EDGE CARD CABLE SYSTEM

- Compatible with SFF-TA-1002 (1C, 2C, 4C & 4C+)
- Surpasses PCIe® 4.0 and 5.0 performance requirements
- Vertical or right-angle cable launch
- Mates with Generate™ 0.60 mm pitch high-speed edge card socket
- Rugged metal latching system

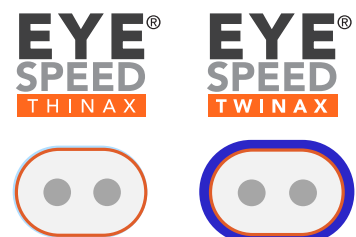


## ROADMAP: FLYOVER® CABLE SYSTEMS



## EYE SPEED® THINAX™ ULTRA PERFORMANCE TWINAX CABLE

- 40% smaller cross-sectional area
- 112 Gbps PAM4 performance
- Taped jacket miniaturizes the cable to match smaller, more dense connectors
- Allows for a smaller pitch within a row
- Achieving a smaller row-to-row pitch is dependent upon stack-up and BOR; customizable per application needs





# HIGH-SPEED CABLE SYSTEMS

Samtec's micro coax and twinax cable systems feature Eye Speed® cable technology and the ability to mix-and-match end options for application-specific requirements with extensive customizing capabilities. Single-ended 50  $\Omega$  and differential 100  $\Omega$  standards with rugged features and options including strain relief, plastic housings, screw downs, latches, locks and more.

## HIGH-DENSITY ASSEMBLIES

- SEARAY™ 1.27 mm pitch with up to 240 I/Os supports PCIe® 2.0/3.0 protocols
- SEARAY™ 0.80 mm pitch with up to 300 I/Os
- 34 or 36 AWG micro coax; 32 AWG twinax
- Rugged options include screw downs, guide posts and latching
- Vertical, right-angle and press-fit board level mates

14  
G b p s



[samtec.com/HDR](http://samtec.com/HDR)

SEARAY™

SEARAY™.8mm

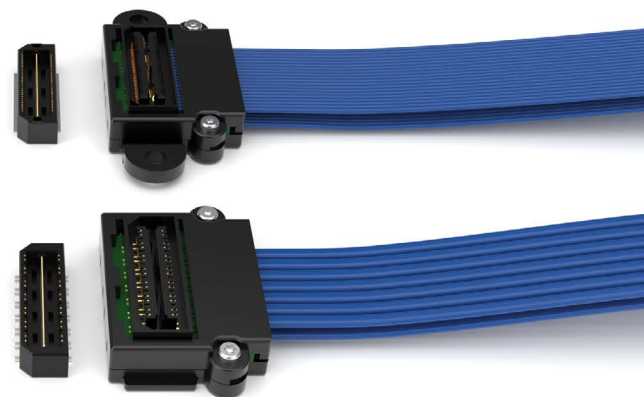


## GROUND PLANE ASSEMBLIES

- Integral ground/power plane reduces crosstalk
- 0.50 mm and 0.80 mm pitch with up to 240 I/Os
- 34 and 38 AWG micro coax; 30 AWG twinax
- Surface mount, edge mount or panel mount terminations
- Rugged screw mounts or retention pin options

QSTRIP®

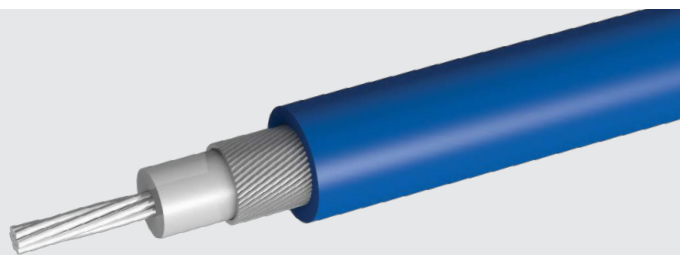
QPAIRS®



## EYE SPEED® CABLE TECHNOLOGY

- Excellent signal integrity performance with individual copper serve or braid shielding
- Stranded conductor for small bend radii and dynamic high flexing cycle applications
- Cost-effective ribbonizing eliminates discrete wires

EYE  
SPEED  
CABLE



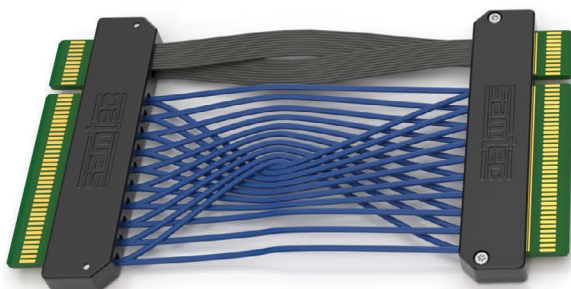
## BUILD IT YOURSELF

Check out the High-Speed Cable Solutionator® to quickly design a full assembly for your specific application. Visit [samtec.com/cablebuilder](http://samtec.com/cablebuilder)

### EDGE CARD ASSEMBLIES

- Micro 0.50 mm pitch assembly mates with shielded edge card socket
- 0.80 mm pitch assembly mates with Generate™ high-speed edge card socket
- PCI Express® twinax assemblies support 3.0/4.0/5.0 data transfer rates
- FireFly™ copper available as standard (14 Gbps), optimized (56 Gbps PAM4) and PCIe® 4.0
- Pin compatible with optical FireFly™ using the same connector system
- 30, 32 and 34 AWG twinax; 34 AWG ultra low skew twinax
- Rugged latching and board lock options

**GENERATE™**



**PCI EXPRESS®**



**FIREFLY™**

### HIGH-SPEED ASSEMBLIES

- Ultra micro 0.50 mm pitch hermaphroditic Razor Beam™ coax assemblies with rugged shielding
- 0.80 mm pitch Edge Rate® coax and twinax assemblies
- Up to 32 pairs or 60 total I/Os per row
- 34 and 38 AWG micro coax; 30 AWG twinax
- Rugged screw down and latching options

**RAZOR BEAM™**  
SYSTEM



**EDGE RATE®**  
SYSTEM



### ALSO AVAILABLE

#### HIGH-SPEED I/O SYSTEMS

- Industry's densest I/O cable system with HyperTransport™ HT 3.1 performance (HDLSP)
- Space-saving, high-cycle 0.80 mm pitch cable system shielded for EMI protection (EPLSP)
- Passive jumpers compliant to SFP+/SFP/XFP/XENPAK and up to 10 Gbps data transmission (SFPE)



# OPTICS

FireFly™ Micro Flyover System™ takes the data connection “off board” for up to 28 Gbps per lane with a path to 56 Gbps PAM4 via optical cable – or copper for cost optimization – using the same surface mount connector system. Samtec’s optics offerings include PCIe®-Over-Fiber and rugged options ideal for harsh environments, as well as passive optical solutions.

## FIREFLY™ OPTICAL SYSTEMS

- Industry leading miniature footprint allows for higher density close to the data source
- Simple assembly process with easy insertion/removal and trace routing
- x4 and x12 designs
- PCIe®-Over-Fiber supports 3.0/4.0 data rates for low latency, power savings and guaranteed transmission
- Extended Temp FireFly™ with a range of -40 °C to +85 °C for military, aerospace and industrial applications



[samtec.com/firefly](http://samtec.com/firefly)



## ALSO AVAILABLE

### EVALUATION & DEVELOPMENT KITS

Samtec-designed and Partner-designed kits and boards featuring FireFly™ simplify design and reduce time to market. Visit [samtec.com/kits](http://samtec.com/kits) or contact [kitsandboards@samtec.com](mailto:kitsandboards@samtec.com)

### PASSIVE OPTICS

Industry standard passive MPO-to-MPO panel adaptor (OPA) and optical patch cable (FOPC)

Adaptor card with PCIe®-Over-FireFly™ optical cable supports 3.0/4.0 platform with scalable configurations for cost optimized performance



## BUILD IT YOURSELF

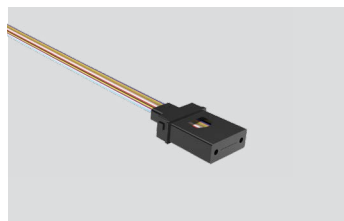
Check out the Optics Solutionator® to quickly design a full assembly for your specific application. Visit [samtec.com/optics-solutionator](http://samtec.com/optics-solutionator)

ECUO	PCUO	ETUO	PCOA
FireFly™ Optical	PCIe®-Over-Fiber	Extended Temp FireFly™	
<div>14 G b p s</div> <div>x4 x12</div> <div>25 G b p s</div> <div>x4 x12</div>	<div>8 G T p s</div> <div>PCIe® 3.0 x4 PCIe® 3.0 x8 PCIe® 3.0 x16</div>	<div>10 G b p s</div> <div>x4, x12</div>	
<div>16 G b p s</div> <div>x12</div> <div>28 G b p s</div> <div>x4</div>	<div>16 G T p s</div> <div>PCIe® 4.0 x4 PCIe® 4.0 x8 PCIe® 4.0 x16</div>	<div>25 G b p s</div> <div>x4</div>	PCIe®-Over-Fiber 3.0/4.0 Adaptor Card with FireFly™

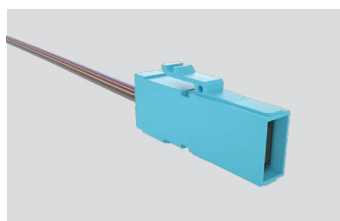
## END OPTION FLEXIBILITY



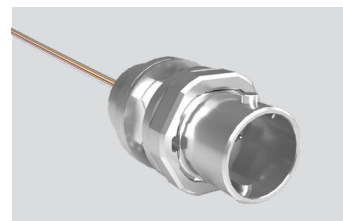
MPO (MTP®)



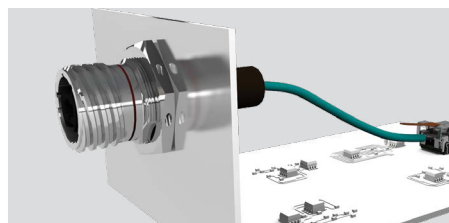
MT



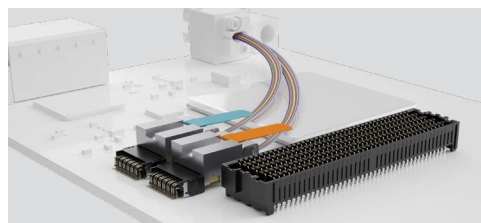
MXC®



U-SDI Interface



Amphenol® MT38999



VITA 66.X Interface



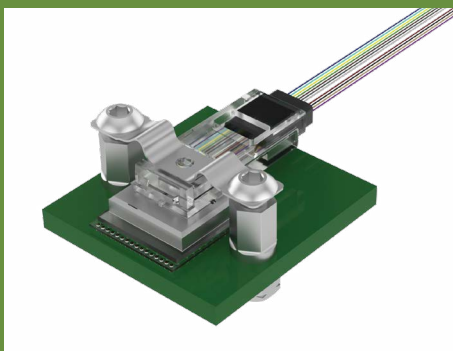
Glenair® Series 79 MT Connector

## ROADMAP: OPTICS



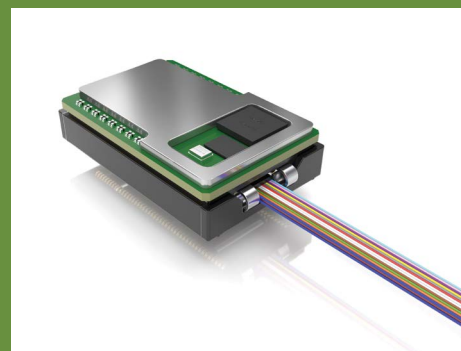
### Extreme Environment FireFly™

Sealed and Mil-Coated with a -40 °C to +85 °C temperature range and multiple end 2 options for exposed military, aerospace and submersible applications



### FireHawk™ Ultra Rugged Optics

Industry's most compact fiber optics with solderable BGA attach for reliability and removable pigtail connector ideal for harsh environments



### Halo™ Next Gen Optical

Capable of 112 Gbps PAM4 per lane with up to 16 channels in a low 6 mm profile designed to withstand high shock and vibration

# RF SOLUTIONS

Full RF solution capabilities, including cable assemblies, board connectors and cable connectors are backed by the highest level of service in the industry. Samtec's RF technical support includes launch optimization, simulation, and testing. The goal is to blend industry-leading system-level signal integrity expertise with high-quality RF products that meet mechanical, precision and performance expectations every time.

## PRECISION RF, HIGH-FREQUENCY CABLE ASSEMBLIES

- Variety of interfaces from 1.00 mm (110 GHz) to TNCA (18 GHz)
- Push-on, threaded and ganged solutions
- Low-loss microwave and millimeter wave cable from .047 to .277, semi-flexible microwave, high-density ganged and Samtec optimized varieties
- Magnum RF™ ganged SMPM for 40% greater density, less processing time and better positional alignment



[samtec.com/rf-cableassemblies](https://samtec.com/rf-cableassemblies)

**MAGNUMRF™**  
GANGED RF ASSEMBLIES



## ALSO AVAILABLE PRECISION RF ADAPTORS

Between-series and in-series adaptors designed for well-performing VSWR



[samtec.com/rf-adaptors](https://samtec.com/rf-adaptors)

*Solutionator*® **RF**  
DESIGN IN A MINUTE CABLE

## BUILD IT YOURSELF

Check out the RF Cable Solutionator® to quickly design a full assembly for your specific application. Visit [samtec.com/rf-cablebuilder](https://samtec.com/rf-cablebuilder)

## PRECISION RF CABLE CONNECTORS

- Flexibility to terminate to an industry-standard cable to meet application specifications
- High-frequency to 110 GHz
- Solder clamp and direct solder connectors available
- Available for a wide variety of semi-flexible and low-loss microwave industry standard cables
- Termination instructions available on engineering prints at [samtec.com](http://samtec.com)



[samtec.com/rf-cableconnectors](http://samtec.com/rf-cableconnectors)

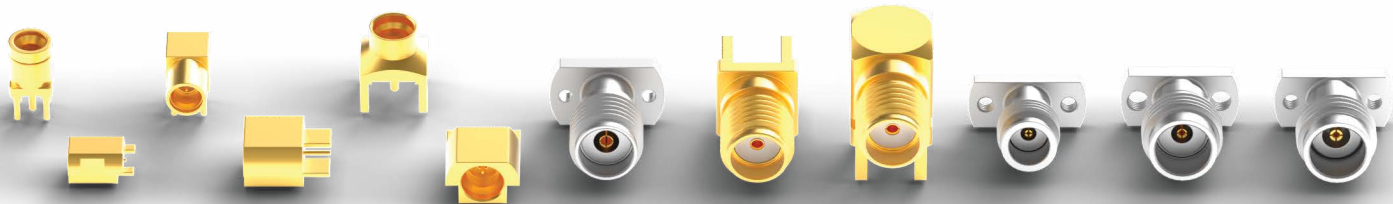


## PRECISION RF BOARD CONNECTORS

- Threaded coupling for superior repeatability and high mechanical stability
- Solderless compression mount for easy, field replaceable, cost-effective assembly to the board
- Magnum RF™ ganged SMPM operates mode-free to 65 GHz with a push-on interface for varying retention forces
- Vertical and edge mount for mezzanine, coplanar and perpendicular applications
- Board-to-board solutions available using SMP, SMPM or Magnum RF™ ganged, multi-position blocks



[samtec.com/rf-boardconnectors](http://samtec.com/rf-boardconnectors)



Type	Frequency	Board Connector	Cable Connector	Cable Assemblies	Adaptor
<b>1.00 mm</b>	to 110 GHz	In Development	PRF10	In Development	
<b>1.35 mm</b>	to 90 GHz	135	PRF13	RF047-A	
<b>1.85 mm</b>	to 65 GHz	185	PRF18	RF047-A, RF086	PRFIA
<b>2.40 mm</b>	to 50 GHz	240	PRF24	RF047-A, RF085, RF086, RF23C	PRFIA
<b>2.92 mm</b>	to 40 GHz	292	PRF92	RF047-A, RF085, RF086, RF23C	PRFIA/PRFBA
<b>3.50 mm</b>	to 34 GHz	N/A	PRF35	RF23S	
<b>SSMA</b>	to 34 GHz	N/A	PRFS1	Available as a Quick-turn Custom	
<b>SMP</b>	to 40 GHz	SMP	PRF00	RF25S, RF405	SMP-B
<b>SMPM</b>	to 65 GHz	SMPM	PRFM0	RF047-A, RF086, RF23C	PRFIA/PRFBA
<b>Ganged SMPM</b>	to 65 GHz	GPPC	N/A	GC47, GC86	PRFIA
		GPPB	N/A	N/A	PRFIA
<b>SMA</b>	to 18 GHz	SMA	PRF01	RF402, RF405, RF25S, RF180, RF280	
<b>N Type</b>	to 18 GHz	N Type	PRF06	RF180, RF280	
<b>TNCA</b>	to 18 GHz	TNCA	PRF04	RF180, RF280	



# RF SOLUTIONS

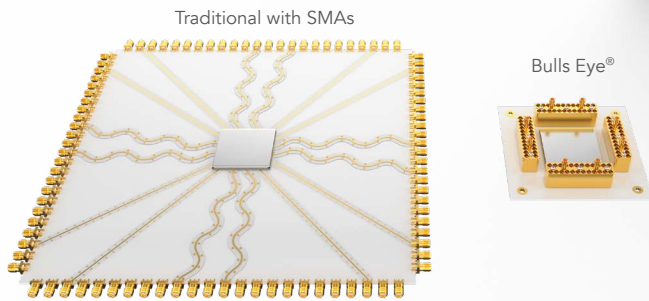
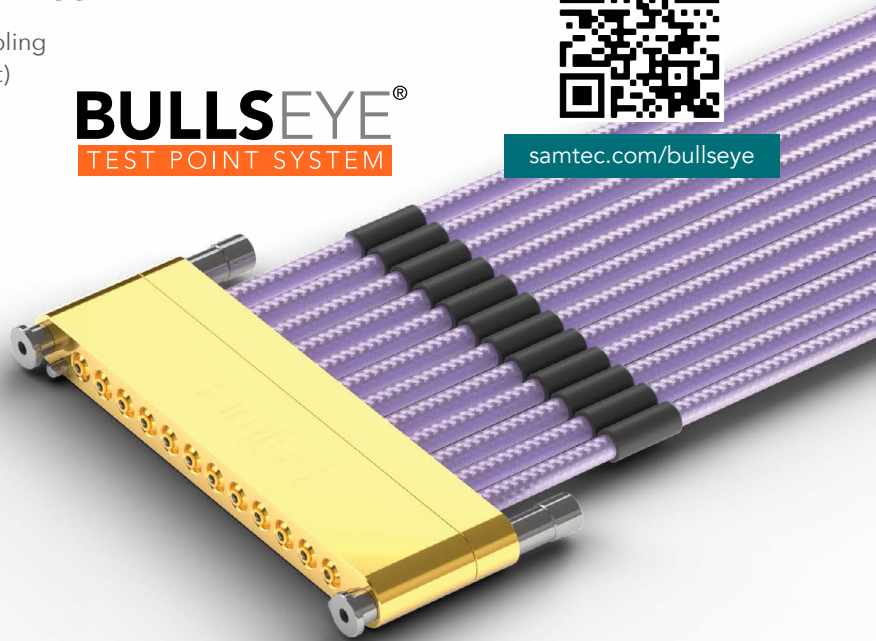
## BULLSEYE® HIGH-PERFORMANCE TEST & MEASUREMENT

- High-density, space saving array design with advanced cabling to support applications to 70 GHz (90 GHz in development)
- Compression interface to the board provides easy on/off and eliminates soldering costs
- 70 GHz, single or double row system with 360° grounding and 1.85 mm connection to instrumentation
- 50 GHz, double row system and 2.40 mm (50 GHz) or 2.92 mm (40 GHz) connection to instrumentation

**BULLSEYE®**  
TEST POINT SYSTEM



[samtec.com/bullseye](http://samtec.com/bullseye)



Enables smaller evaluation boards & shorter trace lengths

Test Assembly	Silicon Speeds
BE90A, 90 GHz	224 Gbps PAM4
BE70A, 70 GHz	112 Gbps PAM4
BE40A, 50 GHz	56 Gbps PAM4

## STANDARD RF 50 Ω & 75 Ω CABLES & CONNECTORS (< 18 GHz)

- Wide variety of industry standard cables with mix and match cable connectors
- Straight and right-angle jacks, plugs and bulkhead jacks; die cast options
- 50 Ω double-shielded RG 316 cable assembly
- Low profile 75 Ω BNC and high-density BNC with pick and place capability, optimized for high volume manufacturing
- The largest variety of 12G-SDI optimized 75 Ω interconnects
- 50 Ω and 75 Ω assemblies with RG type cable and 12G-SDI Belden cable
- .081 mm and 1.13 mm DIA coax cable assemblies with MHF1 (U.FL), MHF3 and MHF4



[samtec.com/rf-cableassemblies](http://samtec.com/rf-cableassemblies)



## ORIGINAL SOLUTIONS

- Shielded twisted pair system for 100  $\Omega$  applications
- Ganged micro scale high-performance RF jacks, plugs and cable assemblies on a 5.00 mm pitch
- IsoRate® high-isolation systems at half the cost vs. traditional RF
- 75  $\Omega$  mini and micro-mini interconnects
- 50  $\Omega$  high-vibration MMCX for rugged applications
- High-frequency solutions: Magnum RF™ to 65 GHz, flexible micro waveguide (E-band), Vita 90 VNX+ with RF backplane, Bulls Eye® high-performance test assemblies



[samtec.com/originalRF](http://samtec.com/originalRF)

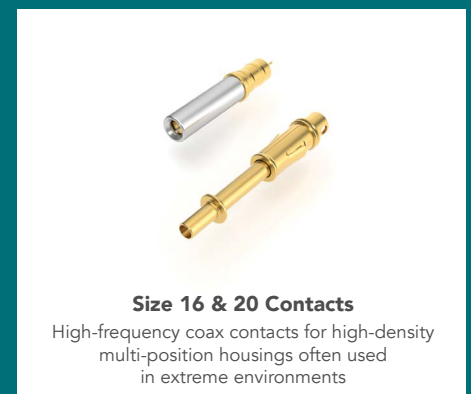
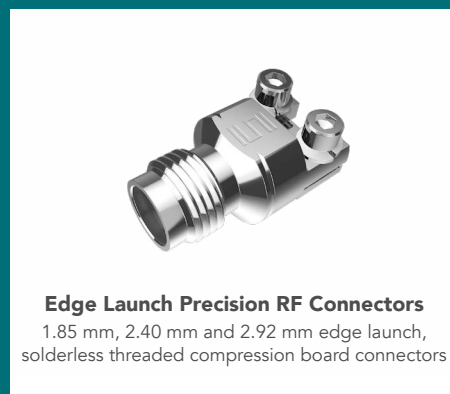
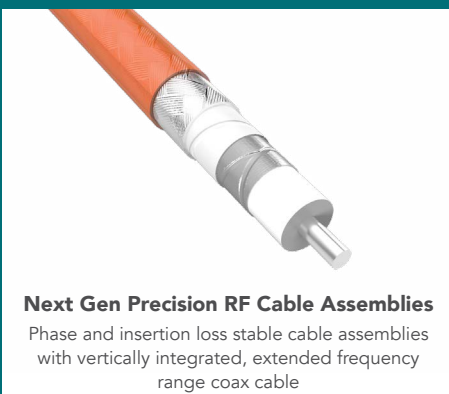
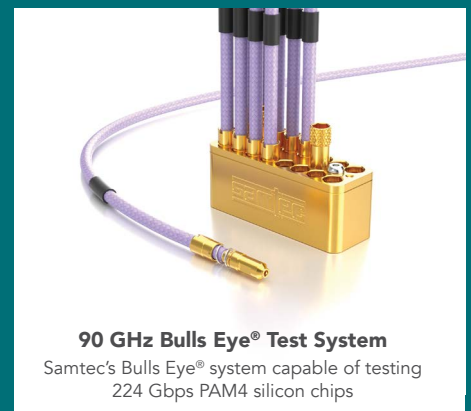
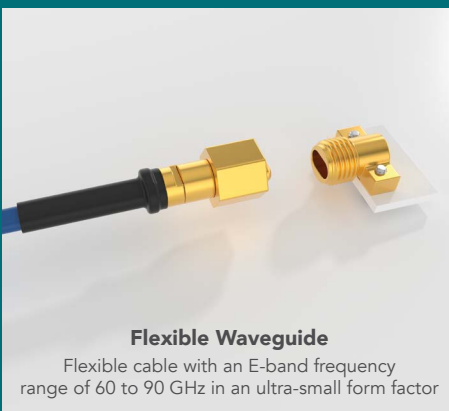
**BULLSEYE®**  
TEST POINT SYSTEM

**ISORATE®**  
ISOLATED EDGE RATE CONTACT

**MAGNUMRF™**  
GANGED RF ASSEMBLIES



## ROADMAP: RF SOLUTIONS



# RUGGED/POWER SOLUTIONS

Rugged contact systems, flexible power interconnects and rugged signal integrity combined with ultra-rugged offerings create the foundation of Samtec's rugged/power solutions for high cycle, high speed and high power applications. Additional testing for severe environments ensures products are more than suitable for military, space, automotive, industrial and other extreme applications.

## RUGGED BOARD-TO-BOARD SYSTEMS

- Tiger Eye™ is Samtec's most rugged contact system rated to 1,000+ mating cycles on 0.80 mm, 1.27 mm and 2.00 mm pitch
- Screw down, locking clip, friction latching, and other ruggedizing options
- High-density, four row design with up to 200 total positions
- Discrete wire assemblies available in 24 - 32 AWG PVC or \*Teflon™ fluoropolymer wire
- IDC cable assemblies available with rugged strain relief option

MAX  
3.8  
A m p s

8  
G b p s



[samtec.com/tigereye](http://samtec.com/tigereye)

TIGER  
EYE  
SYSTEM



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

## TIGER EYE™ CONTACT SYSTEM

- Multi-finger design with several points of contact for high-reliability
- Smooth, flat mating area increases mating cycles and lowers contact resistance
- Heat-treated BeCu for the best combination of mechanical and electrical properties
- Surface mount, micro slot tail increases solder surface area for higher joint strength

TIGER  
EYE  
CONTACT





## RUGGED HIGH-SPEED SYSTEMS

- 0.50, 0.635 and 0.80 mm pitch Edge Rate® strips available in 5 to 18 mm stack heights
- Generate™ 0.60, 0.80 and 1.00 mm pitch edge card sockets up to 56 Gbps PAM4 performance
- 0.635 mm to 2.00 mm pitch micro edge card sockets with rugged features
- Razor Beam™ hermaphroditic interfaces with optional EMI shielding

PAM 4

56  
Gbps

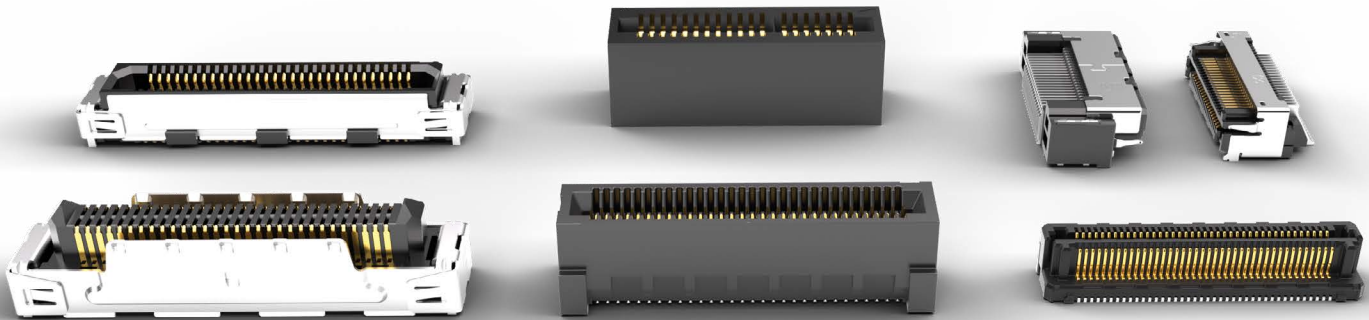


[samtec.com/rugged](http://samtec.com/rugged)

**EDGE  
RATE**  
SYSTEM

**GENERATE**  
SYSTEM

**RAZOR  
BEAM**  
SYSTEM



## POWER SYSTEMS

- mPOWER® 2.00 mm pitch, 18 Amp interconnects designed for power-only or power/signal with Samtec's high-speed connectors for a two-piece solution; cable-to-cable solution in development
- Mini Mate® and Power Mate® systems feature individually shrouded contacts for electrical and mechanical protection
- Extreme power systems with AC or DC power, and AC-DC combo options
- 23.5 A/blade to 58.7 A/blade (1 blade powered) PowerStrip™ systems
- One-piece interfaces designed for high-shock and vibration

MAX

60  
Amps



[samtec.com/power](http://samtec.com/power)

**POWER  
STRIP**



**mPOWER**

**POWERMATE**

## RUGGED/POWER SOLUTIONS

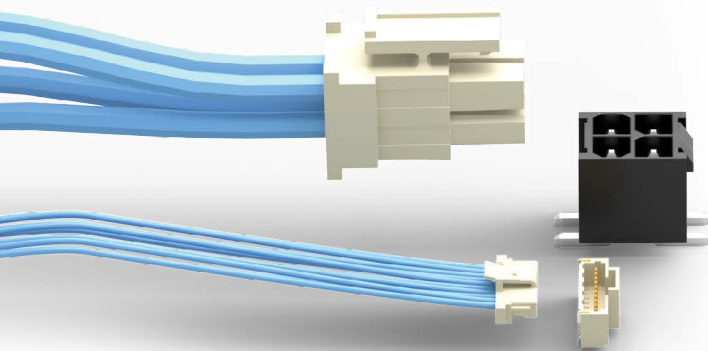
### DISCRETE WIRE CABLE ASSEMBLIES

- High-reliability Tiger Eye™ assemblies with rugged latching and screw down options
- 1.00 mm pitch Micro Mate™ for cable-to-cable, cable-to-board and panel-to-board applications
- Mini Mate® and Power Mate® with individually shrouded contacts
- mPOWER® passes 18 Amps per blade directly to active components
- PowerStrip™ with up to 34.5 Amps per power blade
- Components and tooling available; visit [samtec.com/tooling](http://samtec.com/tooling)

MAX  
**34.5**  
A m p s



[samtec.com/discretewire](http://samtec.com/discretewire)



**MICROMATE™**

**POWER  
STRIP™**

**mPOWER®**

**TIGER  
EYE™**  
SYSTEM



### RUGGED I/O SYSTEMS

- IP67 miniature push-pull latching system with lightweight plastic shell
- IP68 bayonet-style latching circulars with 12 mm, 16 mm and 22 mm metal or plastic shells (cost-effective crimp version available)
- Space-saving rectangular designs and IP68 threaded circular design with rugged overmold
- IP67 sealed USB Type-C system capable of USB 3.1 speeds



[samtec.com/sealed](http://samtec.com/sealed)

**ACCLIMATE™**



## ULTRA RUGGED SOLUTIONS

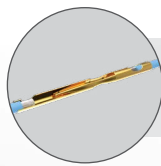
- URSA™ I/O 1.00 mm pitch rugged power system with 4 points of contact for extreme reliability and high mating cycles in cable-to-cable and cable-to-board solutions
- Vertical or right-angle board connector with up to 40 positions per row
- Extreme density with up to 1,450 I/Os in a 1RU panel
- EMI shielding limits signal degradation and optimizes performance
- SureWare™ ultra rugged hardware with 5 - 30 mm stack heights and rugged materials
- Guide Post Standoffs assist with “blind mate” for ultra micro mezzanine connectors
- Jack screw standoffs help reduce the risk of component damage when unmating



[samtec.com/ursa](http://samtec.com/ursa)

[samtec.com/hardware](http://samtec.com/hardware)

**URSA I/O**  
ULTRA RUGGED CONTACT SYSTEM



Four points of contact for a reliable connection

**SUREWARE**  
ULTRA RUGGED HARDWARE



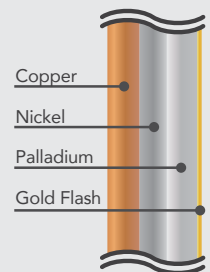
## TESTING

Samtec's products are tested to or beyond industry standards to ensure quality and performance in a variety of applications. Visit [samtec.com/set](http://samtec.com/set)



## SURECOAT™

- High-reliability palladium plating for high-temp, high-cycle applications
- Roadmap: High-cycle “super lube” for extreme mating cycles and cost optimized next gen surface plating



## ROADMAP: RUGGED/POWER



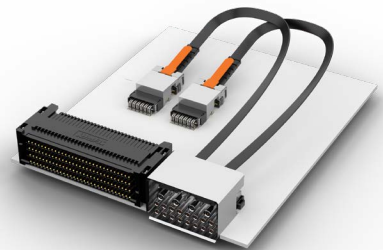
### NovaRay® I/O 38999 Rugged I/O Systems

Samtec's NovaRay® I/O high data rate cable system in a rugged 38999 shell and salt fog resistant to 500 hours



### Single Pair Ethernet (SPE) Cable System

IEC 63171-6 compliant with high-performance Eye Speed® twinax and 4A CCC for Power over Dateline (PoDI)



### VITA 90 VNX+ Solutions

RF backplane system to support 110 GHz with high-density size 20 cable; configured with SEARAY™ right-angle array and FireFly™ optics

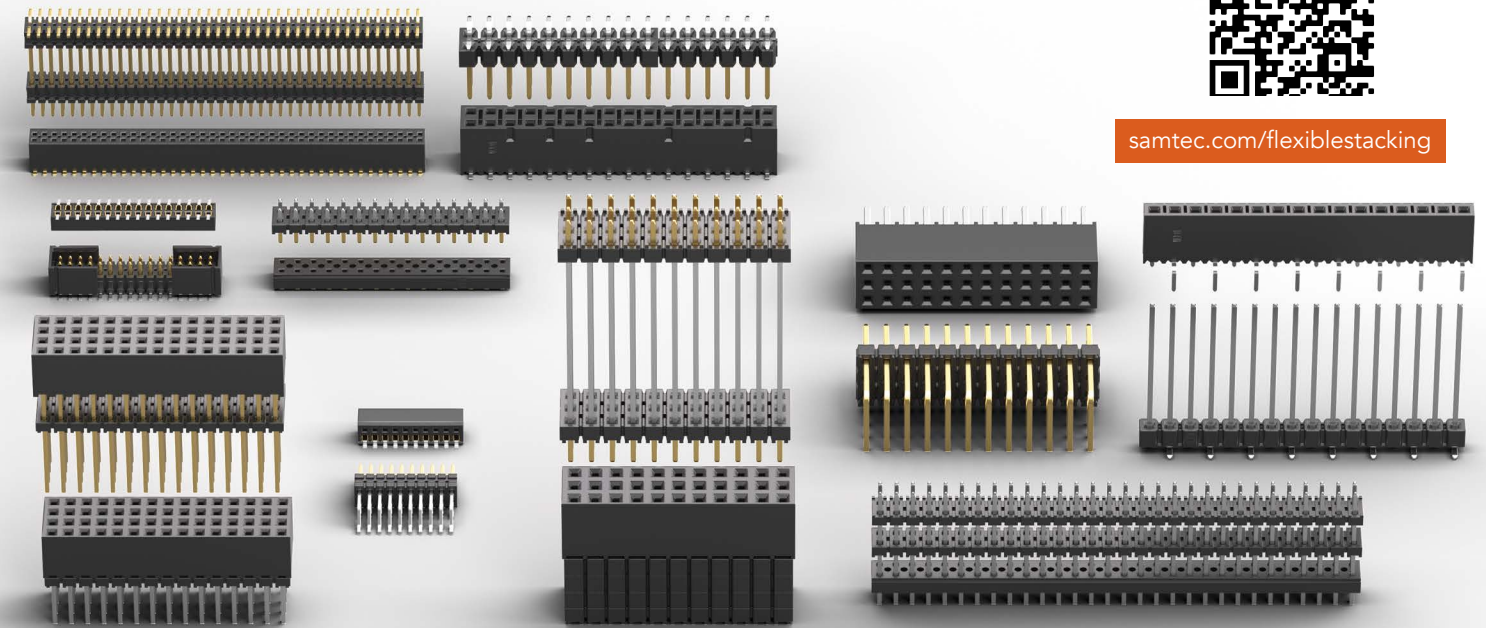


# FLEXIBLE STACKING

With the largest variety of board-to-board interconnects, Samtec makes it easy to find board stackers for any application. Header and socket systems are available in a variety of pitches, densities, stack heights, orientations and many more standard or custom options.



[samtec.com/flexiblestacking](https://samtec.com/flexiblestacking)



## INCREDIBLE FLEXIBILITY

- Post height: Adjustable in .005" (0.13 mm) increments
- Body positions: Adjustable in .005" (0.13 mm) increments
- Board stacking distance: 1.65 mm (.065") – 48.51 mm (1.910")
- Number of pins: 2-300
- Number of rows: 1-6

## VARIETY OF PITCHES

- 0.80 mm (.0315")
- 1.00 mm (.0394")
- .050" (1.27 mm)
- .050" x .050" (1.27 x 1.27 mm)
- .050" x .100" (1.27 x 2.54 mm)
- 2.00 mm (.0787")
- .100" (2.54 mm)
- .156" (3.96 mm)
- .200" (5.08 mm)

## CUSTOMIZABLE

- Mix-and-match headers and sockets to find the right solution
- Quick and easy custom parts are available. Contact [asp@samtec.com](mailto:asp@samtec.com)

*Solutionator*<sup>®</sup> **FLEX**  
GET A MATED SET IN SECONDS **STACKING**

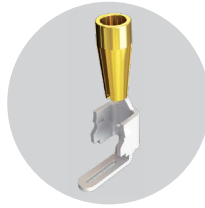
## BUILD IT YOURSELF

Check out the Flex Stacking Solutionator<sup>®</sup> to quickly build a mated set for your specific application. Visit [samtec.com/flex-solutionator](https://samtec.com/flex-solutionator)

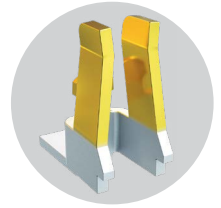
## VARIETY OF CONTACTS



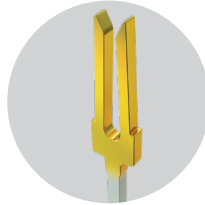
- High-reliability
- High mating cycles
- Multi-finger contact



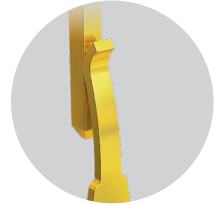
- Pass-through
- Ultra-low profile
- Dual wipe contact



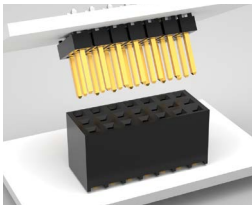
- High-retention
- Cost-effective
- Tuning fork contact



- Best cost
- Reliable performance
- Post & beam contact

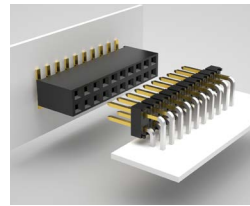


## VARIETY OF ORIENTATIONS/APPLICATIONS



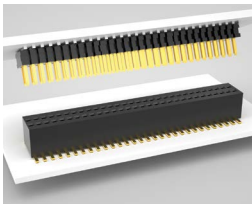
### Standard

- Choice of contact system
- Single, double and triple row designs
- Largest variety



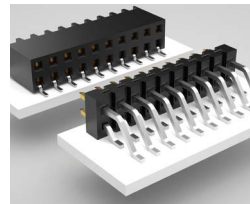
### Right-Angle

- Design flexibility
- Tiger Claw™ & Tiger Buy™ contacts
- Through-hole, surface mount



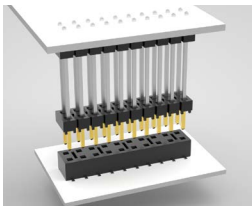
### Low Profile

- Down to 1.65 mm (.065") stack height
- Tiger Claw™ contacts
- Space saving



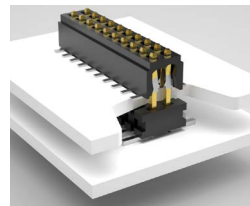
### Coplanar

- 1-4 row designs
- Surface mount, through-hole or mixed technology
- Tiger Claw™ & Tiger Beam™ contacts



### Elevated

- Up to 48.51 mm (1.910") stack height
- Design flexibility
- Clearance, air flow



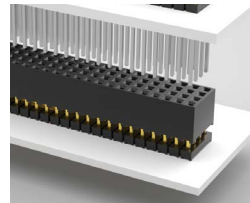
### Bottom Entry

- Tiger Claw™ contacts
- Access to components when mated
- Space savings



### Pass-Through

- Connect three or more boards
- Tiger Claw™ & Tiger Beam™ contact systems
- Surface mount or offset through-hole

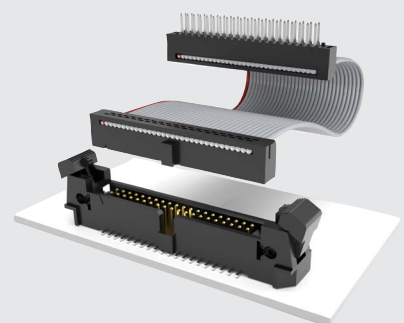


### Self-Nesting

- Tiger Buy™ contacts
- Press-fit or through-hole tails
- PC/104-Plus™ embedded applications

## IDC CABLE SYSTEMS

- .050" and 2.00 mm pitch Tiger Eye™ IDC systems
- Mating shrouded and ejector terminal strips
- Choice of socket and plug, single and double ended, twisted pair and flat cable
- Flexible Flat Ribbon IDC systems in a low profile design with no bulky side locks
- Molded-to-Position IDC systems mate with .025" (.064 mm) square tail headers



# FLEXIBLE STACKING

## ONE-PIECE, 0.80 mm (.0315") & 1.00 mm (.0394") PITCH

SERIES		FSI	SEI	SIB	CLE	FTE	CLM	FTMH/FTM	MLE	MW
PITCH		1.00 mm (.0394")		.100" (2.54 mm)	0.80 mm (.0315")		1.00 mm (.0394")			
ORIENTATION		V				V & RA	V	V & RA	V	
BOARD STACKING (mm)	MIN	3	1.65	3.8	5	5	3.48		4.57	4.62
	MAX	10			9.14		8.43	5.11	9.27	
CONTACT SYSTEM					Tiger Beam™		Tiger Claw™		Tiger Beam™	
MATES		One-Piece			FTE, AW	CLE	FTM, FTMH, MW	CLM, MLE	FTM, FTMH, MW	CLM, MLE

## .050" (1.27 mm) PITCH HEADERS & SOCKETS

SERIES		CLP	FLE	FTS	FTSH	FW	SOLC	TOLC	DWM/ HDWM	FTR	RSM	SLM	
PITCH		.050" x .050" (1.27 mm x 1.27 mm)							.050" x .100" (1.27 mm x 2.54 mm)				
ORIENTATION		V & RA	V		V & RA	V							
BOARD STACKING (mm)	MIN	3.53	5.82	3.53	5.18	7.72	6.35		9.65	9.78		7.11	
	MAX	17.75	19.15	5.82	7.49	19.15	12.00		22.99	14.73	19.69	19.43	
CONTACT SYSTEM		Tiger Claw™	Tiger Beam™				Tiger Buy™						Tiger Buy™
MATES		FTSH, FTS, FW		CLP, FLE			TOLC	SOLC	SMS, SLM, RSM		FTR, HTMS, HDWM, DWM, TML, ZML, TMS	HTMS, TMS, MTMS, DWM, HDWM, FTR, HMTMS	

## 2.00 mm (.0787") PITCH HEADERS & SOCKETS

SERIES	MMT	TMM/MTMM	TMMH	TW	ZLTMM	CLT	ESQT/-368	MMS	SMM	SQT	SQW	TLE
ORIENTATION	RA	V & RA		V				V & RA	V	V & RA	V	
TERMINATION	SMT & MT	T/H & SMT			T/H	T/H & SMT	T/H	T/H & SMT	SMT	T/H	T/H & SMT	SMT
BOARD STACKING (mm)	MIN	2	3.63	4.14	7.49	7.62	3.63	9.37	5.94	6.07	7.85	6.99
	MAX	4	18.87	22.07	43.31	13.34	4.98	43.31	19.81	17.78	29.59	17.53
CONTACT SYSTEM						Tiger Claw™	Tiger Buy™	Tiger Claw™	Tiger Eye™	Tiger Buy™		Tiger Beam™
MATES	CLT, SQT, SQW, ESQT, TLE, SMM, MMS				SQT, SQW, ESQT, SMM	TMM, TMMH, MTMM, MMT, TW, TSH	TMMH, TMM, MTMM, MMT, TW, LTMM, ESQT, ZLTMM, PTT, TSH, TMM, PTHF	TMMH, TMM, MTMM, MMT, TW, LTMM, TSH, ZLTMM	TMM, TMMH, MTMM, MMT, TW, LTMM, TSH, PTT, ZLTMM	TMMH, TMM, MTMM, MMT, TW, TSH, LTMM, ESQT, TSH	TMMH, TMM, MTMM, MMT, TW, PTT	TMMH, TMM, MTMM, MMT, TW, LTMM, TSH, ZLTMM

## .100" (2.54 mm) PITCH HEADERS & SOCKETS

SERIES	DW, EW, ZW	HW	MTSW/HMTSW	TLW/MTLW	TSM	TSW/HTSW	BCS	ESW, ESQ	HLE	SSM	SSQ	SSW
ORIENTATION	V		V & RA					V		V & RA		
TERMINATION	T/H	T/H & SMT	T/H		SMT & MT	T/H			T/H & SMT	SMT	T/H	T/H & SMT
BOARD STACKING (mm)	MIN	13.59	10.03	7.24	6.1	7.47	7.87	9.02	13.59	7.47	11.18	10.03
	MAX	48.51	30.73	46.36	20.96	14.48	35.69	18.92	48.51	26.16	30.1	38.35
CONTACT SYSTEM							Tiger Claw™	Tiger Buy™	Tiger Beam™	Tiger Claw™	Tiger Buy™	
MATES	SSW, SSQ, ESW, ESQ, CES, SLW, BSW, BCS, SSM, HLE, PHF		SSW, SSQ, ESW, ESQ, BCS, BSW, CES, SLW, HLE, SSM	BSW, CES, SLW, HLE	SSW, SSQ, SSM, BSW, ESW, ESQ, BCS, SLW, CES, HLE	SSW, SSQ, SSM, ESW, ESQ, BCS, BSW, CES, SLW	TSW, MTSW, HTSW, HMTSW, TSS, ZSS, DW, EV, ZW, HW, TSM, MTLW, PHT	TSW, MTSW, ESW, MTLW, TSS, ZSS, TSM, DW, ZW, HW, TSSH, HTSS	TSW, MTSW, DW, EV, ZW, TLW, TSM, MTLW, HW	TSW, MTSW, TST, TSS, ZST, ZSS, DW, EV, ZW, TSM, HMTSW, HTSW, TSSH, BST, HTSS, TLW, MTLW	TSW, MTSW, MTLW, EV, ZW, TSS, ZSS, TSM, TSSH, HTSS	TSW, MTSW, HTSW, HMTSW, MTLW, EV, ZW, TSS, HTSS, ZSS, TSM, TSSH, DW, HW



# MODIFIED & CUSTOM SOLUTIONS

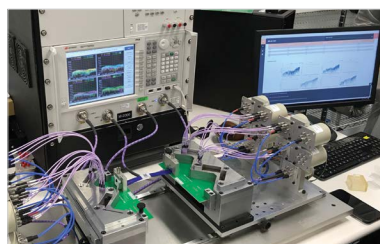
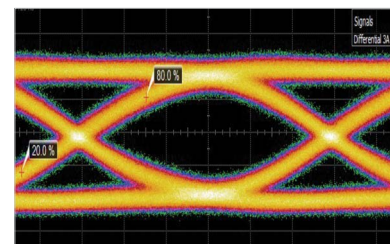
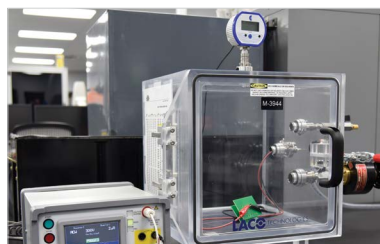


samtec.com/custom

With dedicated Application Specific Product engineers and technicians, Samtec is open to customizing interconnects spanning every product category we offer, which includes both simple modifications as well as completely new and custom designs.

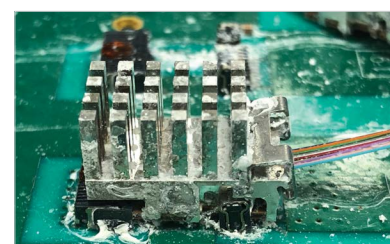
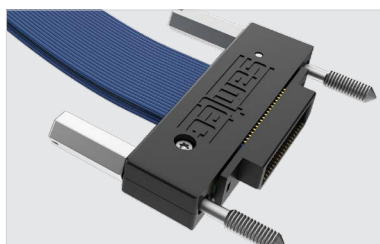
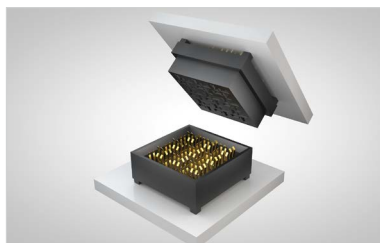
## INDUSTRY-LEADING SUPPORT & EXPERTISE

- Full engineering, design and prototype support
- Design, simulation and processing assistance
- Dedicated Application Specific Product engineers and technicians
- Industry-leading Customer Service
- Quotes and samples turned around in 24 hours
- Flexible, quick-turn in-house manufacturing
- Customer specific testing - AS9102 FAIs available
- ITAR compliant with U.S. based manufacturing
- Contact the Application Specific Products Group at [asp@samtec.com](mailto:asp@samtec.com) to discuss your application



## EXPRESS MODIFICATIONS & ENGINEERED CUSTOMS

- Up to 50  $\mu$ " Gold and Tin Lead plating available
- Polarized positions
- Modified stack heights, latching and screw downs
- Modified contacts, bodies, stamping, plating, wiring, molding and much more
- Ruggedizing features including strain relief, plastic housings, screw downs, latches, locks, etc.
- Mix-and-match cable end options for application specific requirements
- Many non-cataloged cable standards available, including 75  $\Omega$  micro coax & high-density twinax solutions
- Solutions for Optics in extreme environments: Samtec MIL-coat protected, salt-fog impenetrable, mitigation for tin whiskers, fungal resistant, extreme shock and vibration, full support for liquid immersion cooling





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