

# MICRO RUGGED

INTERCONNECT SOLUTIONS GUIDE

# MICRO RUGGED INTERCONNECT SOLUTIONS

Rugged contact systems, flexible power interconnects and rugged signal integrity combined with ultra-rugged offerings, create the foundation of Samtec's micro rugged 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. Samtec's rugged products are offered in conjunction with full engineering support, online tools and a service attitude that is unmatched in the connector industry.

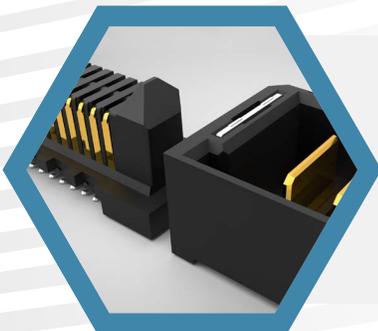
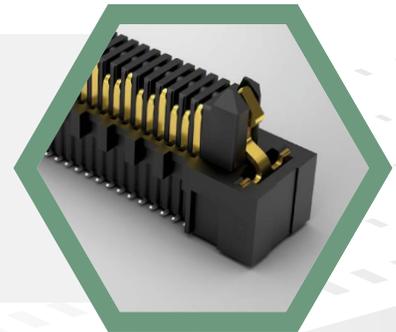


## RUGGED CONTACT SYSTEM

- 1,000+ MATING CYCLES
- TIGER EYE™ HEAT-TREATED BECU CONTACTS
- MULTIPLE POINTS OF CONTACT FOR HIGH-RELIABILITY

## RUGGED SIGNAL INTEGRITY

- HIGH SPEEDS TO 56 GBPS PAM4
- EDGE RATE® CONTACT DESIGN INCREASES WEAR LIFE
- EXPERTISE IN SIGNAL INTEGRITY DESIGN & ANALYSIS



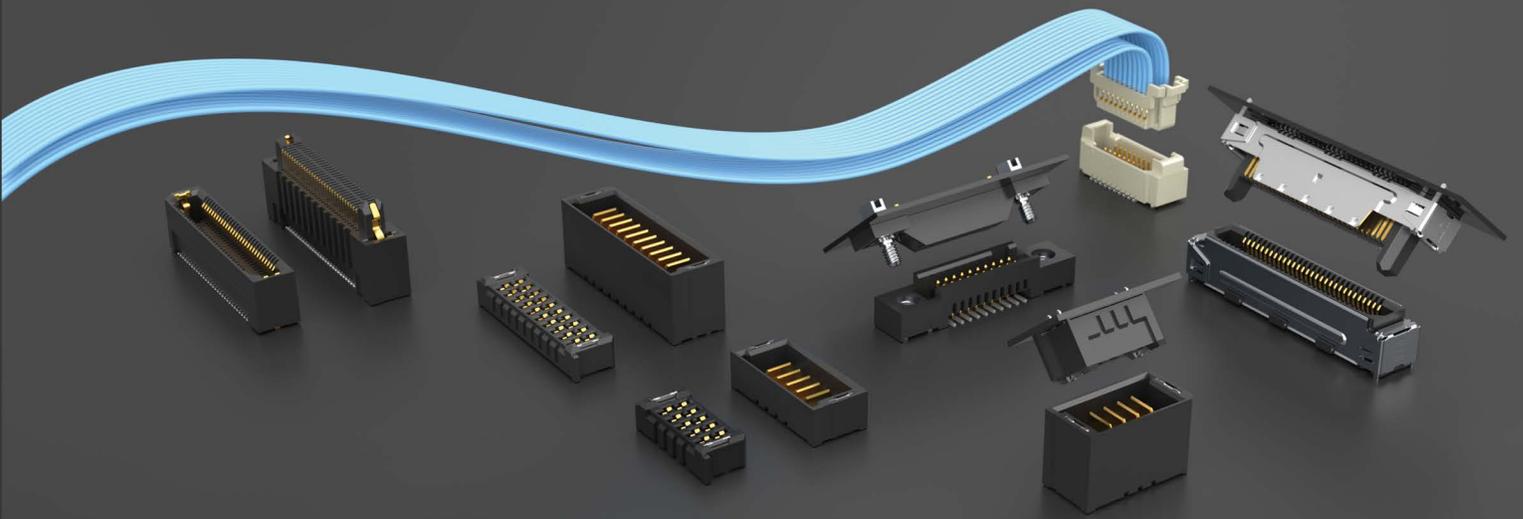
## FLEX POWER

- 3 TO 60 AMPS
- CONFIGURABILITY OF POWER & SIGNAL
- SPACE-SAVING FORM FACTOR

## ULTRA RUGGED

- EXTREME HIGH MATING CYCLES
- RUGGED MIL-DTL MATERIALS
- TESTING FOR EXTREME/HARSH APPLICATIONS





## RUGGED CONTACT SYSTEMS

Tiger Eye™ contact system for high-reliability in rugged applications  
 1,000+ mating cycles  
 0.80 mm to 2.00 mm pitch  
 Board-to-board, discrete wire and IDC cable assemblies



4-7

## RUGGED SIGNAL INTEGRITY SYSTEMS

Edge Rate® contact system for rugged signal integrity performance  
 Performance to 56 Gbps PAM4  
 0.50 mm, 0.635 mm and 0.80 mm pitch  
 Edge card and ultra-micro connectors



8-11

## FLEXIBLE POWER SYSTEMS

Ultra-micro power to 18 A and incredible design flexibility  
 Individually shrouded contacts  
 Small form factor, high power systems to 60 A  
 Board-to-board and cable assemblies



12-15

## ULTRA RUGGED SOLUTIONS

Ultra rugged power I/O systems  
 Ultra rugged hardware and standoffs  
 Ultra rugged testing (SET, E.L.P™, DQT)

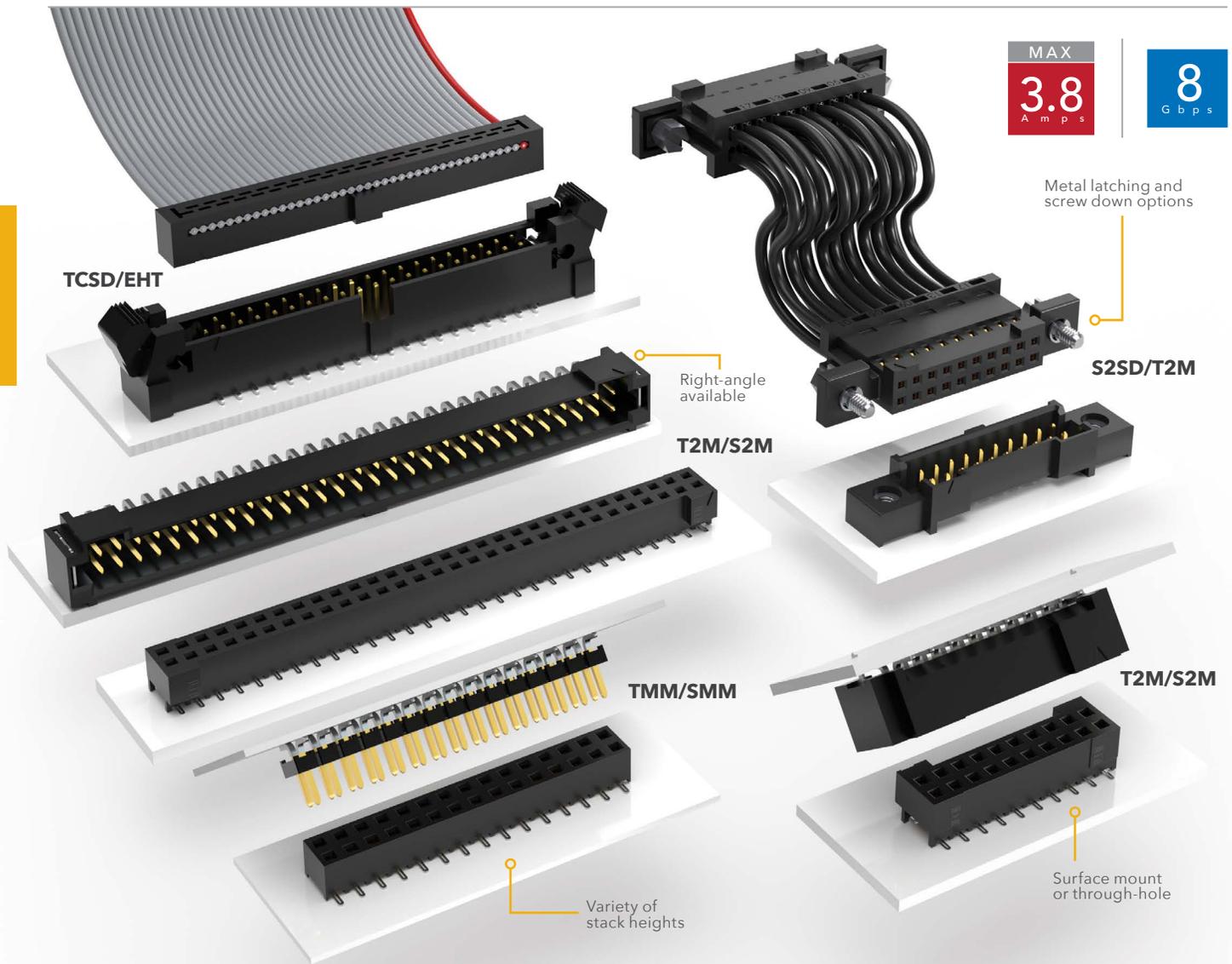


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Full System Support .....	23

# RUGGED TIGER EYE™ SYSTEMS

HIGH-RELIABILITY • MULTI-FINGER BeCu CONTACT • HIGH MATING CYCLES



## 2.00 mm PITCH TIGER EYE™

- Tiger Eye™ is Samtec's most rugged contact system rated to 1,000+ mating cycles
- Wide range of stack heights
- Right-angle mating headers available
- Optional screw downs, weld tabs and locking clips
- Discrete wire assemblies available in 24-30 AWG PVC or Teflon® wire; contact [asp@samtec.com](mailto:asp@samtec.com) for custom solutions



Optional strain relief and variety of wiring options



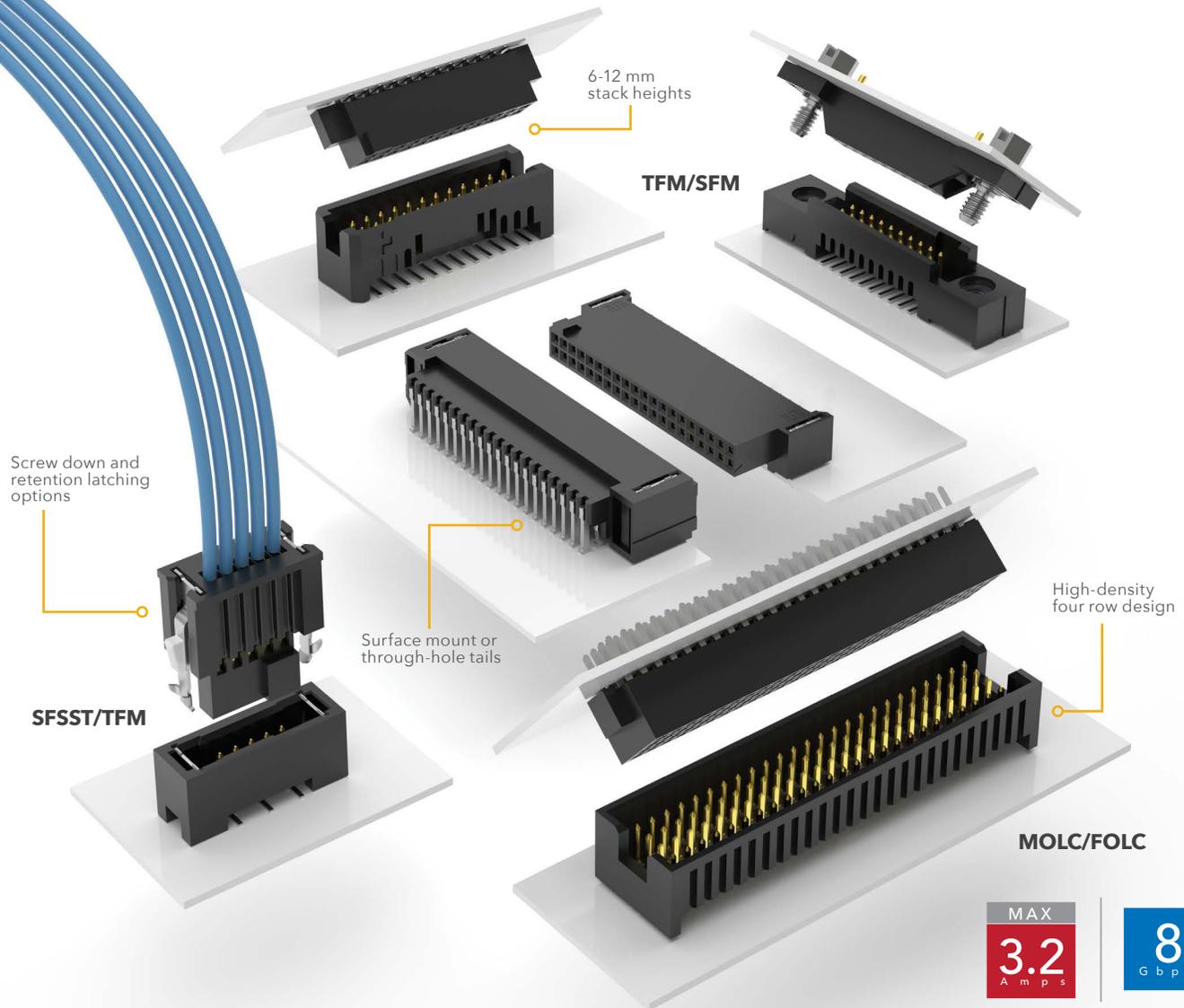
Components (ISD2/CC81) & tooling available: [samtec.com/tooling](http://samtec.com/tooling)

# TIGER EYE™ CONTACT



## 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



MAX  
**3.2**  
A m p s

**8**  
G b p s

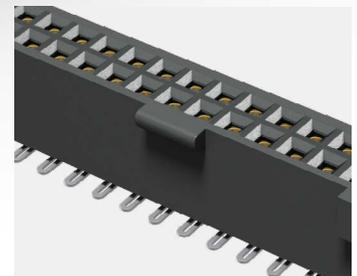
### 1.27 mm PITCH TIGER EYE™

- Screw down, locking clip, friction latching and weld tab ruggedizing options
- Shrouded, polarized and keyed
- Discrete wire assemblies available in single or double row, 28 and 30 AWG PVC or Teflon® wire; contact [asp@samtec.com](mailto:asp@samtec.com) for custom solutions
- Cable components (ISDF/CC03) and tooling available

Dupont™ Teflon® is a registered trademark of the E.I. du Pont de Nemours and Company or its affiliates.



IDC cable assemblies with rugged strain relief (FFSD/FFMD, FFTP/FMTP)



Locking for increased unmating force (SFML/TFML)

# RUGGED TIGER EYE™ SYSTEMS

HIGH-RELIABILITY • MULTI-FINGER BeCu CONTACT • HIGH MATING CYCLES

## 0.80 mm PITCH TIGER EYE™

- Micro pitch and slim body for space-savings
- 6 mm, 7 mm and 10 mm stack heights
- Locking clip, alignment pins and weld tab ruggedizing features
- Discrete wire assembly available with 32 AWG Teflon® wire; contact [asp@samtec.com](mailto:asp@samtec.com) for custom solutions
- Extended Life Product™ testing available



TIGER  
EYE™  
CONTACT

MAX  
2.9  
A m p s

8  
G b p s

Rugged latching system for increased withdrawal force



TEM/  
SEM

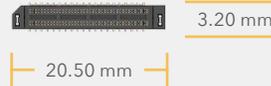
TEMS/  
SEMS

SESDT/  
TEM-L1

TEM/SEM

Vertical and right-angle mating headers

TEM/SEM shown at 40 total positions



Locking for increased unmating force (SEML)



Components (ISDE/CC396) and tooling available: [samtec.com/tooling](http://samtec.com/tooling)



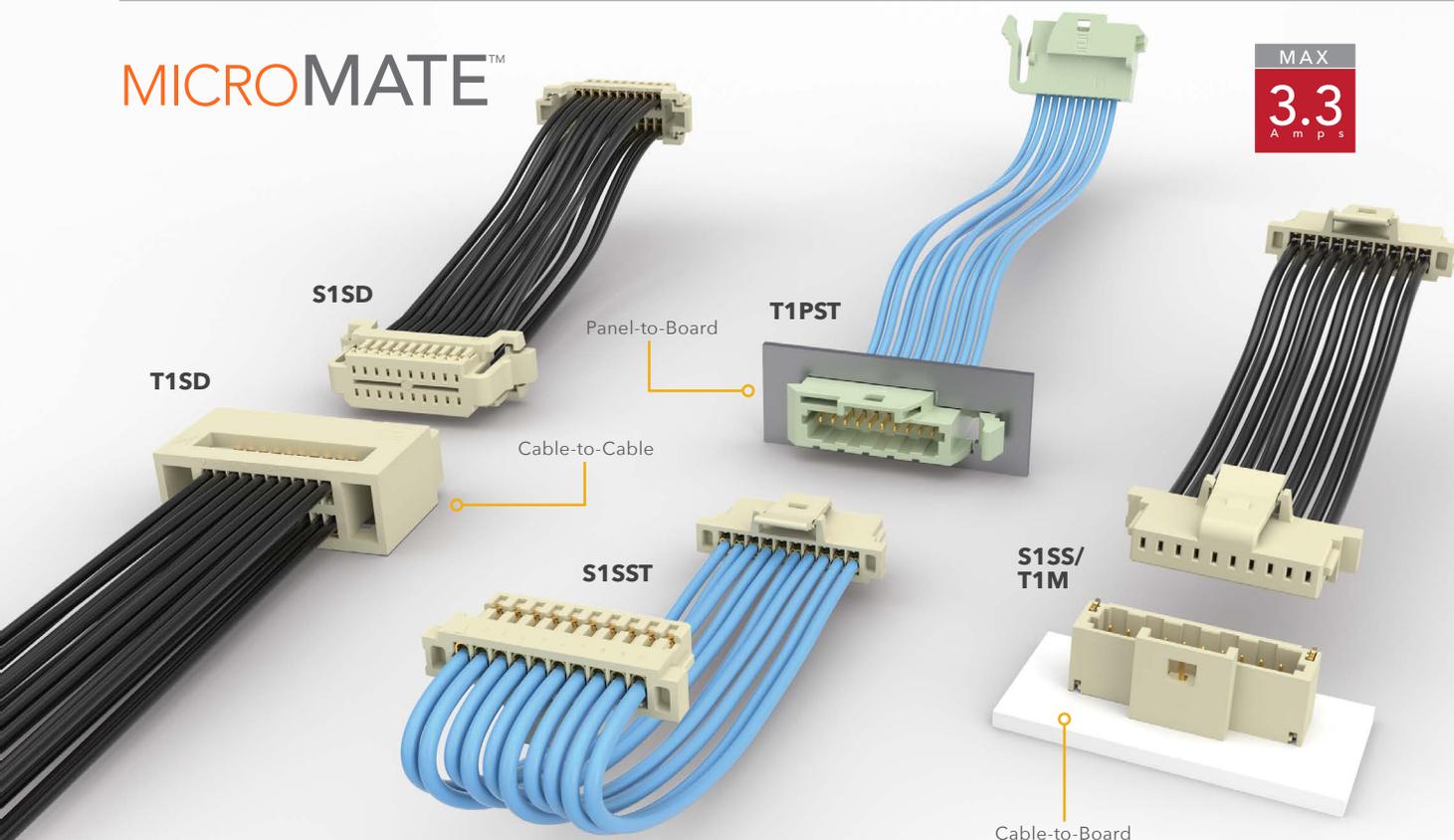
Compatible with mPOWER® for power/signal flexibility

# RUGGED MICRO MATE™ SYSTEMS

SPACE-SAVING • DESIGN FLEXIBILITY • HIGH-RELIABILITY

## MICROMATE™

MAX  
3.3  
A m p s



## 1.00 mm PITCH MICRO MATE™ SYSTEMS

- Crimp-style dual leaf contact system for reliable wire-to-board connection
- Rugged positive latching for increased retention
- 28 and 30 AWG wire options in PVC or Teflon®
- Socket or terminal, single or double row assemblies
- Vertical and right-angle mating headers



Dual leaf contact system for a reliable connection



Components (ISS1, ISD1/CC09; IST1, IDT1, ISP1, IDP1/TC37) and tooling available: [samtec.com/tooling](http://samtec.com/tooling)



Custom solutions available (twisted pair cable shown); contact [asp@samtec.com](mailto:asp@samtec.com)

# RUGGED SI EDGE RATE® SYSTEMS

OPTIMIZED FOR SI PERFORMANCE • INCREASED CONTACT WIPE • HIGH CYCLES

## 0.50 mm PITCH EDGE RATE®

- 1.00 mm contact wipe for a reliable connection
- Rugged friction locks and weld tabs available
- Up to 40% PCB savings vs. ERM8/ERF8
- Compatible with mPOWER® for flexible power/signal solutions

28  
Gbps

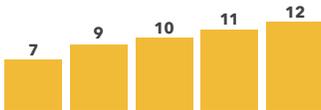
7 mm  
stack height

12 mm  
stack height

Right-angle  
available

ERM5/ERF5

Stack Height Flexibility  
(in mm)



## 0.635 mm PITCH SLIM BODY EDGE RATE®

- Extremely slim 2.5 mm body width
- Up to 120 positions in a 2-row design
- 5 mm stack height with others in development
- Compatible with mPOWER® for flexible power/signal solutions

PAM4

56  
Gbps

Signal/power combination  
with mPOWER®

ERM6/ERF6

J lead for ease  
of processing

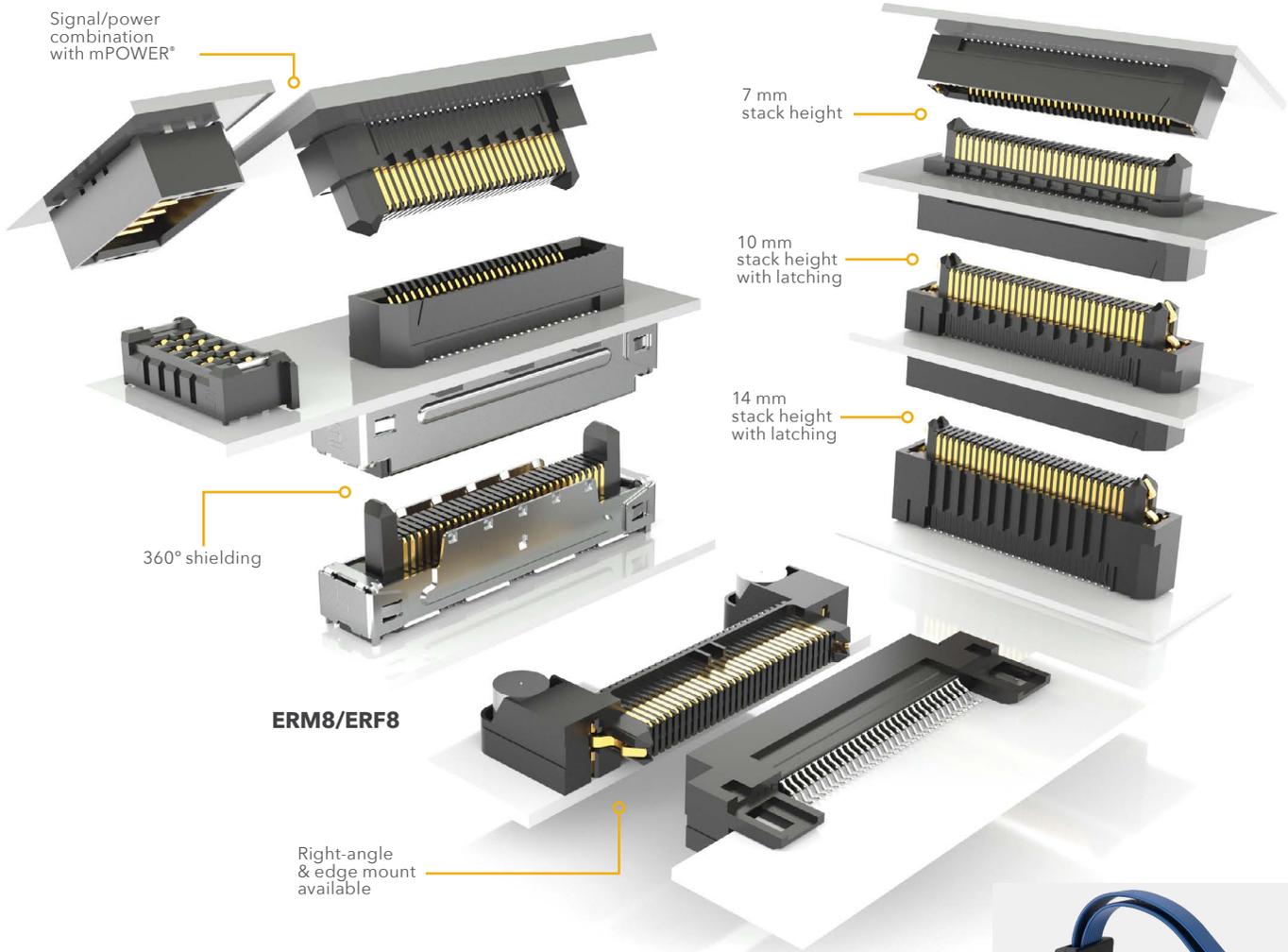
ERF6 shown at 40 total  
positions





## EDGE RATE® CONTACT SYSTEM

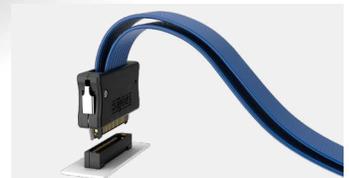
- Smooth milled mating surface reduces wear and increases durability
- Lower insertion and withdrawal forces
- Robust when “zippered” during unmating
- Minimized parallel surface area reduces broadside coupling and crosstalk
- Designed, simulated and optimized for 50 Ω and 100 Ω systems



## 0.80 mm PITCH EDGE RATE®

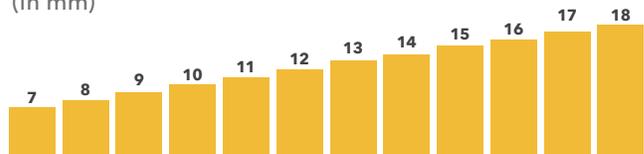
- 1.50 mm extended wipe
- Rugged metal latching for increased retention force
- 360° shielding option reduces EMI
- Compatible with mPOWER® for flexible power/signal solutions
- Cost-effective metal solder lock in development for a more secure connection to the board

28  
Gbps



Mating Cable Assemblies (ERCD/ERDP Series)

Stack Height Flexibility (in mm)

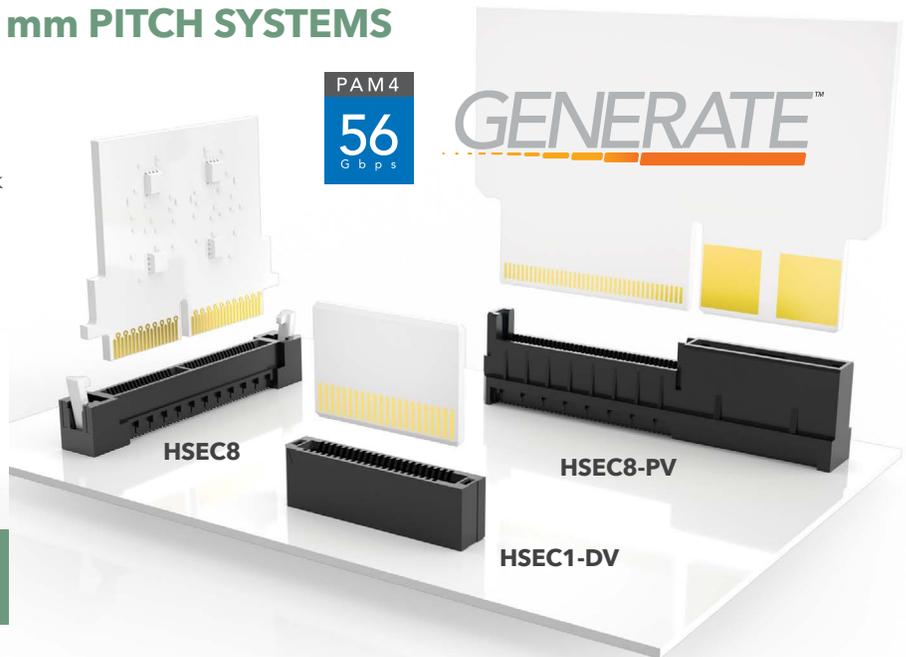


# RUGGED SI EDGE CARD

UP TO 56 Gbps PAM4 • CHOICE OF PITCH • EDGE RATE® CONTACTS

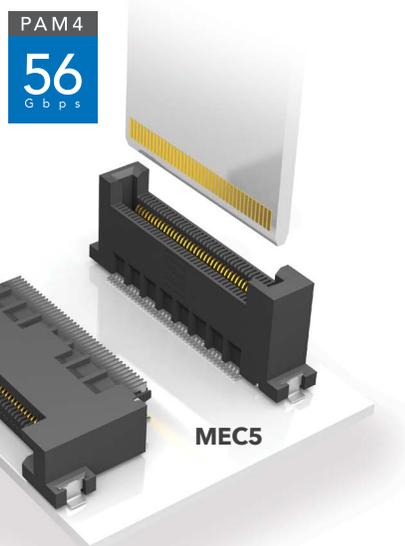
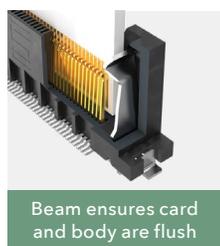
## 0.60 mm, 0.80 mm & 1.00 mm PITCH SYSTEMS

- High-speed Edge Rate® contact system
- Vertical, right-angle and edge mount
- Power/signal combo to 60 A per power bank
- 56 Gbps with differential pair (HSEC8-DP)
- Misalignment mitigation (HSEC1-DV)



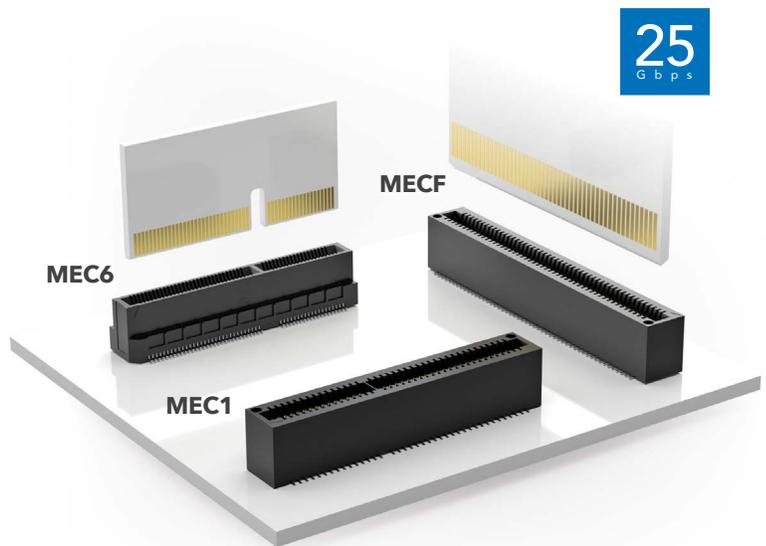
## HIGH-DENSITY EDGE CARD

- Justification beam enables use of standard PCB tolerance
- 0.50 mm ultra-fine pitch with up to 300 total I/Os
- PCIe® 4.0 capable



## MICRO EDGE CARDS

- 0.635 mm, 0.80 mm, 1.00 mm, 1.27 mm and 2.00 mm pitch
- Optional rugged weld tabs, board locks and solder locks
- Solutions for 1.60 mm (.062") and 2.36 mm (.093") thick cards



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# RUGGED SI MICRO SYSTEMS

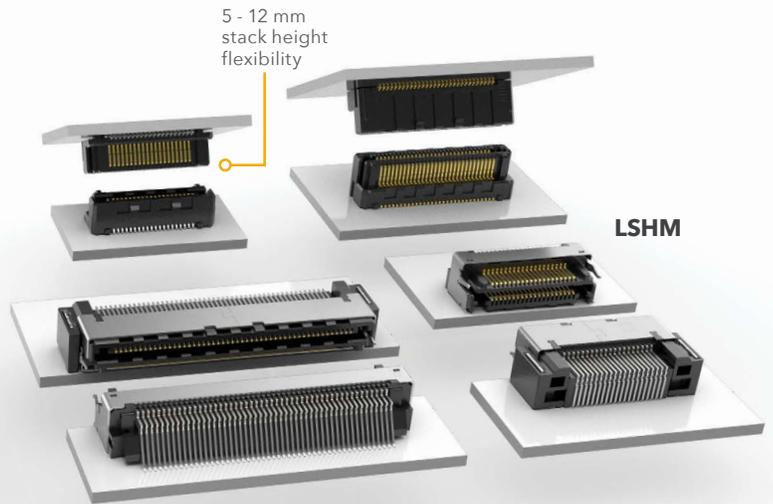
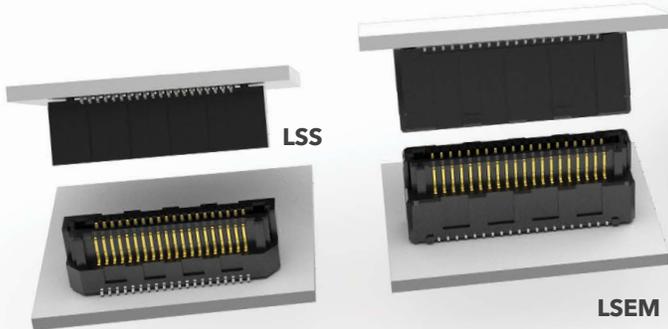
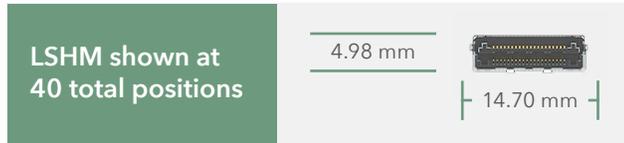
HIGH-DENSITY • HIGH-RETENTION CONTACTS • SLIM ROW-TO-ROW DESIGNS

## HERMAPHRODITIC RAZOR BEAM™ INTERFACES

- High-retention, high-speed Razor Beam™ contacts
- 0.50 mm, 0.635 mm and 0.80 mm pitch
- EMI shielding available to limit signal degradation and optimize performance



25  
Gbps



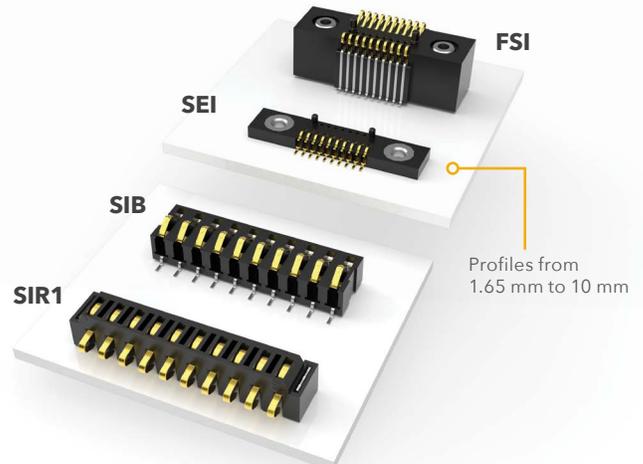
## FLOATING CONNECTORS

- Provides 0.50 mm contact float in the X and Y axes to compensate for misalignment
- 5 mm and 7 mm stack heights
- Micro 0.50 mm pitch



## ONE-PIECE INTERFACES

- Robust design and mechanical hold-downs for high-shock and vibration applications
- Optional rugged weld tabs and locking clips
- 1.00 mm, 1.27 mm and 2.54 mm pitch designs



# FLEXIBLE POWER

# ULTRA MICRO POWER

18 A PER BLADE • MICRO 2.00 mm PITCH • DESIGN FLEXIBILITY

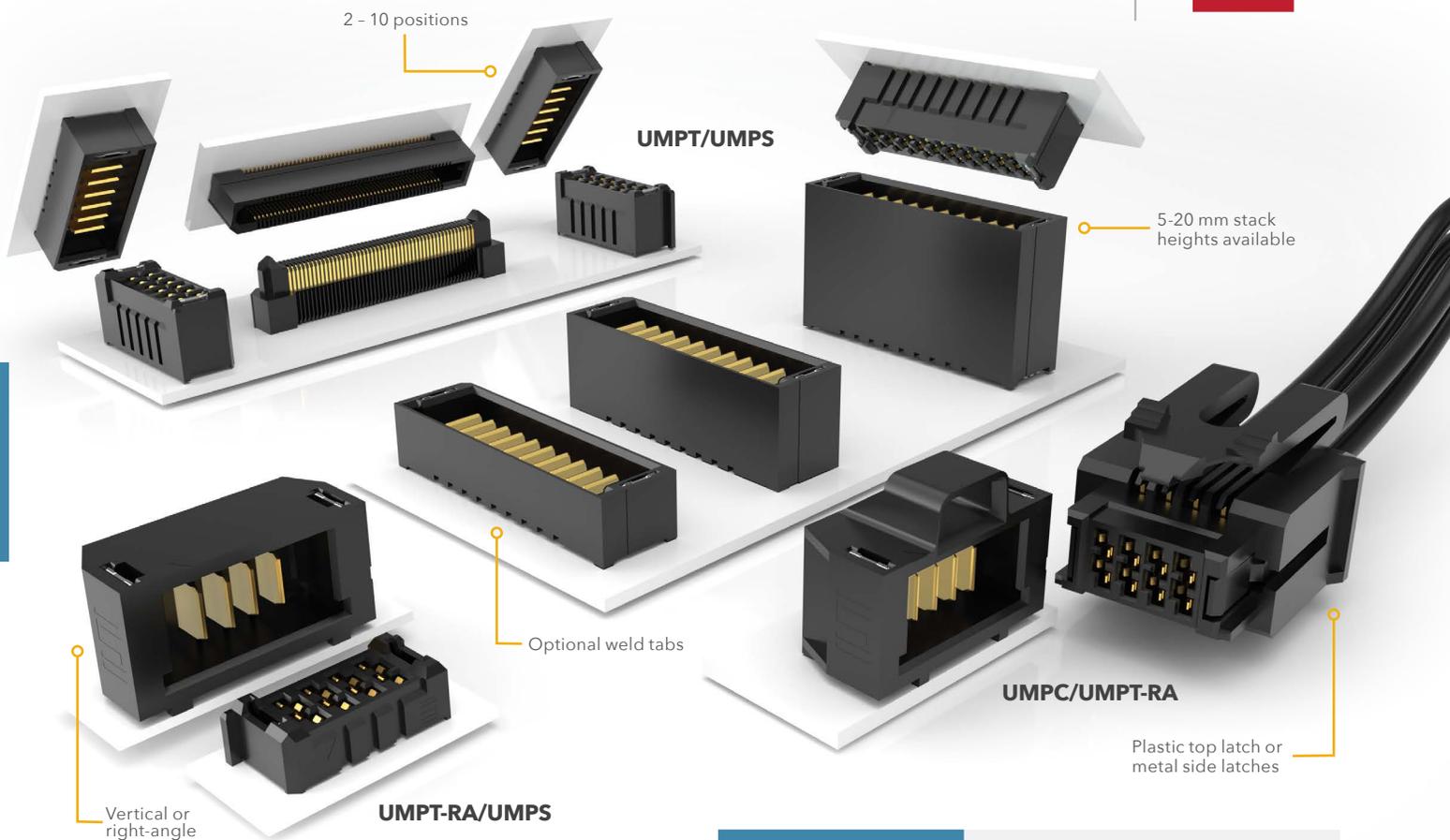
## 2.00 mm PITCH mPOWER®

- 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 (see chart)
- Tin or 10 μ" Gold plated power blades; 30 μ" Gold plating available to meet specific regulations

- Latch option for mating with cable assembly
- Standard creepage (2.20 mm) and clearance (1.65 mm)
- Cable components (IMPC/CC489) and tooling available
- Selectively loading contacts achieves customer specific creepage and clearance requirements; contact [asp@samtec.com](mailto:asp@samtec.com)

mPOWER®

MAX  
18  
A m p s



UMPT shown at 4 total positions



7.60 mm

15.30 mm

# POWER/SIGNAL MATED HEIGHTS

SIGNAL CONNECTOR	MATED HEIGHT (mm)													
	5	6	7	8	9	10	11	12	13	14	15	16	18	20
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													
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								

## CURRENT SPECIFICATIONS

CURRENT RATING (PER CONTACT)		
PINS	-T	-G
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 the maximum allowable temperature

## CREEPAGE & CLEARANCE

	CREEPAGE	CLEARANCE
UMPT/UMPS	2.20 mm	1.65 mm

Selectively loading contacts achieves customer specific creepage and clearance requirements. Contact [asp@samtec.com](mailto:asp@samtec.com)

## POWER SIMULATION

Samtec now offers power simulation that can calculate temperature increase in the connector area. Contact [MicroRuggedGroup@samtec.com](mailto:MicroRuggedGroup@samtec.com) for more details.

## PRODUCT ROADMAP



### Cable-to-Cable System

Shown: 4 Position Cable Assemblies with high-temperature Teflon® cable

#### POSITIONS

2, 3, 4, 5, 6, 7, 8, 9, 10

#### OPTIONS

Teflon® cable and rugged latching

# FLEXIBLE POWER HIGH-POWER

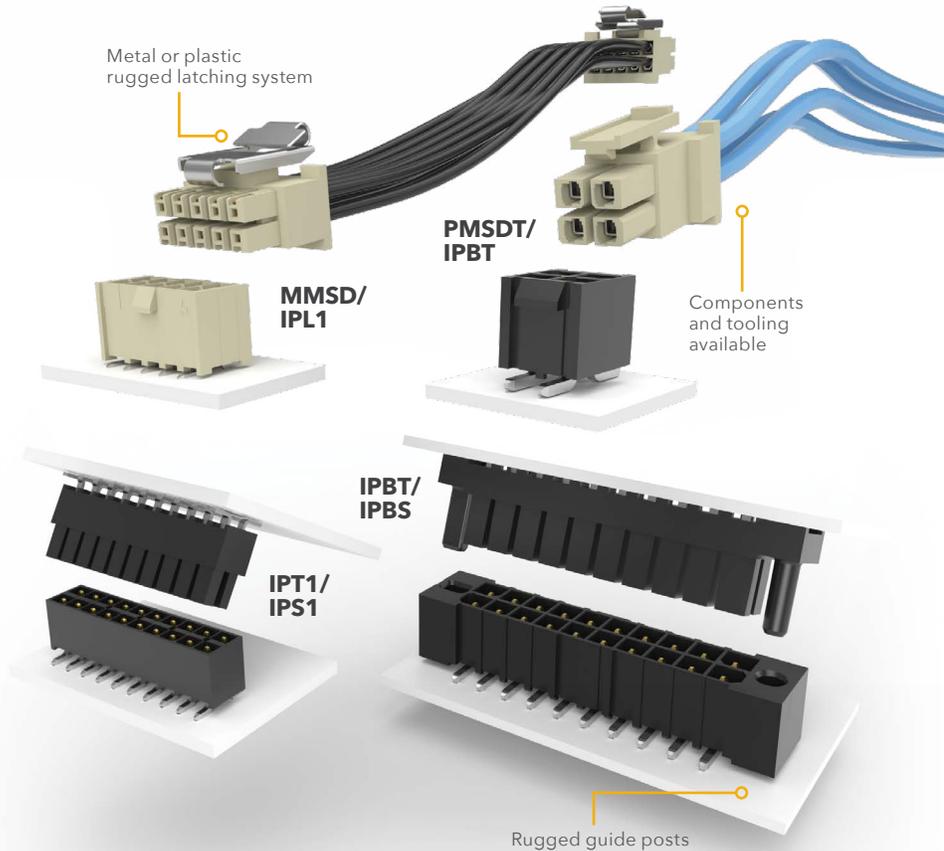
SMALL FORM FACTORS • 10-60 A PER PIN/BLADE • INDIVIDUALLY SHROUDED CONTACTS

## MINI MATE® & POWER MATE®

- Individually shrouded contacts for electrical and mechanical protection
- .100" (2.54 mm) and .165" (4.19 mm) pitch
- Discrete wire assemblies with 16-30 AWG PVC or Teflon® wire
- Selectively loading contacts achieves customer specific creepage and clearance requirements; contact [asp@samtec.com](mailto:asp@samtec.com)

MAX  
**10.3**  
A m p s

	CREEPAGE	CLEARANCE
IPT1/IPSP1 MMSS(T)/MMSD(T)	2.55 mm	1.91 mm
IPBT/IPBS PMSS(T)/PMSD(T)	4.27 mm	3.05 mm



## EXTREME POWER

- AC or DC power, AC-DC combos and split power options (ET60T/ET60S)
- High-density, double stacked power blades (LPHT/LPHS)
- Selectively loading contacts achieves customer specific creepage and clearance requirements; contact [asp@samtec.com](mailto:asp@samtec.com)

LPHT/LPHS

Low 7.5 mm profile design

3 or 5 signal rows in the same form factor

ET60T/ET60S

MAX

**60**  
A m p s

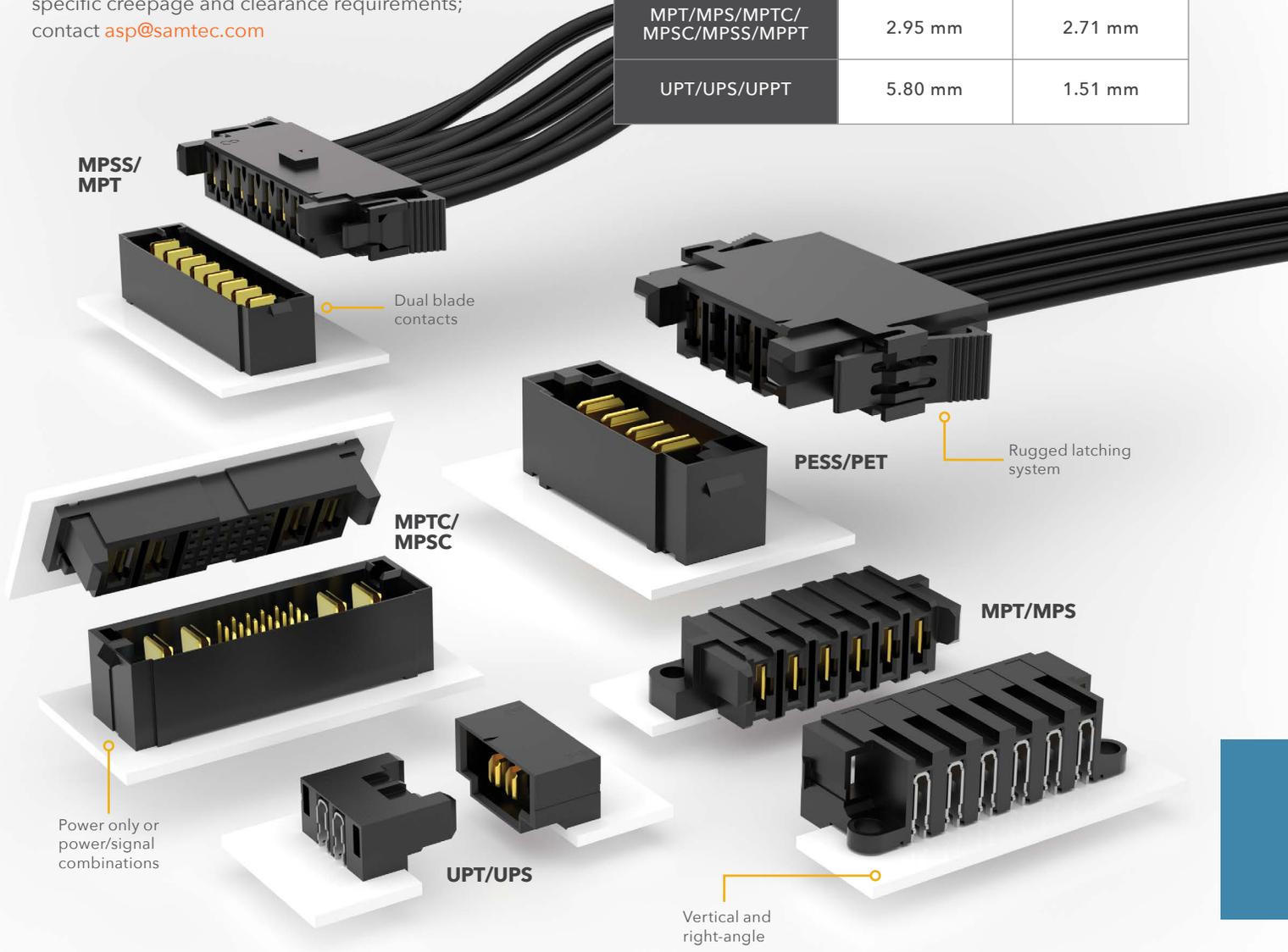
	CREEPAGE	CLEARANCE
LPHT/LPHS	5.63 mm	2.69 mm
ET60T/ET60S	3.02 mm	1.87 mm

# POWERSTRIP™ SYSTEM

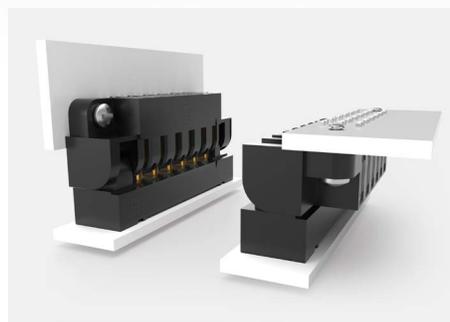
MAX  
**60**  
A m p s

- 23.5 A/blade to 58.7 A/blade (1 blade powered)
- 5.00 mm and 6.35 mm pitch
- Discrete wire assemblies with 10-16 AWG wire
- Selectively loading contacts achieves customer specific creepage and clearance requirements; contact [asp@samtec.com](mailto:asp@samtec.com)

	CREEPAGE	CLEARANCE
PET/PES/PETC/ PESC/PESS	3.66 mm	3.31 mm
MPT/MPS/MPTC/ MPSC/MPSS/MPPT	2.95 mm	2.71 mm
UPT/UPS/UPPT	5.80 mm	1.51 mm



Discrete wire components (IMS5,IMSC5/  
CC46,CC81; IPS6/CC10) and  
tooling available: [samtec.com/tooling](http://samtec.com/tooling)



"Hinging" for 90° mating radius,  
ideal for blind mating (FMPT/FMPS)



Hermaphroditic power system with  
rugged screw downs (MPPT, UPPT)

# ULTRA RUGGED I/O SYSTEMS

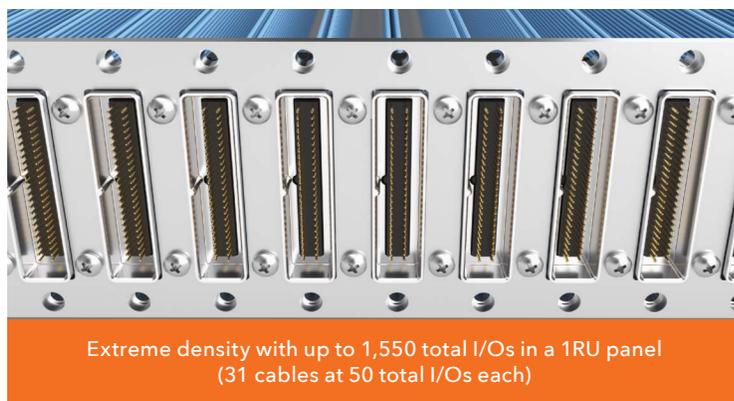
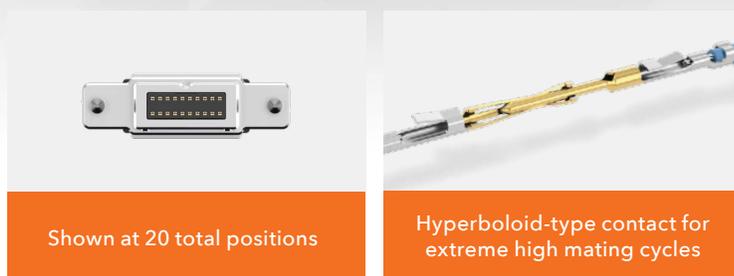
HIGH-RELIABILITY • HIGH CYCLE • SMALL FORM FACTOR

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



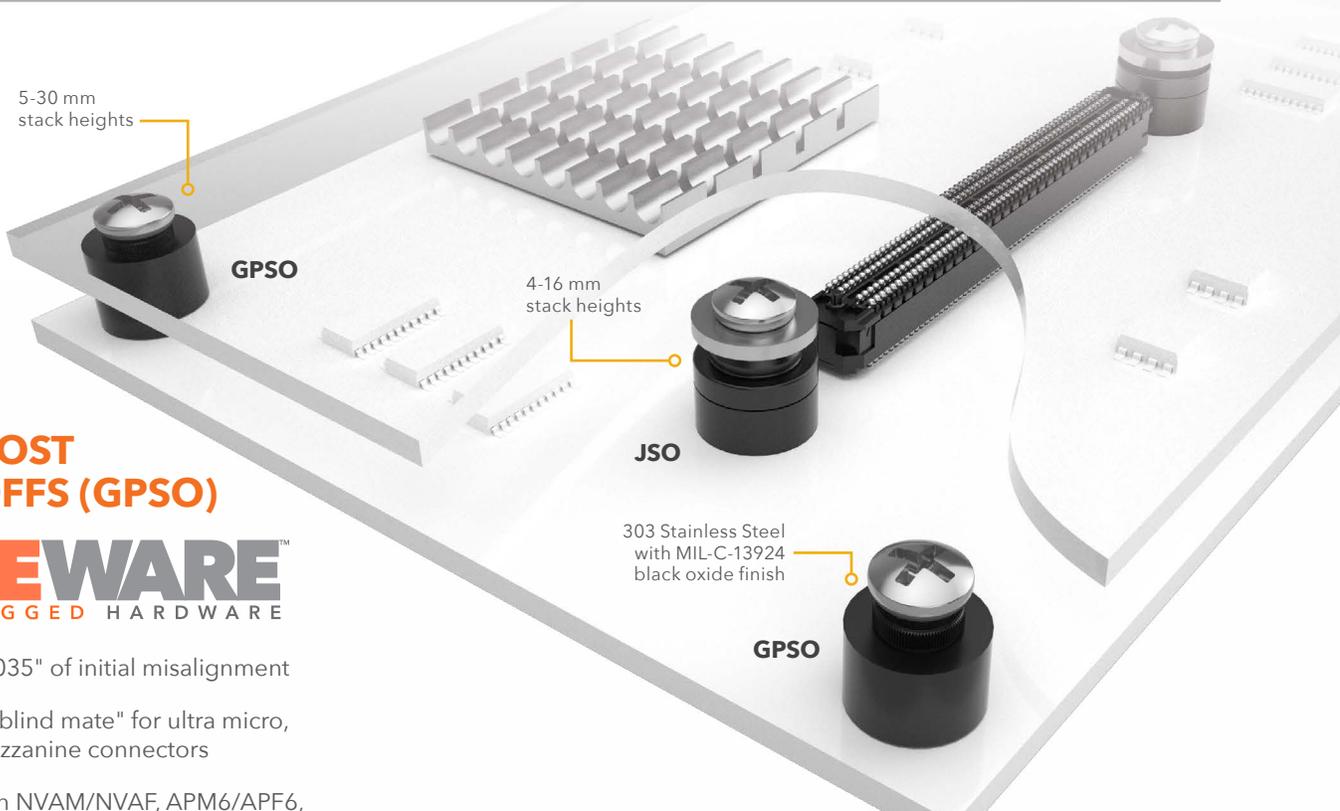
## RUGGED POWER I/O SYSTEMS

- Four points of contact for an extremely reliable connection
- Micro 1.00 mm pitch
- Up to 40 positions per row
- Cable-to-cable & cable-to-board solutions
- EMI shielding to limit signal degradation and optimize performance
- Through-hole or surface mount
- 28 and 30 AWG cable
- Currently in development; for more information contact [MicroRuggedGroup@samtec.com](mailto:MicroRuggedGroup@samtec.com)



# ULTRA RUGGED HARDWARE

STACK HEIGHT FLEXIBILITY • MISALIGNMENT MITIGATION • RUGGED MATERIALS



## GUIDE POST STANDOFFS (GPSO)

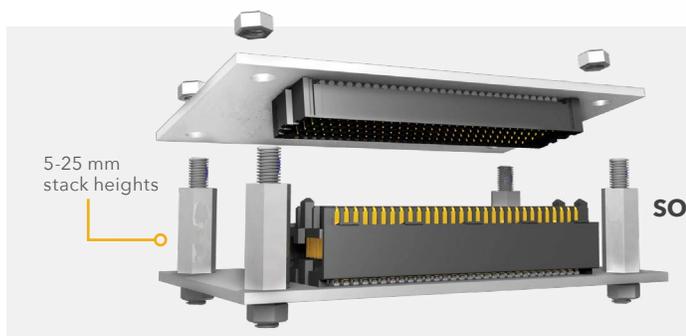
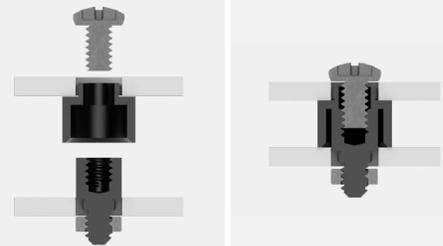
**SUREWARE™**  
ULTRA RUGGED HARDWARE

- Allows for 0.035" of initial misalignment
- Assists with "blind mate" for ultra micro, fine pitch mezzanine connectors
- Pairs well with NVAM/NVAF, APM6/APF6, ADM6/ADF6 and UMPT/UMPS

## JACK SCREW PRECISION STANDOFFS (JSO)

- Reduces risk of component damage
- Assists with unmating of high-normal force connectors like LSHM, SEAM/SEAMF, SEAM8/SEAF8 and LPAM/LPAF

**GPSO:**  
Alignment starts before connectors engage



## PRECISION STANDOFFS (SO)

- Precision machined tolerances (+/- .002" (0.05 mm))
- Ideal for use with all Samtec high-speed connectors
- Standard nylon thread locking compound

# ULTRA RUGGED TESTING

SEVERE ENVIRONMENT • EXTENDED LIFE • DESIGN QUALIFICATION

## SEVERE ENVIRONMENT TESTING

Severe Environment Testing (SET) is a Samtec initiative to test products beyond typical industry standards and specifications for performance confidence in rugged/harsh environment industries. These products undergo additional testing, inspired by military standards, to ensure they are more than suitable for military, space, automotive, industrial and other extreme applications.

SET qualified products are Commercial Off-the-Shelf (COTS) and modified COTS for incredible design flexibility to get solutions to market faster. Visit [samtec.com/SET](http://samtec.com/SET) or contact [SET@samtec.com](mailto:SET@samtec.com) for additional information and current available test results.



- Performance confidence
- Short lead-times
- Cost-effective
- Qualification Testing online
- No minimum order quantity
- Modified COTS built to Samtec's print



## SET QUALIFIED PRODUCTS

**SFM/TFM** - Tiger Eye™ 1.27 mm Pitch Micro Rugged System

**SEAF/SEAM** - SEARAY™ High-Density Arrays

**LSHM** - Razor Beam™ Hermaphroditic Strips

**SSM/TSM** - .100" Pitch Square Post Header & Socket

**FTSH/CLP** - .050" Pitch Header & Socket

**ERF8/ERM8** - Edge Rate® Rugged High-Speed Strips

**S2M/T2M** - Tiger Eye™ 2.00 mm Pitch Micro Rugged System

**UMPS/UMPT** - mPOWER® Ultra Micro Power Connectors

**SEAF8/SEAM8** - SEARAY™ Ultra-High Density Arrays

**Testing Now:** Micro Mate™ and Tiger Eye™ Discrete Wire Systems, Micro Coax and Twinax Cable Assemblies, FireFly™ Copper Systems and AccliMate™ Sealed I/O Systems

## SET TESTING INCLUDES

- Mating/Unmating/Durability
- Mechanical Shock/Random Vibration/LLCR & Nanosecond Event Detection
- Temperature Cycling
- Non-Operating Class Temperature
- DWV at Altitude
- Electrostatic Discharge (ESD)
- Outgassing

## NASA

Samtec's SET products are approved for NASA Class D missions that require high-reliability, quick-turn and cost-effective solutions for LEO and GEO satellites, SmallSats, CubeSats and other space exploration applications.

## EXTENDED LIFE PRODUCT™

E.L.P.™ products are tested to rigorous standards, which evaluate contact resistance in simulated storage and field conditions.

- 10 year Mixed Flowing Gas (MFG)
- High Mating Cycles (250 to 2,500)
- Certain plating and/or contact options will apply

For complete details about Samtec's E.L.P.™ program, a list of qualifying products and test results, please visit [samtec.com/ELP](http://samtec.com/ELP) or email the Customer Engineering Support Group at [ASG@samtec.com](mailto:ASG@samtec.com)



## DESIGN QUALIFICATION TESTING

All Samtec series undergo Design Qualification Testing (DQT), which includes:

- Gas Tight
- Normal Force
- Thermal Aging
- Mating/Unmating/Durability
- IR/DWV
- Current Carrying Capacity (CCC)
- Mechanical Shock/Random Vibration/LLCR
- Mechanical Shock/Random Vibration/Event Detection



## TESTING REFERENCE CHART

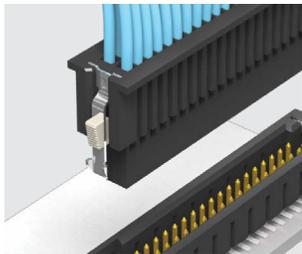
TEST	SET	E.L.P.™	DQT
Gas Tight	X*	X*	X
Normal Force	X*	X*	X
Thermal Aging	X*	X*	X
Mating / Unmating / Durability (240 Hrs)	X (100% RH, 250 Cycles)	X* (90-98% RH, 100 Cycles)	X (90-98% RH, 100 Cycles)
IR / DWV	X (At Altitude of 70,000 Feet)	X*	X
CCC	X*	X*	X
Mechanical Shock / Random Vibration / LLCR & Nanosecond Event Detection	X (40 G Peak, 11 ms, Half Sine & 12gRMS, 5 - 2,000 Hz, 1 Hr / Axis)	X* (100 G Peak, 6 ms, Half Sine & 7.56gRMS Avg, 2 Hr / Axis)	X (100 G Peak, 6 ms, Half Sine & 7.56gRMS Avg, 2 Hr / Axis)
Temperature Cycling (500 Cycles)	X	N/A	N/A
Non-Operating Class Temperature	X	N/A	N/A
Electrostatic Discharge (ESD)	X	N/A	N/A
10 Year MFG (Mixed Flowing Gas)	N/A	X	N/A
Mating Cycles (250 to 2,500)	N/A	X	N/A

\*Completed as part of initial Design Qualification Testing (DQT). E.L.P.™ and SET testing are performed in addition to DQT.

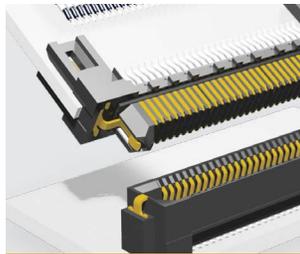
# RUGGED FEATURES

OPTIONS FOR HIGH-RELIABILITY • HIGH-RETENTION • HIGH-CYCLE LIFE

## RUGGEDIZING OPTIONS



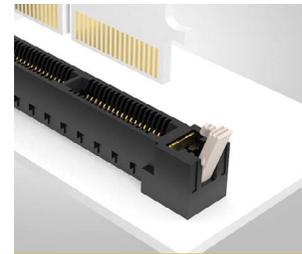
**POSITIVE LATCHING**  
Manually activated latches increase unmating force by up to 200%



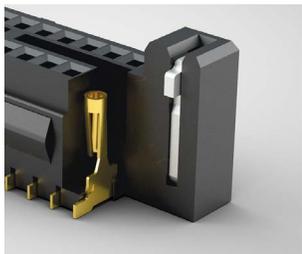
**FRICTION LOCKS**  
Metal or plastic friction locks increase retention/withdrawal force



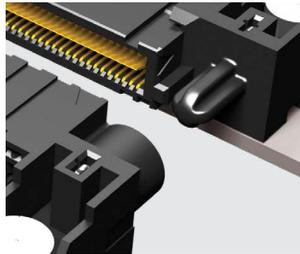
**RETENTION PINS**  
Increase unmating force by up to 50%



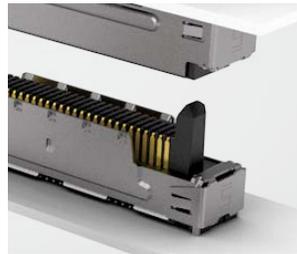
**BOARD LOCKS**  
Boards are mechanically locked together



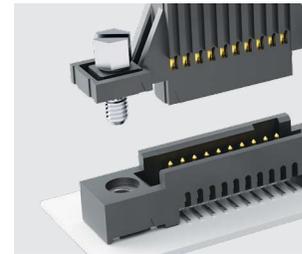
**WELD TABS**  
Significantly increase shear resistance of connector to PCB



**GUIDE POSTS**  
Easy and secure mating



**SHIELDING**  
360° shielding reduces EMI



**SCREW DOWNS**  
Secure mechanical attachment to the board

## CONTACT SYSTEMS

**TIGER EYE™**  
CONTACT



- High-reliability
- High Mating Cycles
- Multi-finger Contact

**TIGER CLAW™**  
CONTACT



- Dual Wipe Contact
- Pass-through Applications
- Ultra-low Profile

**BLADE & BEAM™**  
CONTACT



- Mating/Alignment "Friendly"
- Cost-effective

**TIGER BEAM™**  
CONTACT



- Best Cost
- Reliable Performance
- Post & Beam Contact

**EDGE RATE®**  
CONTACT



- Designed for Signal Integrity
- Superior Impedance Control
- Reduced Broadside Coupling

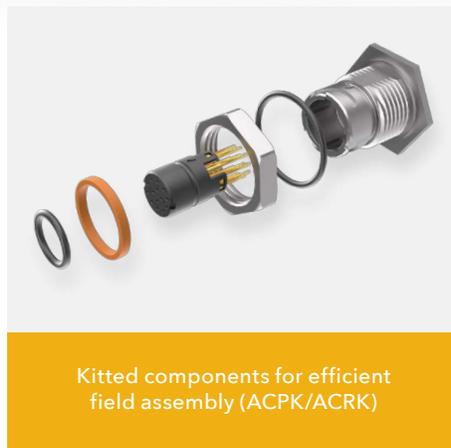
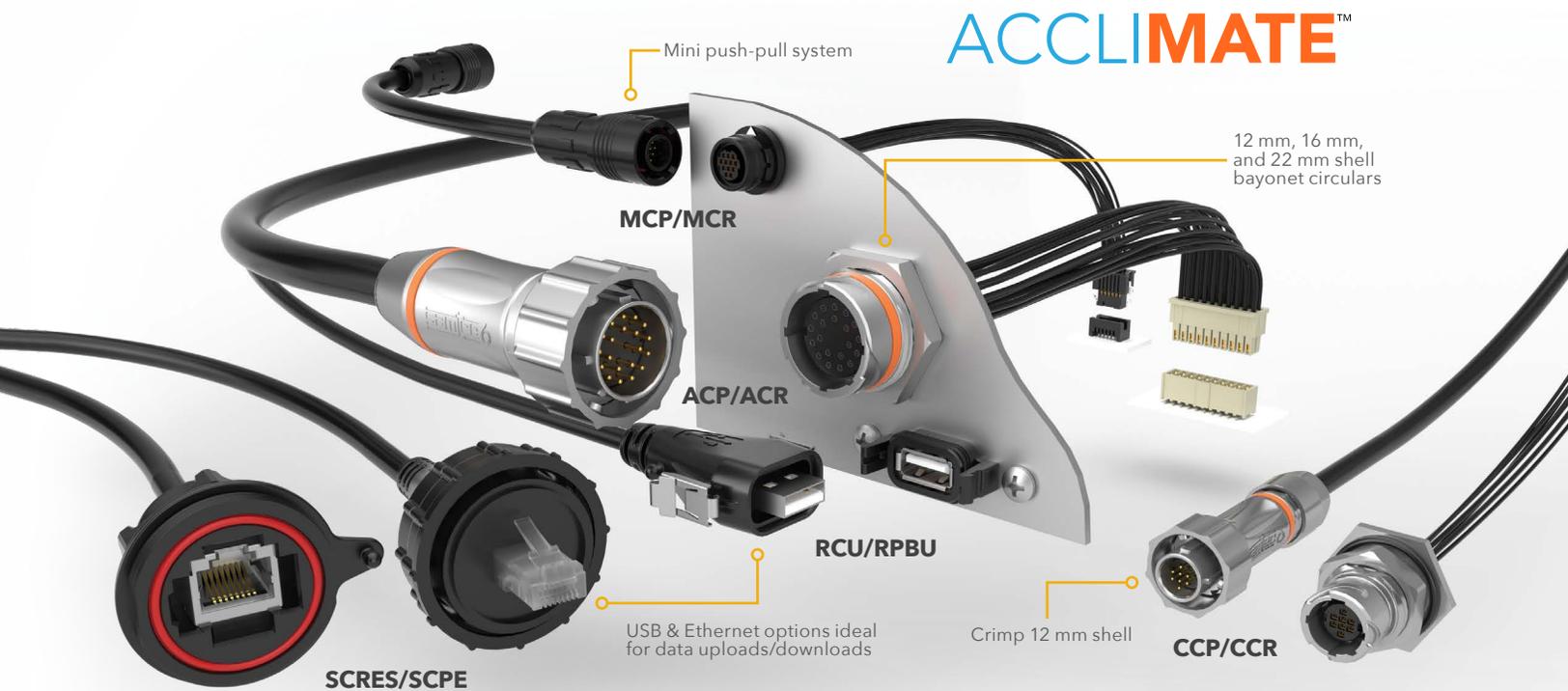
# SEALED I/O

# ACCLIMATE™ SYSTEMS

IP67 & IP68 • BAYONET/PUSH-PULL CIRCULARS • SPACE-SAVING RECTANGULARS

## FLEXIBLE SEALED SYSTEMS

- IP67 miniature push-pull latching system with lightweight plastic shell
- IP68 bayonet-style latching circulars with metal or plastic shells and flexible configurations
- Cost-effective crimp version available
- Rectangular design for maximum panel area savings
- IP68 threaded circulars with rugged overmold design
- Right-angle and cable-to-cable options in development (ACX, CCX)

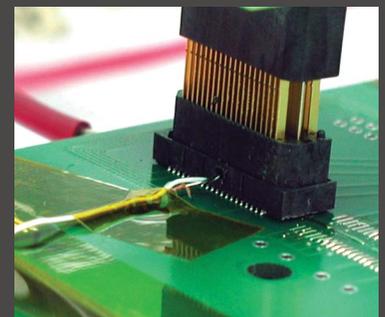
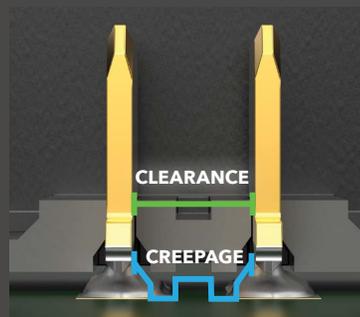
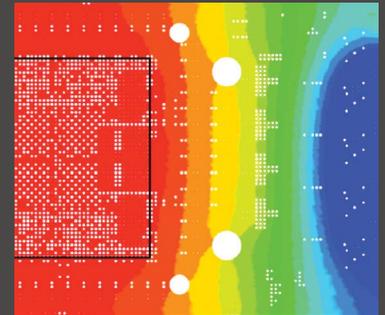


# POWER INTEGRITY & CUSTOM SOLUTIONS

## POWER INTEGRITY SERVICES

- Standard power test data, including current carrying capacity, working voltage, voltage drop and resistance, creepage and clearance, is available for select power systems
- Current Cycling Test Data, which demonstrates connector performance in realistic and common applications, is available for select series
- Power Integrity Guidelines are based on test data and proven design parameters, designed to help in connector selection and PCB design maximization
- Power Integrity Certified products undergo testing and additional requirements unique to Samtec. Products must pass Current Cycling Test EIA 365-55, have current carrying capacity, resistance vs. number of contacts data available and Power Integrity Guidelines developed

Visit [samtec.com/powerintegrity](http://samtec.com/powerintegrity) to learn more

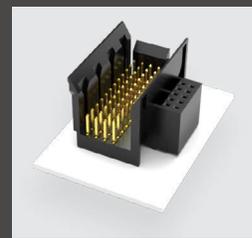


## FLEXIBLE RUGGED SOLUTIONS

- Full engineering, design and prototype support
- Design, simulation and processing assistance
- Quotes and samples turned around in 24 hours
- Dedicated Application Specific Product engineers and technicians
- Custom options for board level connectors and cable assemblies including: contacts, bodies, stamping, plating, wiring, molding, ruggedizing features and more

### Express Modification

Standard PowerStrip™ cable with non-standard end 2 option



### Engineered Custom

Multi-power staging, power/signal combo, header/socket combo, custom body

## FLEXIBLE DISCRETE WIRE SOLUTIONS

- Variety of end 2 options
- Barrel crimp
- Nylon woven sleeves
- Ring/spade lug terminal
- Twisted pairs
- Break out
- Heat shrink
- Panel mount
- Color coding
- Sealed
- Selectively populated
- Harness style crimp



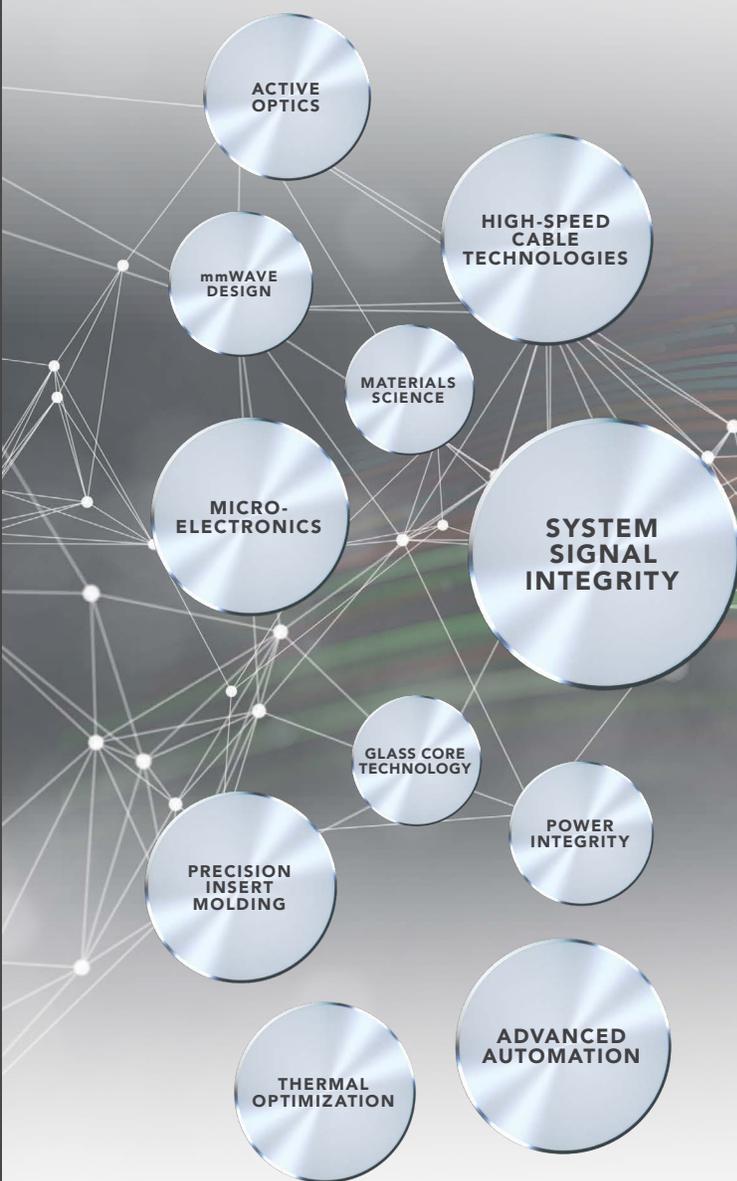
Contact Customer Engineering Support at [asp@samtec.com](mailto:asp@samtec.com) for express modifications or engineered customs.

# FULL SYSTEM SUPPORT

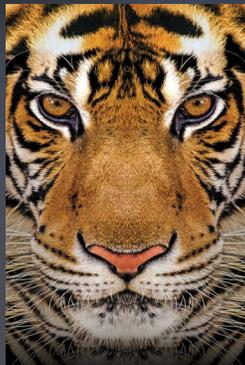
## INTEGRATION LEADS TO INNOVATION

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.**



Visit [samtec.com/tech-centers](http://samtec.com/tech-centers) for more information.



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