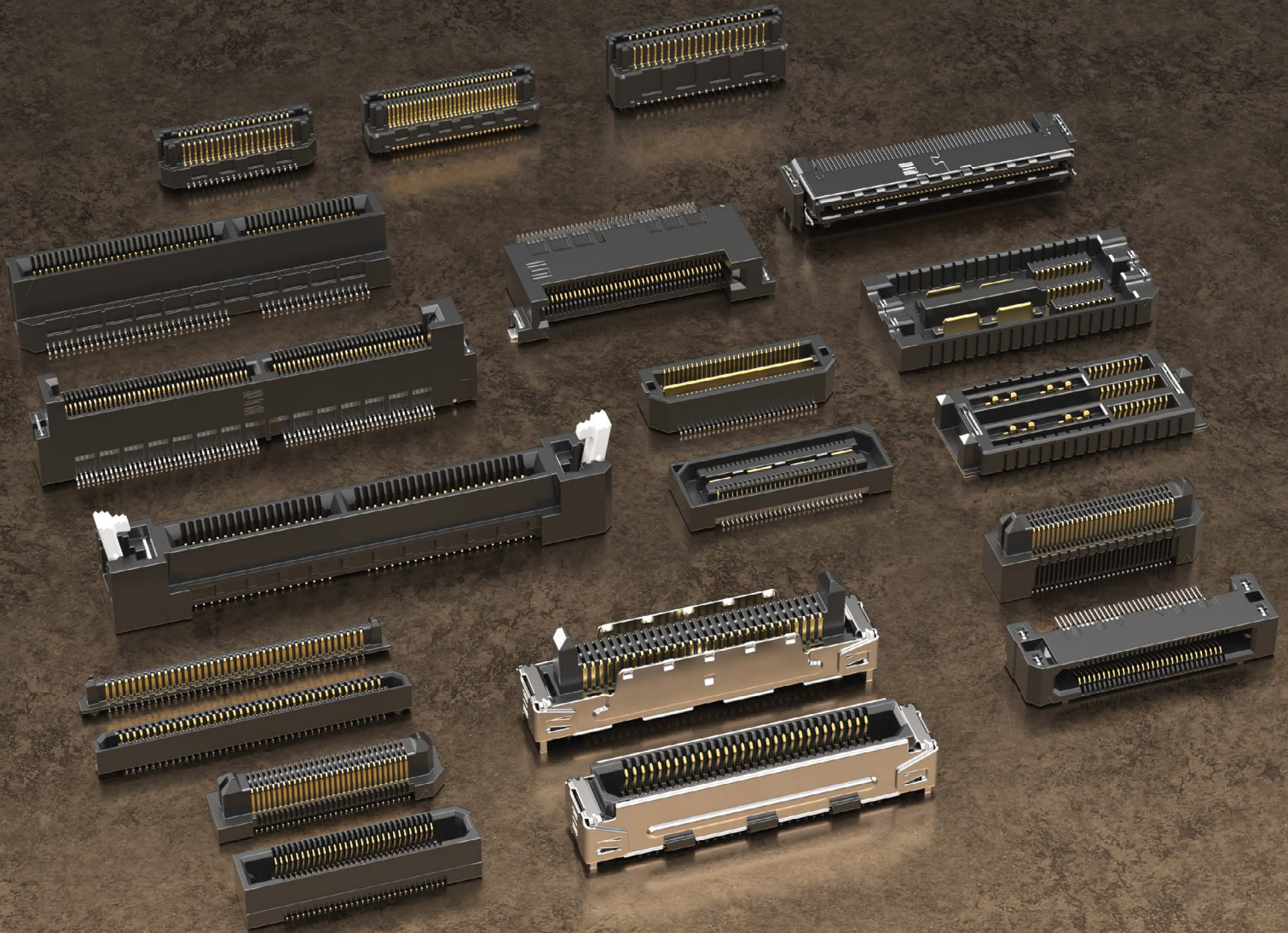
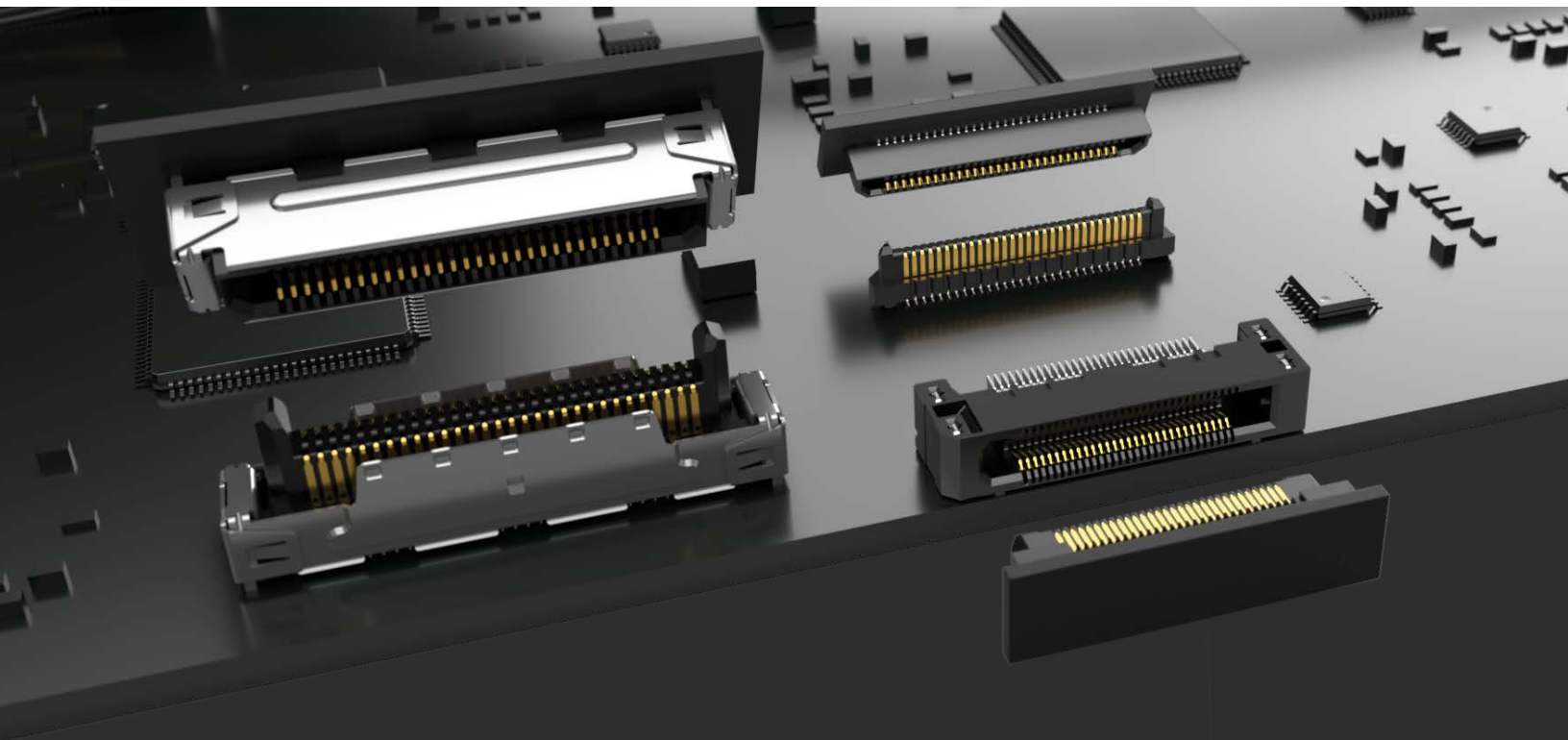




RUGGED HIGH-SPEED SYSTEMS



RUGGED HIGH-SPEED SYSTEMS



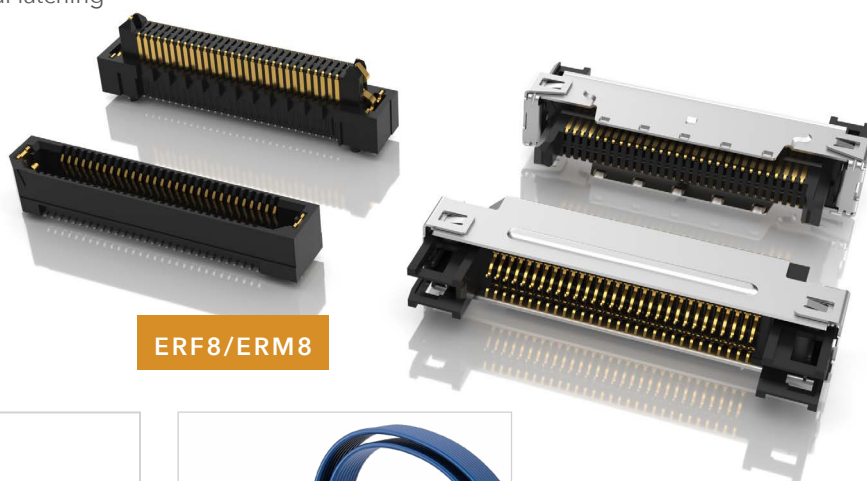
0.80 mm PITCH EDGE RATE®

- 1.50 mm extended contact wipe
- Optional extended guide post and rugged metal latching
- 360° shielding option reduces EMI
- Up to 200 total pins
- Single-ended or differential pair signaling
- Vertical, right-angle and edge mount available
- Severe Environment Testing (SET) qualified (ERF8/ERM8); aligns with MIL-DTL-55302. Visit samtec.com/set for test reports.

**EDGE
RATE**
SYSTEM

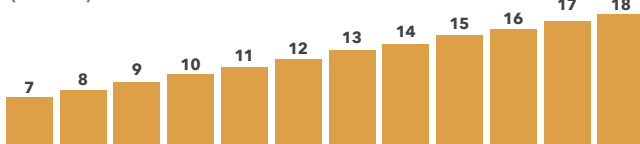
PAM4

56
Gbps



ERF8/ERM8

Stack Height Flexibility
(in mm)



Mating Cable Assemblies
(ERCD/ERDP Series)

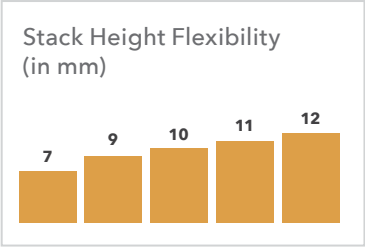
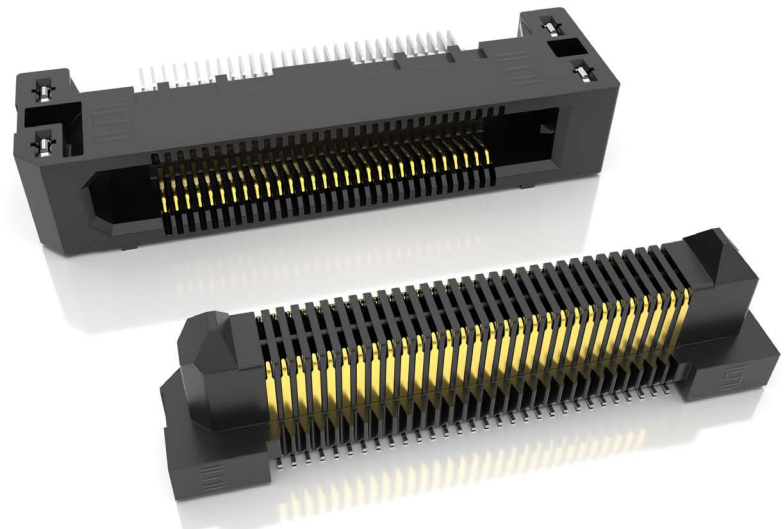
0.50 mm PITCH EDGE RATE®

- 1.00 mm contact wipe for a reliable connection
- Rugged friction locks and weld tabs available
- Up to 40% PCB savings vs. 0.80 mm pitch
- Up to 150 total pins
- Vertical and right-angle available

**EDGE
RATE**
SYSTEM

28
Gbps

ERF5/ERM5



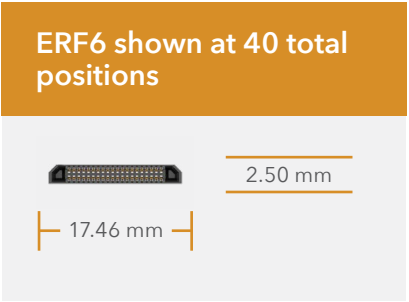
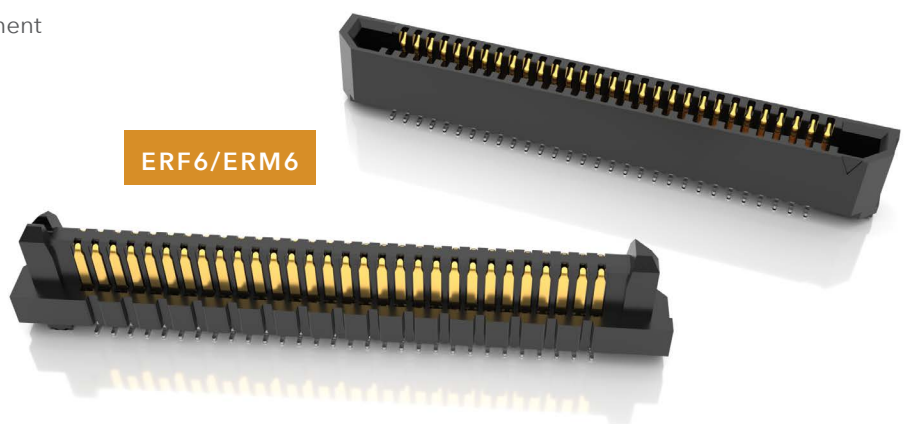
0.635 mm PITCH SLIM BODY EDGE RATE®

- Extremely slim 2.5 mm body width
- 0.90 mm contact wipe
- Up to 120 total positions in a 2-row design
- 5 mm stack height with others in development
- Optional weld tabs
- J lead for ease of processing

**EDGE
RATE**
SYSTEM

PAM4
56
Gbps

ERF6/ERM6



**EDGE
RATE**
CONTACT



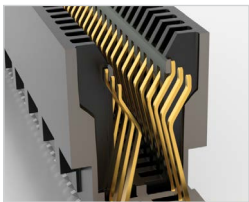
EDGE RATE® CONTACT SYSTEM

- 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

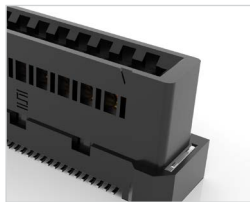
Rugged High-Speed Systems

0.60 mm, 0.80 mm & 1.00 mm PITCH SYSTEMS

- High-speed Edge Rate® contact system
- Vertical, right-angle, edge mount and pass-through
- Power/signal combo to 60 A per power bank (HSEC8-PV)
- PCIe® 3.0, 4.0 and 5.0 capable
- 0.60 mm pitch is PCIe® 6.0 capable with performance to 64 Gbps PAM4 (32 Gbps NRZ)
- Misalignment mitigation (HSEC1-DV)
- Press-fit tails, weld tabs, locks and latches



Rugged tucked beam technology (HTEC8)

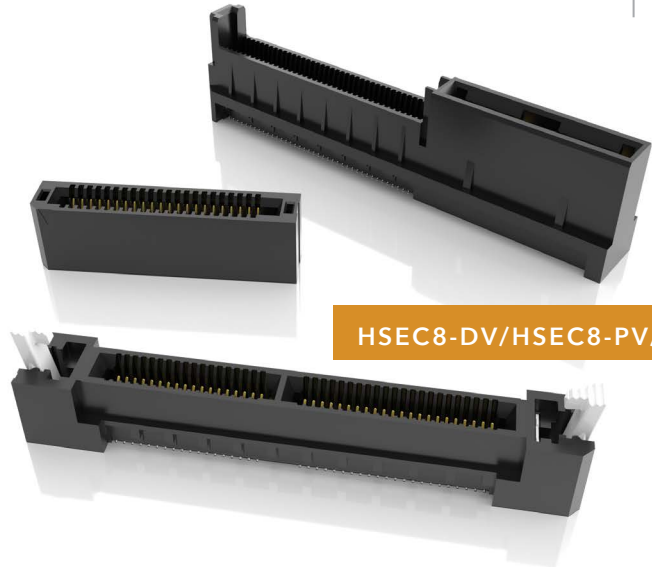


Compliant to SFF-TA-1002 (HSEC6)

GENERATE™

PAM4

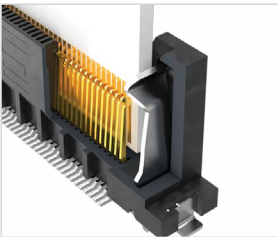
56
Gbps



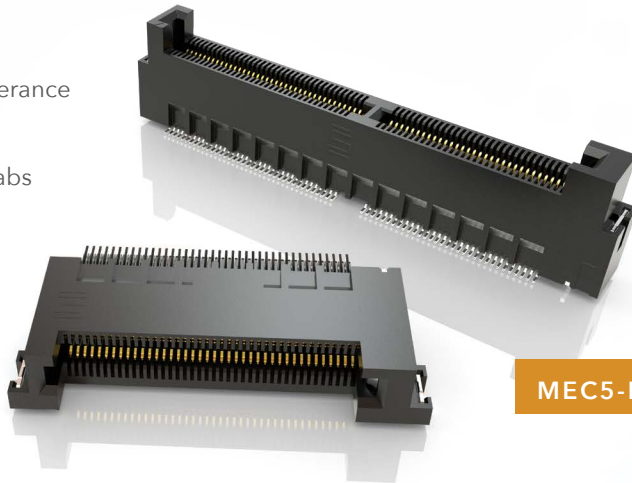
HSEC8-DV/HSEC8-PV/HSEC1

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
- Surface mount or through-hole with rugged weld tabs
- PCIe® 4.0 capable



Beam ensures card and body are flush



MEC5-DV/MEC5-RA

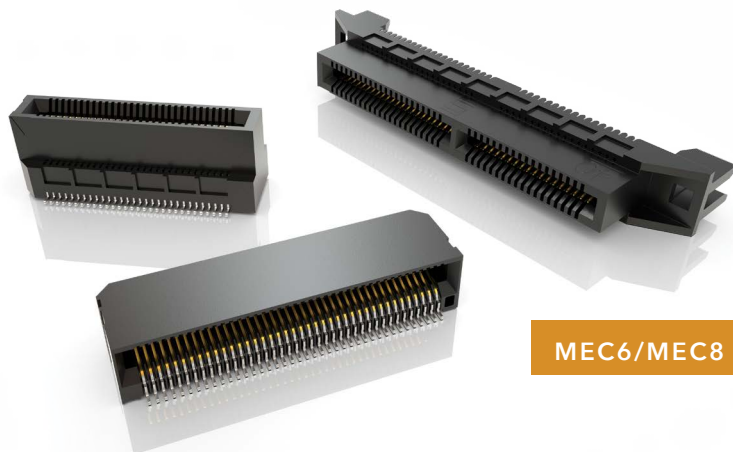
PAM4

56
Gbps

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

MICRO EDGE CARDS

- 0.635 mm, 0.80 mm, 1.00 mm, 1.27 mm and 2.00 mm pitch
- Optional rugged weld tabs and polarization
- Solutions for 1.60 mm (.062") and 2.36 mm (.093") thick cards
- Vertical, right-angle and edge mount



MEC6/MEC8

25
Gbps

ACCELERATE® mP POWER/SIGNAL ARRAYS

- Best in class density for power and signal
- Rotated power blades for improved performance and simplified breakout region (BOR)
- Open-pin-field design for routing and grounding flexibility
- Low profile 5 mm stack height; up to 16 mm in development
- Up to 8 power and 240 signal positions; additional position counts in development

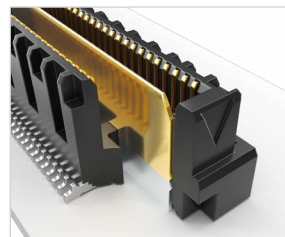
ACCELERATE® mP



Q SERIES® GROUND PLANE CONNECTORS

- Integral ground/power plane for reliable signal integrity and power to 25 Amps
- 0.50 mm, 0.635 mm and 0.80 mm pitch
- Low profile Q Strip® from 5 mm to 25 mm stack heights
- Q Rate® with signal integrity-optimized Edge Rate® contacts
- Q2™ with optional shielding and increased insertion depth

QSERIES®

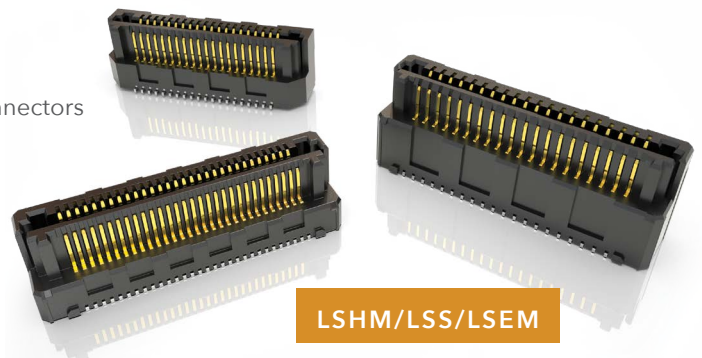


Surface mount ground plane improves electrical performance



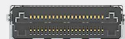
HERMAPHRODITIC RAZOR BEAM™ INTERFACES

- High-retention, high-speed Razor Beam™ contacts
- 0.50 mm, 0.635 mm and 0.80 mm pitch
- Slim body design
- 4-6x greater mating/unmating forces vs. typical micro pitch connectors
- Self-mating system reduces inventory costs
- Shield option for EMI protection



LSHM shown at 40 total positions

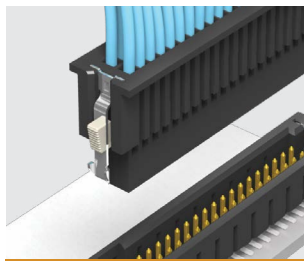
5.00 mm



14.70 mm

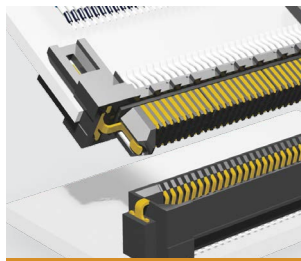
RUGGED FEATURES & CUSTOM SOLUTIONS

RUGGEDIZING OPTIONS



POSITIVE LATCHING

Manually activated latches increase unmating force by up to 200%



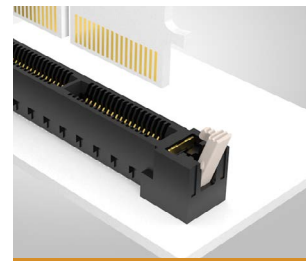
FRICTION LOCKS

Metal or plastic friction locks increase retention/withdrawal force



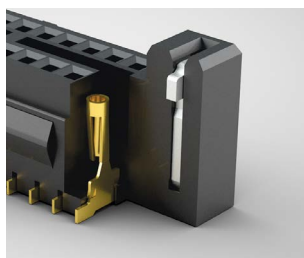
RETENTION PINS

Increase unmating force by up to 50%



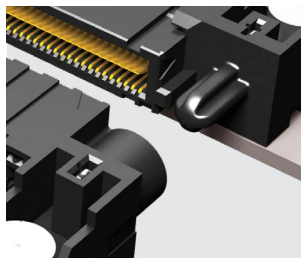
BOARD LOCKS

Boards are mechanically locked together



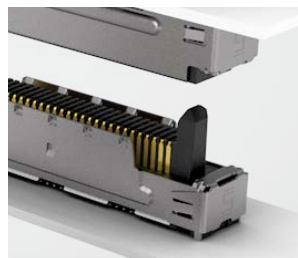
WELD TABS

Significantly increase shear resistance of connector to PCB



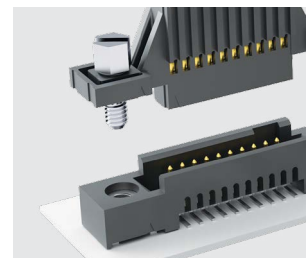
GUIDE POSTS

Easy and secure mating



SHIELDING

360° shielding reduces EMI



SCREW DOWNS

Secure mechanical attachment to the board

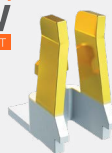
CONTACT SYSTEMS

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
- Micro Pitch

TIGER BEAM™
CONTACT



- Best Cost
- Reliable Performance
- Post & Beam Contact

EDGE RATE™
CONTACT



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

MICRO-HYPERBOLOID™



- High-reliability
- Four Points of Contact
- Extreme Mating Cycles

WILLINGNESS, SUPPORT AND EXPERTISE

Industry-Leading Customer Service

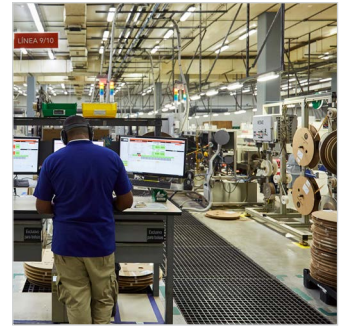
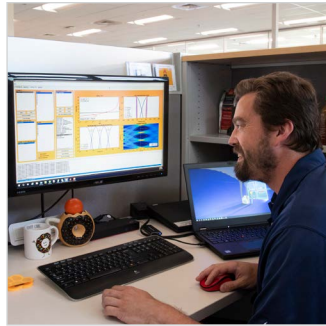
- Quotes and samples in 24 hours
- Prototype and processing assistance
- Dedicated Application Specific Product engineers and technicians

Flexible, In-House Manufacturing

- Global Operations, including multiple cable fabrication & assembly facilities
- Quick-turn samples and prototypes
- Custom & modified product support

Signal Integrity Expertise

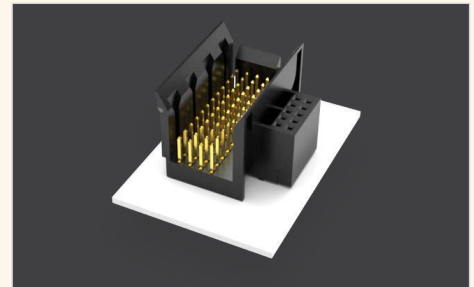
- Industry-leading engineering support for high-performance system design
- Full system optimization assistance, including simulation, testing, analysis and evaluation



CUSTOMS & EXPRESS MODIFICATIONS

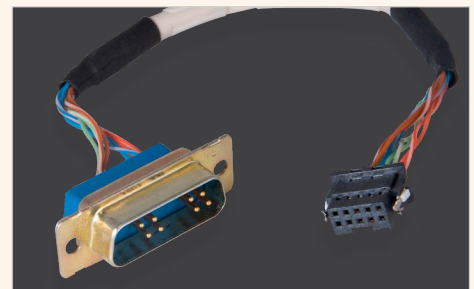
FLEXIBLE RUGGED SOLUTIONS

- Contacts and bodies
- Stamping, plating and molding
- Wiring
- Strain relief
- Screw downs
- Latches & locks
- Shielding modifications
- Polarization



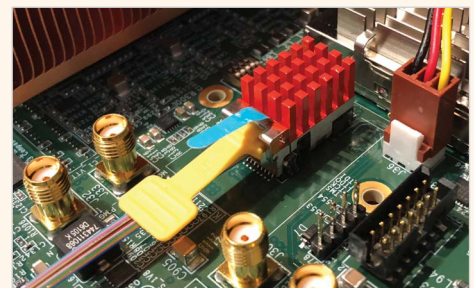
FLEXIBLE DISCRETE WIRE SOLUTIONS

- Variety of end 2 options
- Nylon woven sleeves
- Twisted pairs, color coding
- Heat shrink
- Selectively populated
- Barrel or harness crimp
- Ring/spade lug terminal
- Sealed



OPTICS FOR EXTREME ENVIRONMENTS

- Parylene coating
- Salt-fog impenetrable
- Mitigation for tin whiskers
- Fungal resistant
- Extreme shock and vibration
- Full support for liquid immersion cooling





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SUDDEN SERVICE®

UNITED STATES • NORTHERN CALIFORNIA • SOUTHERN CALIFORNIA • SOUTH AMERICA • UNITED KINGDOM
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