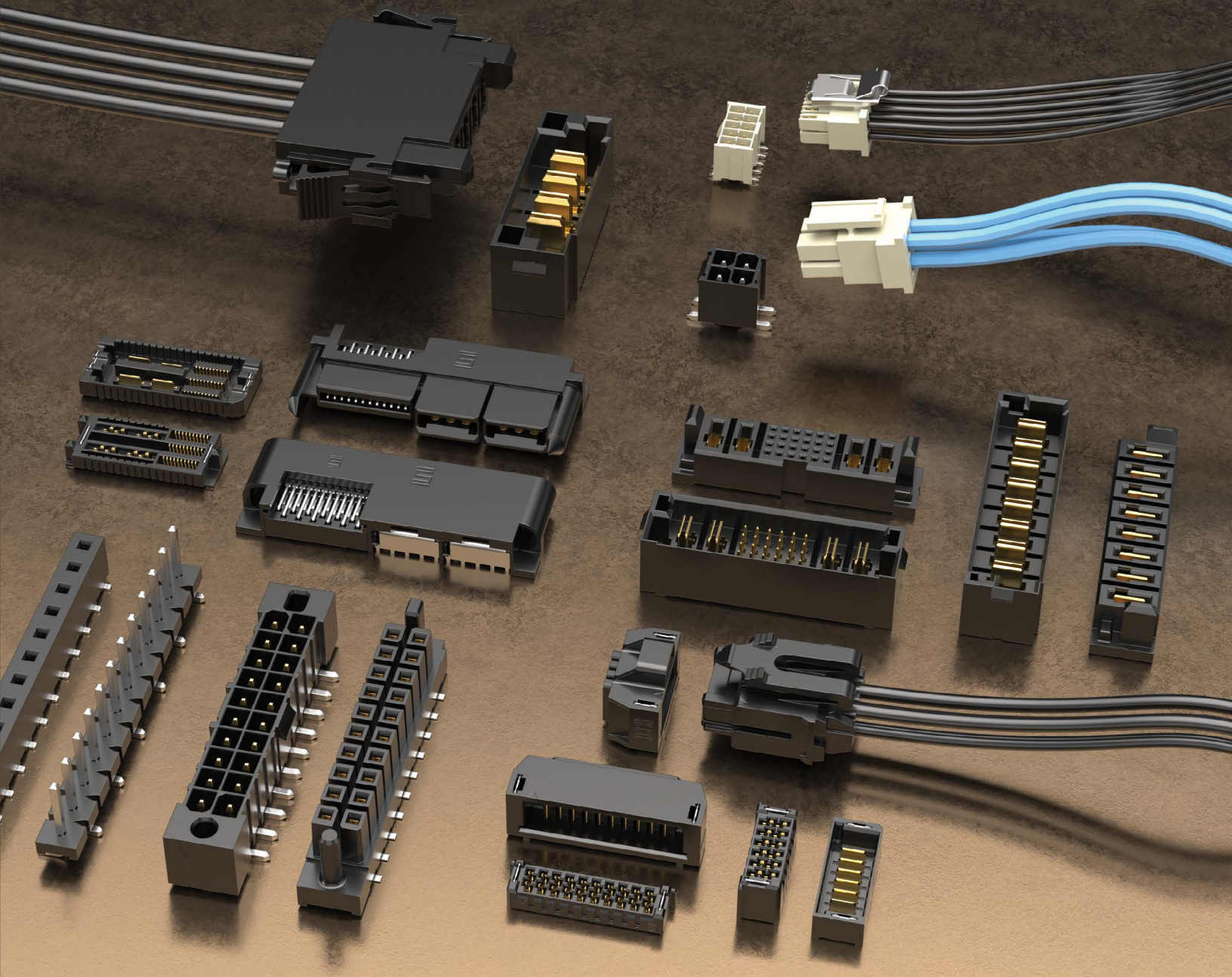
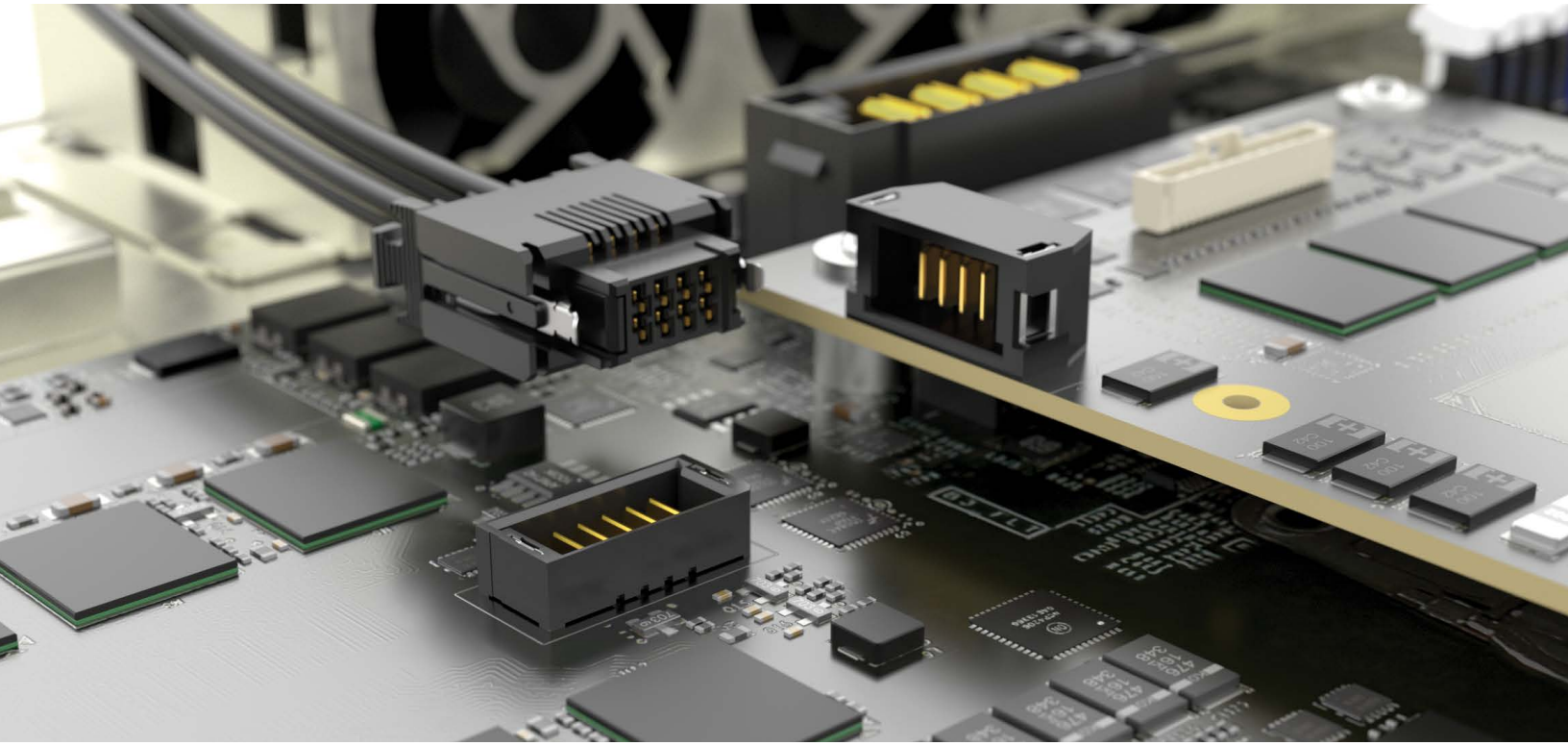
samtec

POWER SYSTEMS



samtec.com/power

POWER SYSTEMS

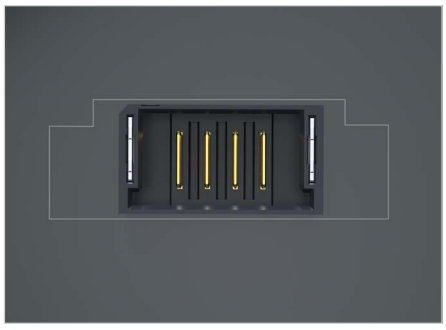


2.00 mm PITCH ULTRA MICRO POWER

mPOWER®

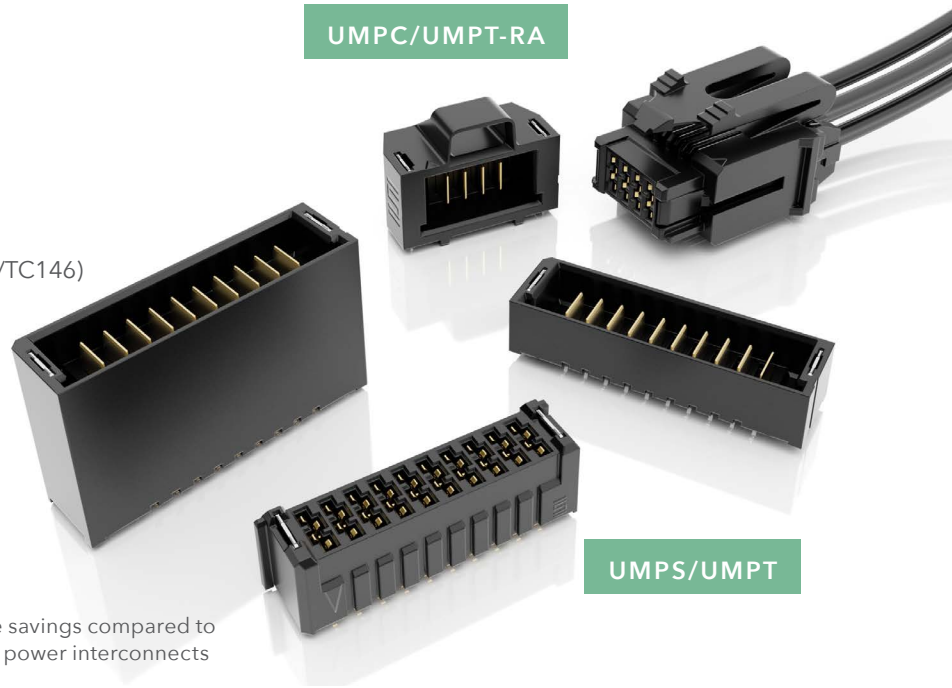
MAX 18 Amps

- Board-to-board, cable-to-board and cable-to-cable
- Tin or 10 µ" Gold plated power blades; 30 µ" Gold plating available to meet specific regulations
- 2-10 total power blades
- 5-20 mm stack heights; vertical and right-angle
- Optional weld tabs
- Mating cable assemblies with plastic top or metal side latching
- Components (IMPC/IMPCC/CC489, IMPE/IMPEC/TC146) and tooling also available; visit **samtec.com/tooling**



40% space savings compared to traditional power interconnects

UMPC/UMPT-RA



UMPS/UMPT

ULTRA MICRO POWER (continued)

SureWare™ guide post standoffs available for misalignment and "blind mate"

Cable-to-cable solutions available with rugged side latching (UMPET/UMPIT)

SET
SEVERE ENVIRONMENT TESTED

Severe Environment Testing (SET) qualified (UMPS/UMPT); aligns with MIL-DTL-55302. Visit **samtec.com/set**

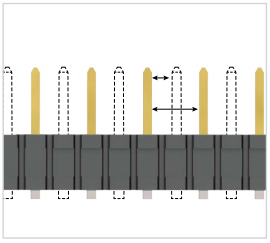
CURRENT SPECIFICATIONS

CURRENT RATING (PER CONTACT)		
PINS	Tin	Gold
1	17.8 A	17.5A
2	15.5 A	16.3 A
3	13.5 A	13.9 A
4	12.9 A	13.2 A
10	9.8 A	8.9 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



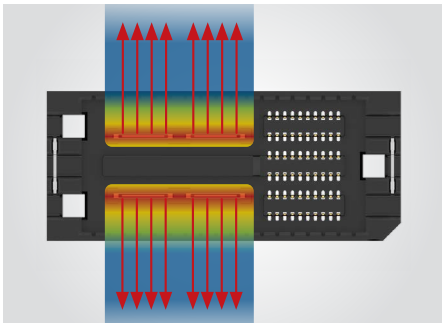
Selectively loading contacts achieves customer specific creepage and clearance requirements. Contact **asp@samtec.com**

ACCELERATE® mP POWER/SIGNAL ARRAYS

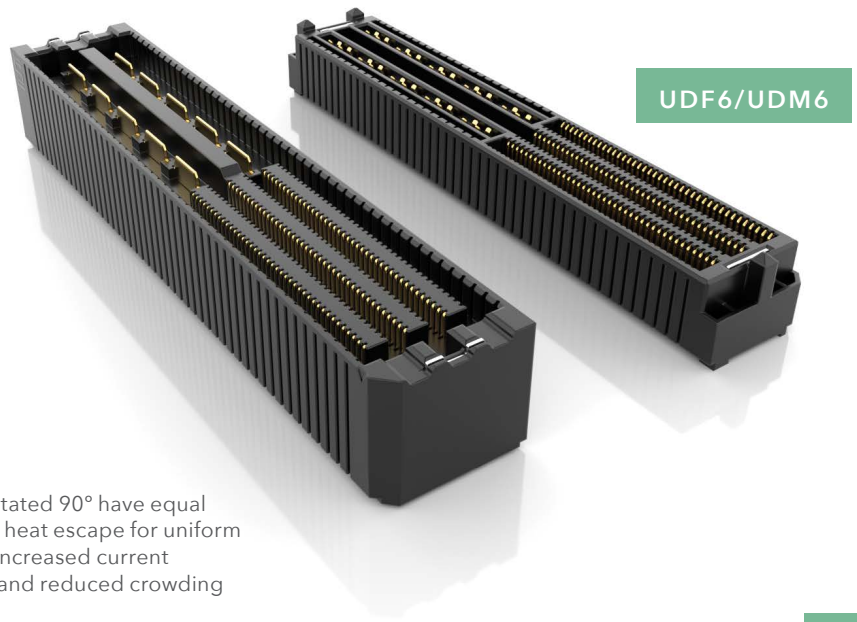
- Best in class density for power and signal
- Rotated power blades for improved performance and simplified breakout region (BOR)
- Open-pin-field design for routing and grounding flexibility
- PCIe® 6.0 capable
- Low profile 5 mm stack height; up to 16 mm in development
- Up to 8 power and 240 signal positions; additional position counts in development

ACCELERATE®mP

MAX 22 Amps | PAM4 64 Gbps



Blades rotated 90° have equal access to heat escape for uniform cooling, increased current capacity and reduced crowding



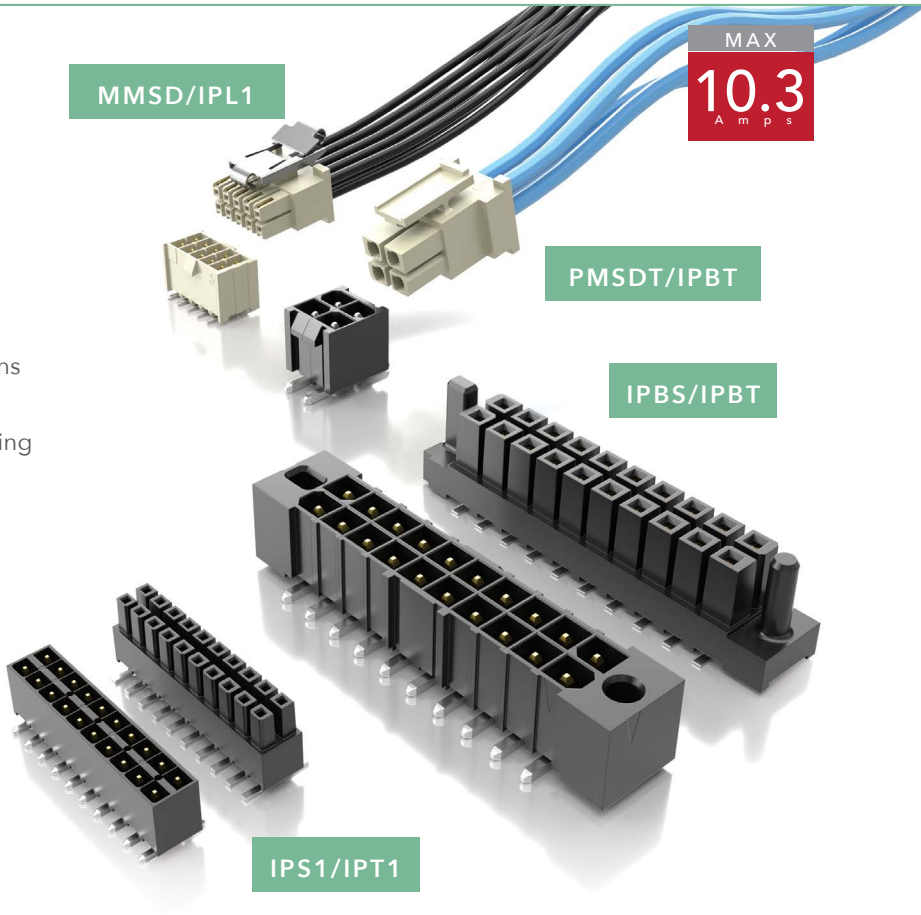
UDF6/UDM6

MINI MATE® & POWER MATE®

- Individually shrouded contacts for electrical and mechanical protection
- .100" (2.54 mm) and .165" (4.19 mm) pitch
- Surface mount or through-hole
- Vertical and right-angle for parallel, perpendicular and coplanar applications
- Locking clip, key polarization and guide post options
- Discrete wire assemblies with 16-30 AWG PVC or Teflon™ fluoropolymer wire; components and tooling available (samtec.com/tooling)
- Metal or plastic rugged latching system

	CREEPAGE	CLEARANCE
IPT1/IPS1 MMSS(T)/MMSD(T)	2.54 mm	1.91 mm
IPBT/IPBS PMSS(T)/PMSD(T)	4.27 mm	3.05 mm

Selectively loading contacts achieves customer specific creepage and clearance requirements; contact asp@samtec.com



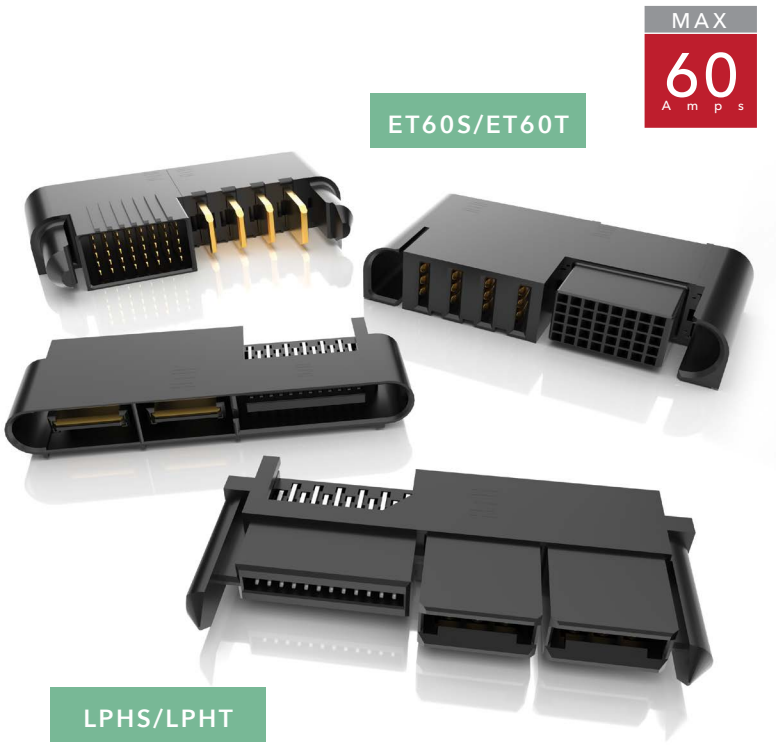
*Teflon™ is a trademark of The Chemours Company FC, LLC used under license by Samtec

EXTREME POWER

- AC or DC power, AC-DC combos, split power and hotswap options (ET60S/ET60T)
- 3 or 5 signal rows in the same form factor
- Top guide post option for board space savings
- High-density, double stacked power blades in a low 7.5 mm profile (LPHS/LPHT)
- Rugged guide posts for blind mating assistance
- Vertical or right-angle socket mates with terminal or .062" (1.60 mm) PCB card

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

Selectively loading contacts achieves customer specific creepage and clearance requirements; contact asp@samtec.com

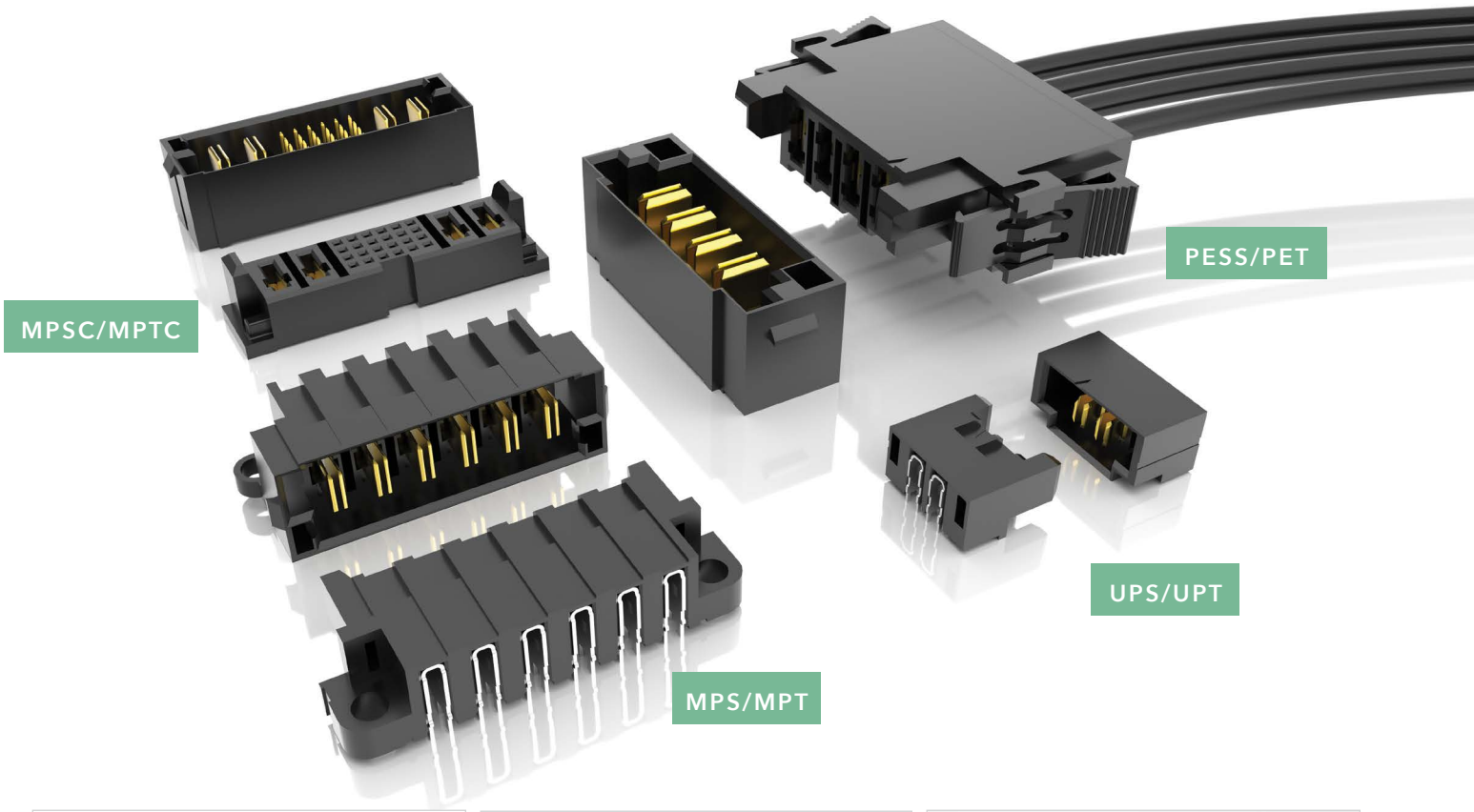


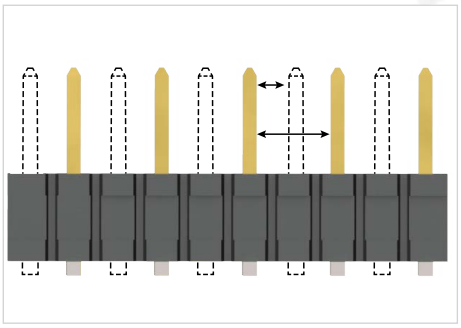
POWERSTRIP™ SYSTEM

MAX 60 Amps

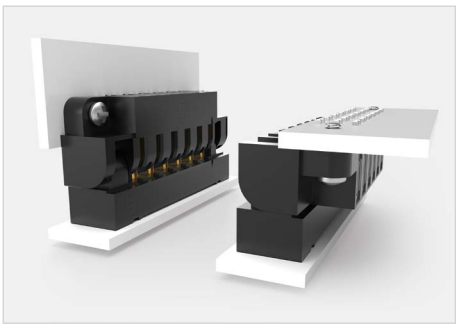
- 24.8 A/blade to 58.7 A/blade (1 blade powered)
- 3.81 mm, 5.00 mm and 6.35 mm pitch
- Up to 10 dual blade contacts
- Power only or power/signal combinations available
- Vertical and right-angle orientations
- Rugged latching, guide posts, locking clips and screw downs
- Discrete wire assemblies with 10-16 AWG wire; components and tooling available (samtec.com/tooling)

	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	5.50 mm	1.51 mm

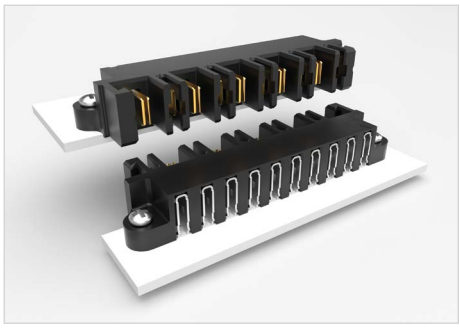




Selectively loading contacts achieves specific creepage and clearance requirements. Contact asp@samtec.com



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



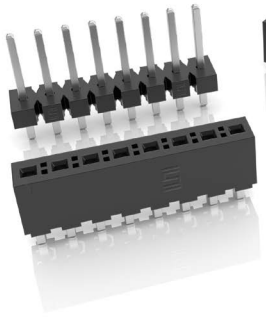
Hermaphroditic power systems with rugged screw downs (MPPT, UPPT)

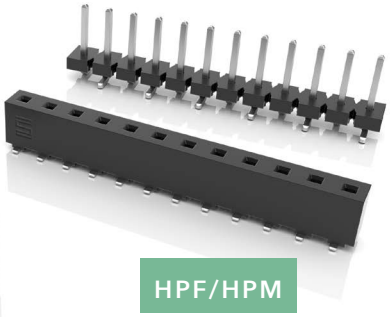
FLEXIBLE POWER STACKING SYSTEMS

MAX 16.1 Amps

- Standard and high-power connector strips
- Power Eye three-finger BeCu contacts for a reliable connection
- .156" (3.96 mm) and .200" (5.08 mm) pitch
- 1 to 24 total positions
- Flexible stack heights from .350" (8.89 mm) to 1.02" (25.91 mm)
- Surface mount and through-hole
- Vertical and right-angle for parallel and perpendicular applications
- Rugged locking clip option

FHP/FWJ





HPF/HPM

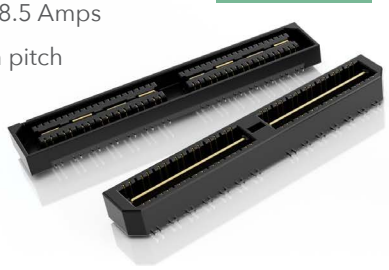
HIGH-SPEED GROUND PLANE SYSTEMS

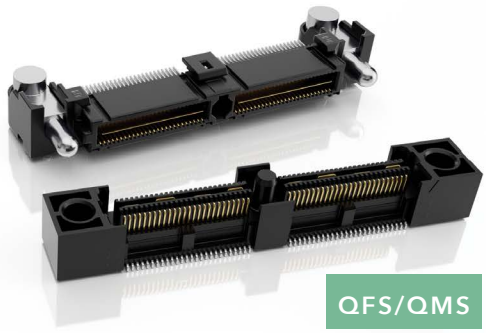
QSERIES®

MAX 25 Amps

- Integral ground/power plane improves electrical performance
- Q2™ rugged connectors rated to 15.7 Amps
- Q Strip® low profile connectors rated to 25 Amps
- Q Rate® slim connectors rated to 8.5 Amps
- 0.50 mm, 0.635 mm and 0.80 mm pitch
- 5 mm to 25 mm stack heights

QSE/QTE





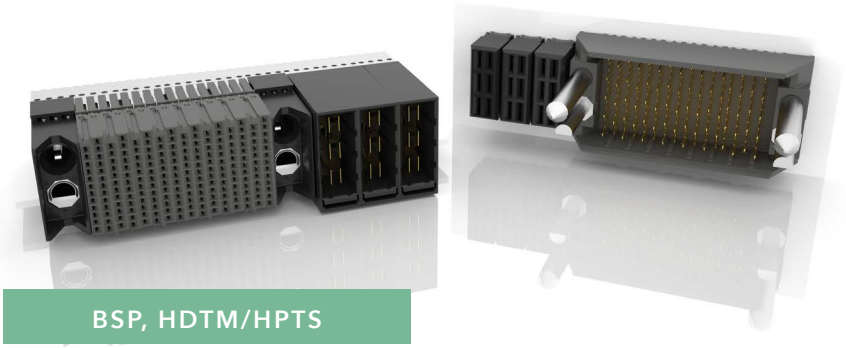
QFS/QMS

HIGH-SPEED BACKPLANE SYSTEMS

XCede HD

MAX 17.3 Amps

- Backplane power modules for design flexibility
- ExaMAX® modules rated to 17.3 Amps
- XCede® HD modules rated to 12.3 Amps; integrated power in development
- 12 to 72 pair designs
- Integrated guidance and keying



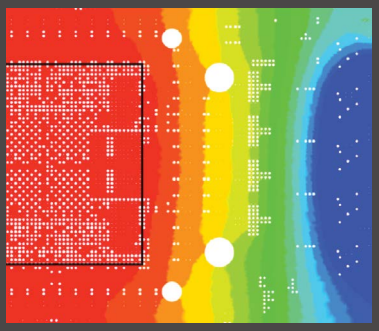
BSP, HDTM/HPTS

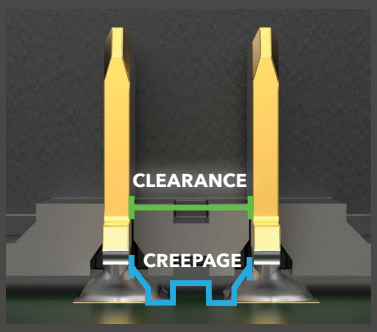
POWER SERVICES

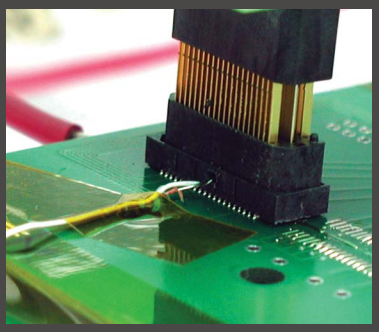
POWER INTEGRITY SERVICES

- 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** to learn more.



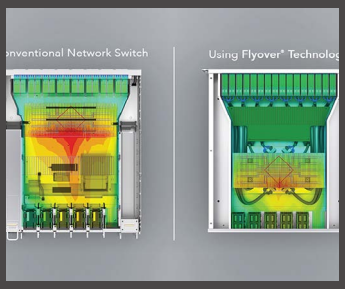




POWER ARCHITECTURE, SYSTEM DESIGN & ROUTING SERVICES

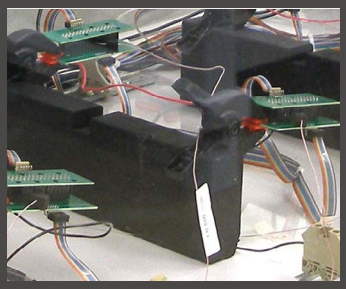
Samtec provides complete support and strategies for the optimization of system power architectures.

Visit **samtec.com/sig** for more information.

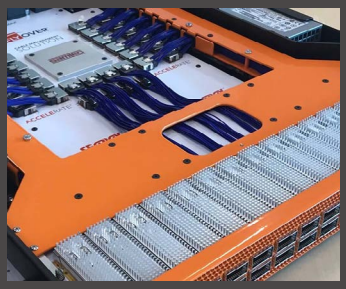


System Power Architectures & Design Solutions

Reference Routing Development for Application-Specific Solutions



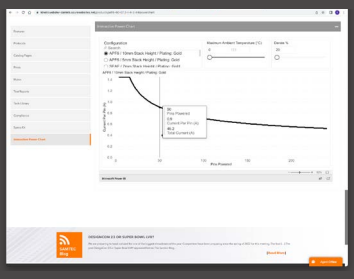
Safety and Reliability Design Assurance



Recommendations for Customer-Specific Requirements

INTERACTIVE POWER CHART

Samtec offers power simulation that can calculate temperature increase in the connector area, in real time. Find this tool on samtec.com when searching a product for your specific application. Contact **RuggedPower@samtec.com** for assistance.



SUDDEN SERVICE®

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