



PCI Express® INTERCONNECT SOLUTIONS

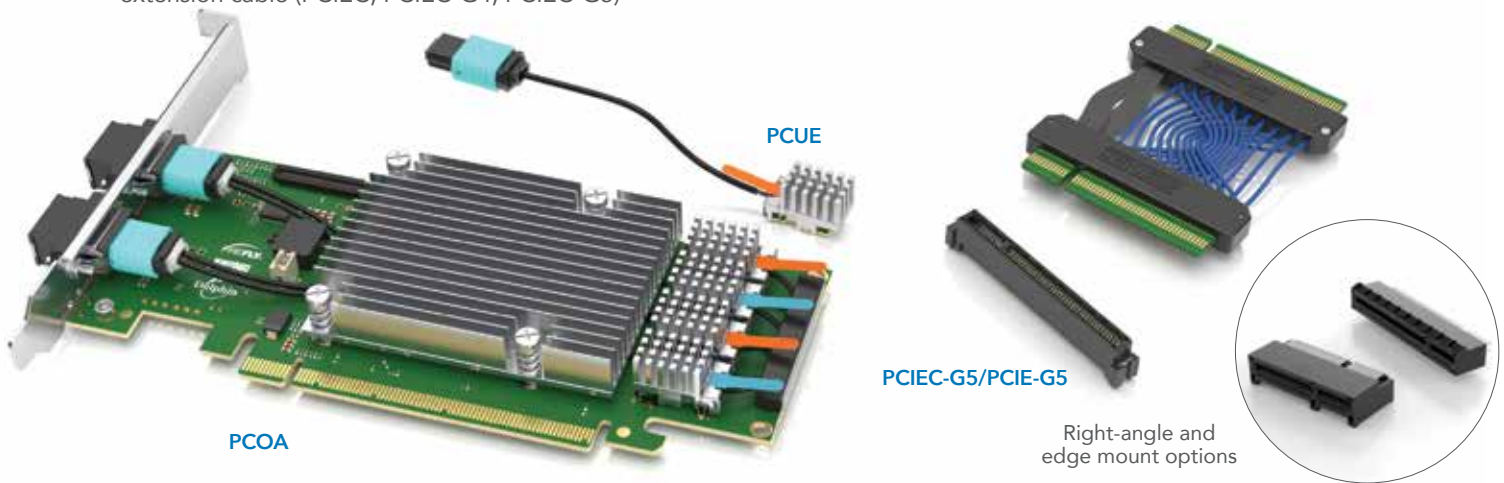


PCI Express Standard & Capable Solutions • Up to 224 Gbps PAM4 for Future PCI Express Technologies



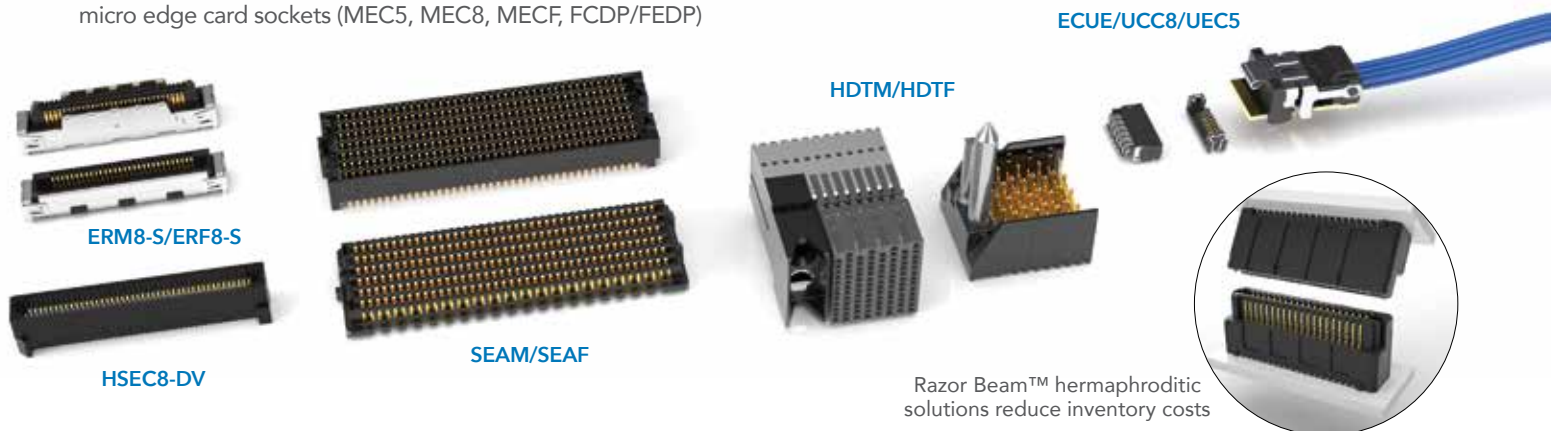
PCI Express® 3.0/4.0/5.0 Standard Interconnects

- Solutions that meet PCI Express electrical and mechanical specifications; 6.0 solutions in development
- 1.00 mm pitch edge card sockets support 1, 4, 8 and 16 PCI Express® links (PCIE, PCIE-G4, PCIE-G5)
- Compliant cable assemblies configurable as a jumper or extension cable (PCIEC, PCIEC-G4, PCIEC-G5)
- Test cable assemblies for debug and characterization (PCRF, PCRF-G4, PCRF-G5)
- PCI Express®-Over-FireFly™ mid-board optical and copper assemblies for low latency, power savings and guaranteed transmission (PCUO, PCUE); optical adaptor card available (PCOA)



PCI Express 4.0 Capable Interconnects

- Solutions that meet PCI Express electrical specifications for design flexibility and potential cost savings
- SEARAY™ high-density (SEAM/SEAF, SEAM8/SEAF8) and LP Array™ open-pin-field arrays (LPAM/LPAF)
- Dual row strips: high-speed Edge Rate® contacts (ERX5, ERX6, ERX8) and Q Series® integral ground/power plane (QXS, QXE, QRX8)
- Generate® 64 Gbps PAM4 (HSEC1, HSEC8, HTEC8) and micro edge card sockets (MEC5, MEC8, MECF, FCDP/FEDP)
- Ultra micro, low profile interconnects (SX4, SX5, XLH)
- Razor Beam™ self-mating connectors (LSS, LSEM)
- XCede® HD high-density backplane connectors with a modular design (HDTM/HDTF)
- FireFly™ copper cable system in an industry leading miniature footprint (ECUE/UCC8/UEC5)



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5.0 & 6.0 Capable Solutions

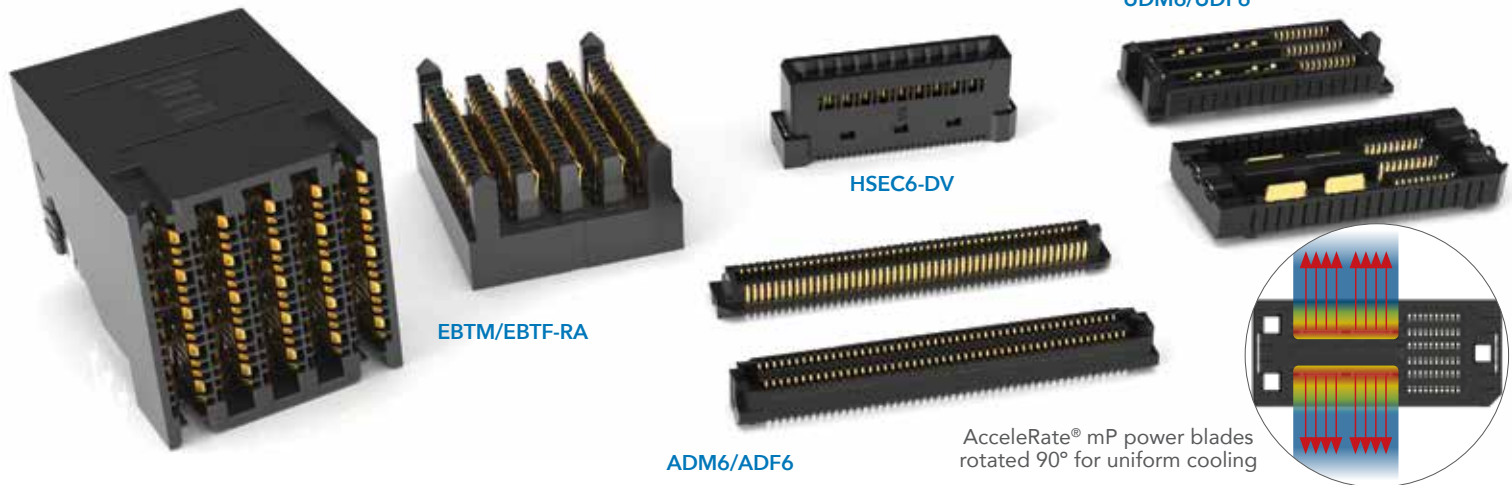
PAM 4

32
Gbps

64
Gbps

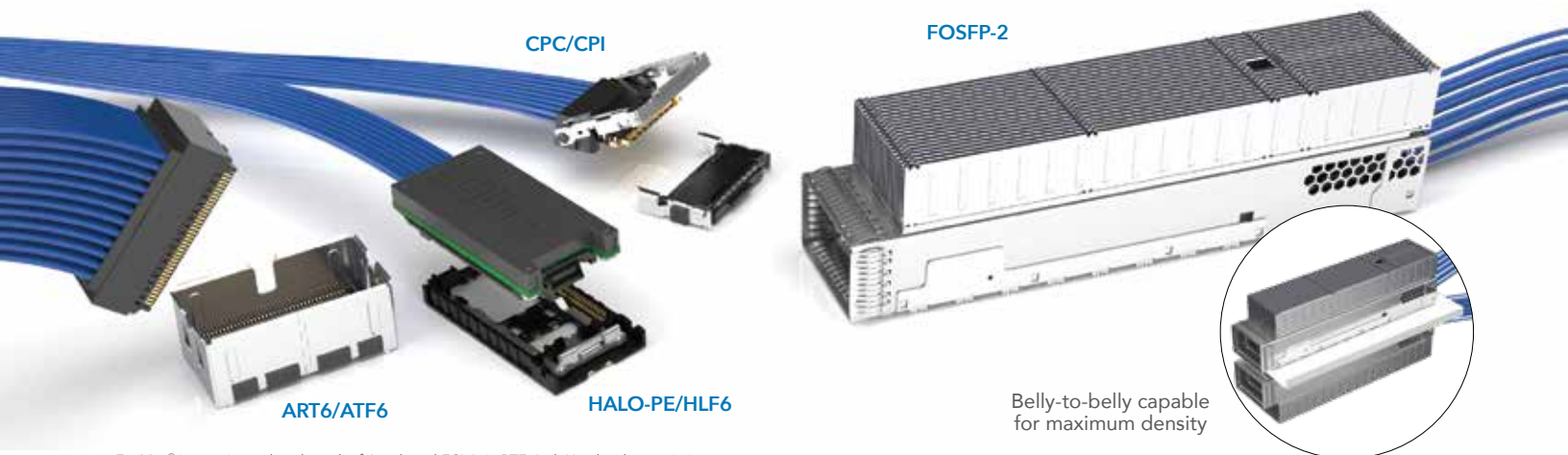
Board-to-Board Solutions

- AcceleRate® HD high-density, 4-row slim body arrays (ADM6/ADF6)
- AcceleRate® HP 112 Gbps PAM4 high-performance arrays (APM6/APF6)
- AcceleRate® mP 15 A/blade power/signal arrays (UDM6/UDF6)
- Generate® 0.60 mm pitch edge card connectors featuring signal integrity optimized Edge Rate® contacts (HSEC6)
- SUPERNOVA™ one-piece, dual compression interface (GMI)
- ExaMAX® traditional, direct-mate orthogonal and coplanar backplane connectors (EBDM/EBTF/EBTM)



Flyover® Cable Solutions

- Flyover® SFP/QSFP/OSFP assemblies with up to 224 Gbps PAM4 performance (FSFP, FOSFP-1/-2, FQSFP/-DD/-D8)
- ExaMAX® I/O cable-to-panel assembly with EMI shielding (EBCE/EBTC)
- AcceleRate® HP high-density (ARP6/APF6, ART6/ATF6) and AcceleRate® Mini small form factor, 112 Gbps PAM4 assemblies (ARM6/AMF6)
- AcceleRate® slim 7.6 mm body assembly (ARC6/ARF6)
- Si-Fly® LP low profile, near-chip assembly (CPC/CPI)
- Generate® 0.60 mm pitch edge card and high-speed test assemblies (GC6, GC6-RF)
- Halo Cu™ 112 Gbps PAM4 copper system is interchangeable with Halo® optical (HALO-PE/HLF6)
- ExaMAX® high-speed backplane system (EBCM/EBCF)



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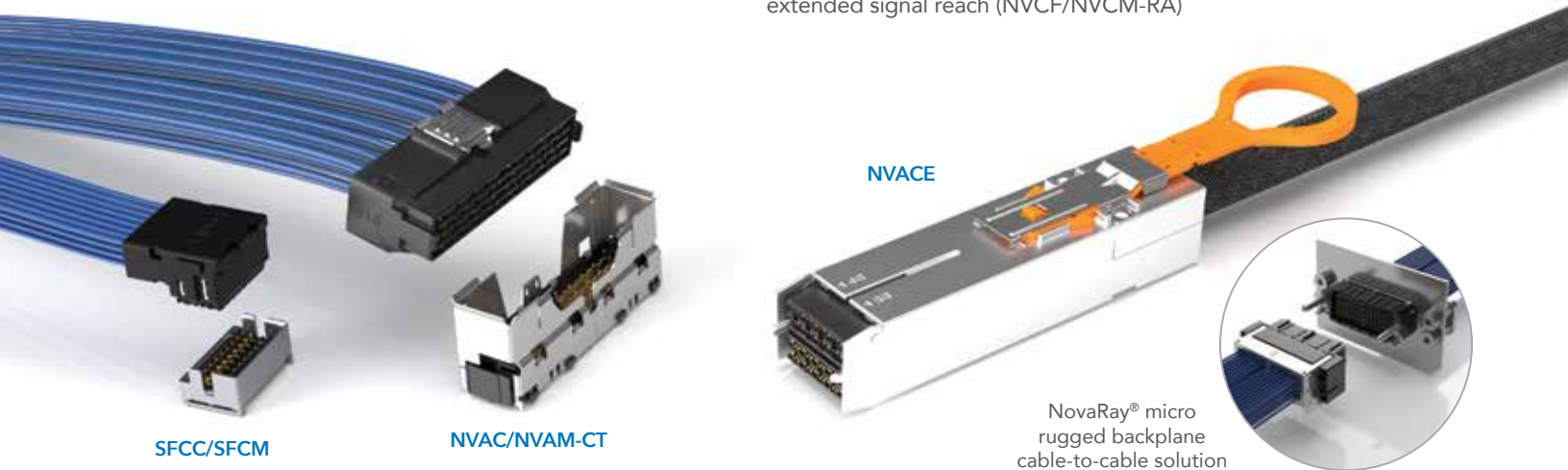
Board-to-Board Solutions

- Si-Fly® HD 224 Gbps PAM4 mezzanine arrays with 64 differential pairs per square inch (SFBM/SFBF)
- NovaRay® 128 Gbps PAM4 arrays with 48 fully shielded differential pairs per square inch (NVAM/NVAF)
- NovaRay® micro rugged backplane connectors with up to 128 differential pairs in a single connector (NVBM-RA/NVBF)



Flyover® Cable Solutions

- Si-Fly® HD 224 Gbps PAM4 co-packaged and near-chip (ASIC adjacent) systems (SFCC/SFCM, SFNC/SFNM-L)
- NovaRay® 128 Gbps PAM4 high-speed systems with two reliable points of contact (NVAC/NVAM-CT)
- NovaRay® I/O 128 Gbps PAM4 panel mount system; rugged 38999 shell option (NVACE/NVACP, NVA3E/NVA3P)
- NovaRay® micro rugged backplane assemblies for extended signal reach (NVCF/NVCM-RA)



Recommended Pinouts & Sidebands

Contact HSB2B@samtec.com for guidance on pinouts for high-speed board-to-board and backplane solutions.

Contact HDR@samtec.com for guidance on pinout and cable mapping for Flyover® solutions.