PCI Express® INTERCONNECT SOLUTIONS

PCI Express CEM AIC  •  PCI Express Capable  •  112+ Gbps PAM4 for Next Gen PCI Express Technologies
PCI Express® CEM AIC Solutions

**PCIe® Edge Card Sockets & Cable Assemblies**

1.00 mm Pitch • x1 (36P), x4 (64P), x8 (98P), x16 (164P)

- PCIe 3.0 Vertical, Right-Angle & Edge Mount Edge Card Connectors (PCIE Series)
- PCIe 4.0 Slim Edge Card Connector (PCIE-G4 Series)
- PCIe 4.0 Low Profile Connector (PCIE-LP Series)
- PCIe 5.0/6.0 Vertical & Edge Mount Connector (PCIE-G5 Series)
- Also available: PCIe 3.0/4.0/5.0/6.0 Jumper/Extension Cable Assemblies (PCIEC/PCIEC-G4/PCIEC-G5 Series)

**PCI Express Jumpers**

- For use as a Loop Back Extender, SerDes Physical Extender or as a physical extender for PCIe card debug and analysis.

**PCIe®-Over-Fiber Cable Assemblies**

**Optical FireFly™ Systems**

- PCIe 4.0 Optical Cable Assembly (PCUO Series)
  - x4, x8 and x16 PCIe micro optical engines
- PCIe 4.0 Adaptor Card with Optical FireFly™ (PCOA Series)
  - x16, x8, dual x8, x4, dual x4 & quad x4 configurations
  - PCIe x16 Edge Card Connection
- In development: PCOA & PCUO Series for PCIe 5.0

**Copper FireFly™ Systems**

- PCIe 3.0 & 4.0 Copper Cable System (PCUE Series)
  - 34 AWG ultra low skew twinax ribbon cable
  - x4 duplex system
  - Interchangeable with PCUO in the same connector footprint

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**PCI Express® Capable Solutions**

**Generate™ High-Speed Edge Card Systems**

**Choice of Pitches & Orientations • Rugged Contact System & Mechanical Features**

**PCIe® 6.0 Capable**
- Generate™ 0.60 mm pitch High-Speed Differential Pair Edge Card Connector (HSEC6-DV Series)
  - SFF-TA-1002 Compliant
  - Mating High-Speed Cable Assembly (GC6 Series) with 34 AWG Eye Speed® Ultra Low Skew Twinax
- Generate™ 0.80 mm pitch Differential Pair Edge Card Connector (HSEC8-DP Series)

**High-Speed/High-Density Arrays & Backplane Systems**

**Design Flexibility • Space Savings**

**PCIe 6.0 Capable**
- AcceleRate® HD 4-Row, Slim Body Arrays (ADM6/ADF6 Series)
- AcceleRate® Slim Cable Assemblies (ARC6/ARF6 and ARF6-RA Series)
- AcceleRate® mP High-Density, High-Speed Power/Signal Arrays (UDM6/UDF6 Series)
- ExaMAX® High-Speed Vertical, Right-Angle and Orthogonal Headers and Receptacles (EBTM/EBTM-RA/EBDM-RA/EBTF-RA Series)

[Samtec website link: samtec.com/PCIe]
Future-Proof 112+ Gbps PAM4 Solutions

In addition to PCI Express® Capable Solutions, Samtec offers a full line of ultra high-performance solutions engineered for 112 Gbps PAM4 speeds and beyond, providing future-proof design flexibility for the support of next gen PCIe® technologies.

Panel Mount Cable Systems

**NovaRay® I/O Panel Mount Cable System**
- 112 Gbps PAM4 performance
- 8, 16 & 32 differential pair configurations
- Cable-to-Cable bulkhead panel connection using Flyover® Technology
- Multiple ASIC-adjacent connectivity options available

**Flyover® QSFP Cable Systems**
- Compatible with all QSFP, QSFP-DD and QSFP-DD/800 pluggables
- Up to 800 Gbps aggregate (112 Gbps PAM4)
- Multiple ASIC-adjacent connectivity options available

Mid-Board ASIC-Adjacent Interconnect Solutions

**NovaRay® Extreme Density and Performance Arrays**
- 4.0 Tbps aggregate data rate – 9 IEEE 400G channels
- Mating 0.80 mm pitch socket cable assembly

**Si-Fly™ Low Profile High-Density Cable System**
- Extremely low profile (3.8 mm)
- 8 or 16 pairs for routing 4 or 8 channels
- Extreme channel performance enables 25.6 TB aggregate with a path to 51.2 TB

**AcceleRate® HP High-Performance Arrays**
- 0.635 mm pitch, open-pin-field, 4-row design (up to 400 total pins; roadmap to 1,000+)
- PCIe 6.0 & 100 GbE capable
- Mating cable assembly available

**AcceleRate® Mini Extreme Performance Cable System**
- Incredibly small form factor
- Eye Speed® Thinax™ ultra performance twinax
- One or two differential pairs

Backplane Cable Systems

**ExaMAX® High-Speed Cable Backplane System**
- Two reliable points of contact
- 2.4 mm mating surface area (contact wipe)
- Supports panel, mid-board, cable-to-cable and cable-to-board configurations