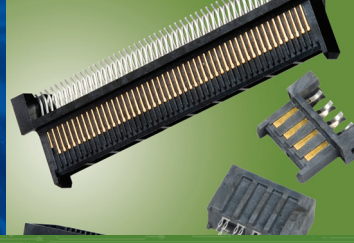
Aptera™

High Performance, Low Profile Solutions



- Ideal for the space constraints of high-speed memory and card edge applications
- Streamlined construction allows optimal airflow
- Low crosstalk supports 6.25 Gbps data rates
- Impedance controlled at 100 ± 10 ohms
- Superior mechanical integrity
- RoHS compliant

Difficult electronic packaging challenges require innovative solutions. Amphenol's Aptera™ connector meets these challenges with a high-speed interconnect designed specifically for space constrained areas. Aptera's pin assignments are not predetermined, providing more flexibility when it comes to PCB routing design. The combination of small format and high performance capabilities make Aptera the ideal solution for applications such as servers, storage, and networking equipment.

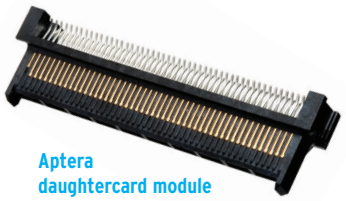
Version	Density	Contact Pitch*
• Standard	46 signals per inch 18 signals per 10mm	.043" 1,1mm
• Stacker	46 signals per inch 18 signals per 10mm	.043" 1,1mm
• Power	15 contact per inch 6 contacts per 10mm	.138" 3,5mm

*Does not include length of end guides.

Flexibility for Optimized Solutions

Aptera's design incorporates Amphenol's modular connector architecture, providing designers with a high level of flexibility to meet performance requirements. Streamlined construction allows for optimal airflow.

- Modular design allows for backplane and power modules on the same card edge for optimized performance
- Low profile construction reduces minimum slot pitch between daughtercards to 10mm (.39")
- SMT daughtercard termination to the card edge
- Supports various daughtercard thicknesses
- Backplane components and slot pitch remain consistent regardless of daughtercard thickness



Aptera daughtercard module

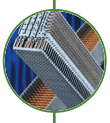
Electrical Advantages

Multi-line Sum-of-Voltage Crosstalk			
Differential 2:1 signal-to-ground ratio	6.25 Gbps	6 signal pairs per linear centimeter (15 pairs per linear inch)	< 2.0% crosstalk at 200 picosecond risetimes, < 2.8% at 100 picosecond risetimes
Single-Ended 1:1 signal-to-ground ratio	3.125 Gbps	8 signal pairs per linear centimeter (22 pairs per linear inch)	< 5.7% near-end crosstalk at 250 picosecond risetimes

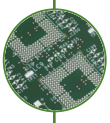
The Amphenol TCS Advantage

"By offering design solutions and advice related to signal integrity between the chip, the design of the PCB, and finally, the connector, Amphenol TCS has the total signal path covered. This type of system solution approach provides an advantage over connector-only manufacturers."

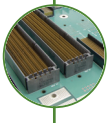
- Fleck Research



Industry Leading Connectors



Printed Circuit Backplanes



Integrated Backplane Systems

Design and Applications Solutions

Amphenol TCS
A Division of Amphenol Corporation

Proven Technology

The Aptera connector leverages proven technology with:

- Press-fit technology on the backplane
  - GbX® 0.018" (0,46mm) compliant pin technology for improved impedance matching and ample design clearance for manufacturing
- Blind mate with keying and guidance
- Modular architecture to optimize size and configuration to the application

Aptera backplane module

Dedicated Power Delivery

The Aptera power module incorporates the same low profile features of Aptera's other components allowing it to work in-line.

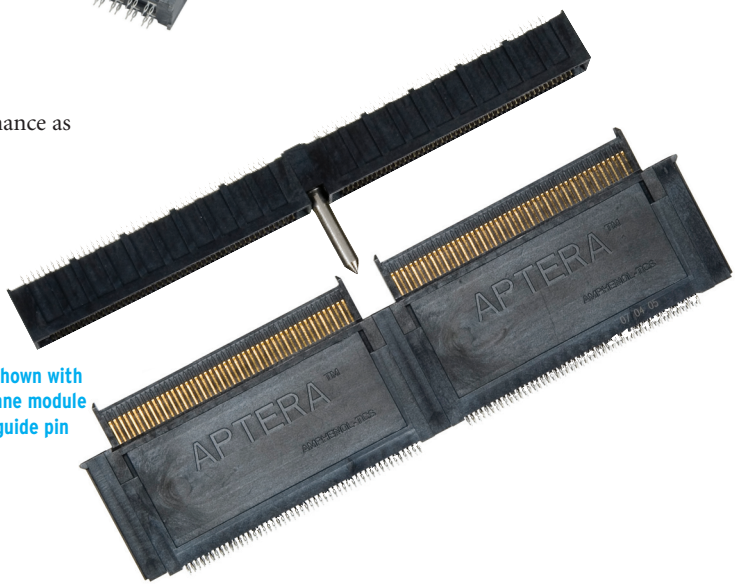
- 2 row blade configuration
- Up to 3 amps per contact
- Design modules with up to 20 positions maximum per module

Aptera power module

Stacker

Mezzanine solution provides the same electrical performance as standard Aptera.

- Mates with standard backplane modules
- Available in 40mm board-to-board stack heights
- Uses proven GbX compliant pin technology



Aptera Stacker shown with standard backplane module with integrated guide pin

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