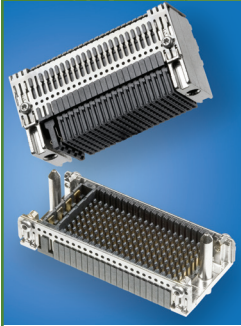


Ventura®

High-Performance, Highest Density Available



- Up to 178 pins per inch
- Data rates of 6.25 Gbps single-ended and 12 Gbps differential
- 100% SMT attachment
- Multi-line sum-of-voltage crosstalk greater than 18 dB below transmission
- 8 and 14-Row configurations
- Stub-resistant contact design
- Vertical and horizontal routing
- Integrated power and guidance
- RoHS compliant



When high-performance and high-density are required, Amphenol's Ventura® connector meets the challenge. The Ventura platform can deliver data at 6.25 Gbps per signal - the fastest single-ended connector available - and reach speeds of 12 Gbps when driven differentially.

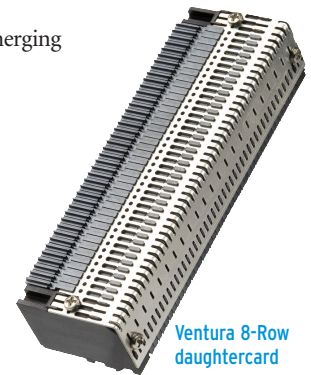
With up to 178 real signals per inch, Ventura offers the most density of any connector on the market. Utilizing surface mount technology to minimize via effects, Ventura is designed to meet the most demanding high performance applications. The ability to route horizontally & vertically out of the connector helps designers reduce costly PCB layer count.

Version	Single-Ended	Differential	Minimum Slot Pitch
14-Row	178 real signals per inch (70 real signals per 10mm)	89 differential pairs per inch (44.5 differential pairs per 10mm)	1.54" (39,1mm)
8-Row	102 real signals per inch (40 real signals per 10mm)	51 differential pairs per inch (25.5 differential pairs per 10mm)	1.01" (25,6mm)

Excellent High-Speed Electrical Performance

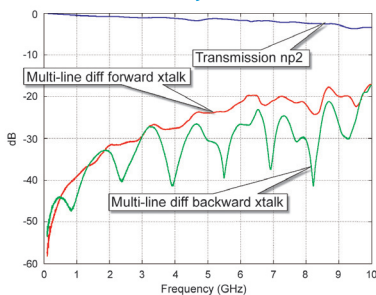
Ventura provides the electrical performance needed to support the emerging requirements of higher bandwidth systems.

- 6.25 Gbps singled-ended, 12 Gbps differential
- **Single-ended insertion loss** less than 2 dB at 6 GHz, less than 3 dB at 8 GHz
- **Differential insertion loss** less than 2 dB at 6 GHz, less than 3 dB at 10 GHz
- 50 Ohms \pm 5 Ohms impedance



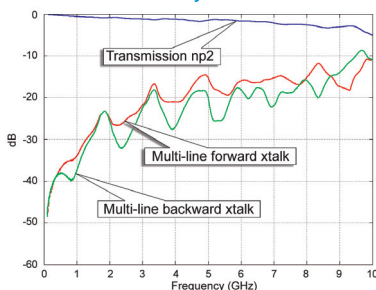
Ventura 8-Row daughtercard

Differential transmission and multi-line sum-of-voltage crosstalk



Measured differential transmission and multi-line crosstalk (forward and backward, 0 to 10 GHz) of the longest signal pair in a 14 signal-row Ventura connector includes the effects of SMT pads and 12-mil through-vias.

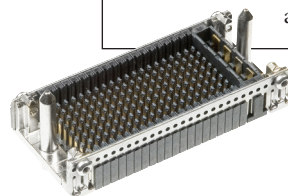
Single-ended transmission and multi-line sum-of-voltage crosstalk



Measured single-ended transmission and multi-line crosstalk (forward and backward, 0 to 10 GHz) of the longest row signal path in a 14-signal-row Ventura connector includes the effects of SMT pads and 12-mil through-vias.

Multi-line Sum-of-Voltage Crosstalk (includes the effects of SMT pads and 12-mil through-vias)

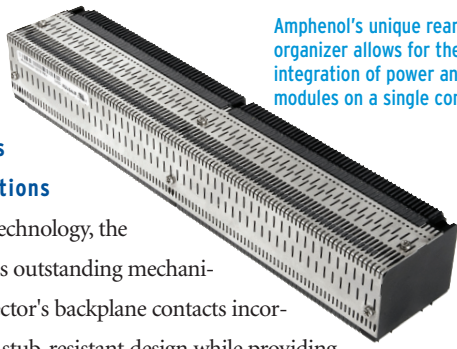
Single-ended	Greater than 13 dB below transmission at 5 GHz	Greater than 12 dB below transmission at 8 GHz	Less than 5% crosstalk at 150 picoseconds rise time
Differential	Greater than 18 dB below transmission at 8 GHz	Greater than 14 dB below transmission at 10 GHz	Less than 5% crosstalk at 75 picoseconds rise time



Ventura 8-Row backplane module with integrated power and guidance

Amphenol TCS

A Division of Amphenol Corporation



Amphenol's unique rear organizer allows for the seamless integration of power and guidance modules on a single connector

Mechanical Robustness for Real World Applications

With proven Amphenol technology, the Ventura platform provides outstanding mechanical robustness. The connector's backplane contacts incorporate an innovative new stub-resistant design while providing 2.5mm of contact wipe. A modular wafer design on both the backplane and daughtercard provides maximum configurability and Amphenol's unique rear organizer allows for the seamless integration of power and guidance modules.

- Mechanically robust, stub-resistant contact design
- Custom configure backplane and daughtercard connectors to match your design needs
- Integrated components on the daughtercard and backplane eliminate the need to assemble individual modules to the board

Flexible, Modular Design

Ventura's modularity allows designers to create custom connectors up to 270mm long. This is achieved by combining up to 3 groups of 40 signal wafers separated by a guide module for added stability. Power modules can be substituted for signal wafers, as long as the total length of 270mm is not exceeded.



Ventura 8-Row backplane wafer

Integrated Power Modules

Ventura's backplane and daughtercard power modules offer 3 Amps per contact and can be positioned anywhere on the rear organizer to match your requirements.

Version	No. of Contacts	Amps per Module
8-Row	24	72

Reliable Surface Mount Technology

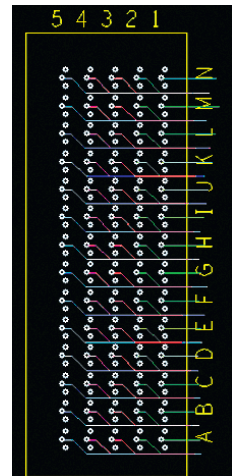
SMT application provides added flexibility by allowing design-dependent via placement which minimizes via effects on thicker, high layer count backplanes. Ventura utilizes proven gull-wing lead technology, considered one of the most reliable terminations for high pin-count connectors. To provide reliable solder distribution, Amphenol TCS developed a unique landing pad design which also enhances Ventura's electrical performance.

- Solder joints conform to IPC standards
- Lead and lead-free (Pb) SMT process compatible
- Unique construction allows reliable solderability of more than 5,000 leads

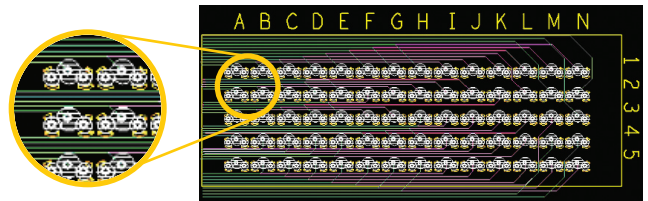
Flexible Routing Solutions

Help Reduce Your Design Time

Ventura's routing channels are designed to accommodate up to four traces per routing channel. In addition, the connector provides the flexibility of vertical and horizontal routing, helping designers achieve a reduction in layer count while decreasing the time required to route the backplane. The primary routing channel uses 4 mil lines and 4 mil spaces, allowing designers four lines per routing channel in the primary direction, 1 line per routing channel in the secondary channel.



Ventura 14-Row Secondary Channel Routing on 4 Layers



Ventura 14-Row Primary Channel Routing on 2 Layers

Amphenol TCS

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