

The DensiStak™ Connector: Advancing Connectivity Solutions



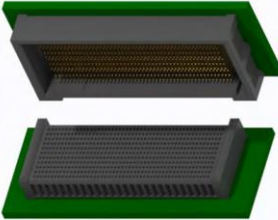
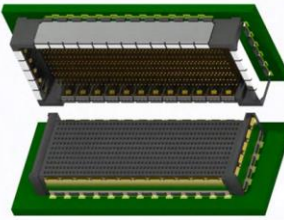
Amphenol's latest addition to its list of interconnect solutions with best-in-class mechanical and signal integrity performance is the [DensiStak™ Board-to-Board Connector](#). This connector is a solution that addresses the need for flexible pin design, high-density and compact interconnects, especially in challenging environments like automotive applications.

With an impressive pin count density, the DensiStak™ connector has over 1000 pins arranged in an 11-row configuration, and has data rates up to 16Gb/s, on PCIe® Gen 4. It has a reliable dual-beam contact system, is USCAR-2 T3V2 certified and comes with optional shields.

The all-new **DensiStak™ Board-to-Board Connector** is an efficient high-density product, a high-performance solution designed to meet the needs of a wide range of applications, from high-speed data transfer to automotive electronics.

DensiStak™ - Solution Overview

Amphenol
COMMUNICATIONS SOLUTIONS

<p>Standard Version</p> <p>DensiStak™ Vertical Header H2=7.0mm 198 - 1034Pos P/N 10169063-XX02X00LF</p>  <p>DensiStak™ Vertical Receptacle R6=5.8mm 198 - 1034Pos P/N 10169064-XX06X00LF</p> <p>Stack Height: 8mm Tooled</p>	<p>Shield Option</p> <p>DensiStak™ Vertical Header H2=7.0mm 198 - 1034Pos P/N 10169063-XX02X10LF</p>  <p>DensiStak™ Vertical Receptacle R6=5.8mm 198 - 1034Pos P/N 10169064-XX06X10LF</p> <p>Stack Height: 8mm Upon Request</p>
--	--

Here is a comprehensive look at the [DensiStak™ Board-to-Board Connector](#) and all you need to know about it.

Features and Benefits

High Density (11-Row, 1000+ Positions)

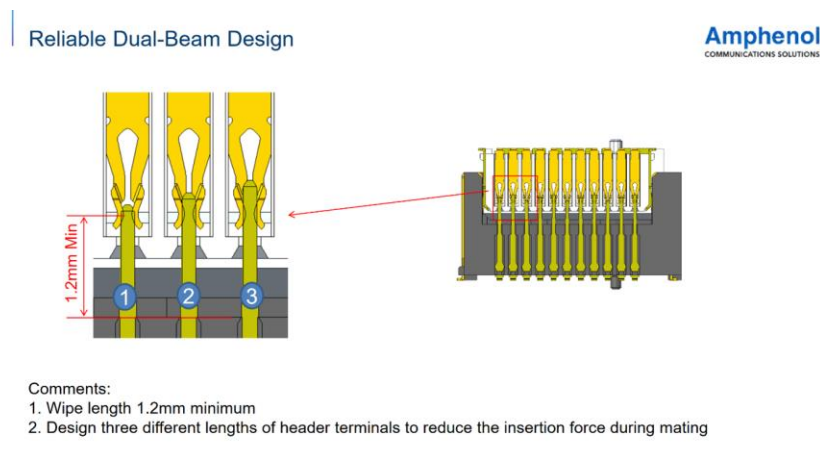
- **Feature:** The DensiStak™ connector boasts an impressive 11-row configuration with over 1000 pins.
- **Benefit:** This high pin count array addresses high-density application requirements such as the main interface to an automotive electronic module dealing with complex computations like Autonomous Driving.

High-Speed Performance

- **Feature:** The DensiStak™ connector supports speeds up to 16 Gb/s.
- **Benefit:** It meets the demands of modern communication standards like PCIe® Gen 4. Whether you're transferring large data packets or streaming high-definition video, this product ensures reliable performance.

Dual-Beam Contact System

- **Feature:** The dual-beam contact design enhances reliability.
- **Benefit:** By providing redundant electrical paths, it minimizes the risk of signal interruption due to shock, vibration, or environmental factors. Critical connections remain stable even in challenging conditions like automotive transportation.



Compact Design (0.80 mm x 1.25 mm Pitch)

Feature: The DensiStak™ connector's compact form factor optimizes board space.

Benefit: In densely populated systems, every millimeter matters. This connector allows efficient use of available real estate, enabling more functionality within a limited footprint.

USCAR-2 T3V2 certified

Feature: The DensiStak™ connector supports temperature class T3 up to 125°C, and shock & vibration class V2.

Benefit: It's specifically designed for automotive applications, ensuring compatibility with automotive electronics, including Advanced Driver Assistance Systems (ADAS).

Open-Pin-Field Design

Feature: The connector's open-pin-field array design offers flexibility.

Benefit: Engineers can customize the pin configuration to suit specific requirements, adapting to various system architectures and interconnect scenarios.

Applications

Automotive:

The DensiStak™ seamlessly integrates into the Advanced Driver Assistance Systems (ADAS), which includes the cameras, LiDAR sensors, and central processing units. Reliable connections are essential for real-time decision-making in autonomous vehicles. It is USCAR-2 T3V2 certified to withstand the harsh environment of the automotive.

Data Centers:

In data centers, where processing power and data throughput are critical, the DensiStak™ connector efficiently links servers, storage arrays, and networking equipment. Its high-density pin configuration ensures high performance, speed, and seamless communication.

For example, whether connecting SSDs, HDDs, or RAID controllers, the DensiStak™ connector handles high-demand data transfer requirements within storage systems with considerable ease.

Telecommunications:

The DensiStak™ connector's high-speed capabilities support efficient data exchange in telecommunication infrastructure and other critical network components like line cards, switches, and routers.

Industrial:

When it comes to the industrial setting, there is a need for precision and ruggedness. Precision robotics demand reliable connections for motor control, feedback sensors, and communication modules. The DensiStak™ connector ensures robust performance in robotic arms, CNC machines, and automated assembly lines.

Summing Up

The DensiStak™ Board-to-Board Connector by Amphenol is a highly versatile and high-performing solution due to its high-density pin design, featuring over 1,000 pins in an 11-row configuration and supporting speeds up to 16 Gb/s with PCIe® Gen 4 compatibility. The DensiStak™ connector provides reliable, high-speed data transfer across various applications. Its dual-beam contact system enhances connection stability, while the compact design optimizes board space. USCAR-2 T3V2 certified and made of robust materials makes it ideal for automotive use.

The [DensiStak™](#) connector stands out as a versatile, efficient solution, advancing connectivity in automotive, data centers, telecommunications, and industrial applications. It is surely a product to look out for from Amphenol.