

ComboStak® and PowerStak® Connectors for Data Centers

The data and communication industry is under constant development to introduce many innovative technologies that makes our lives hassle free. From a simple activity like sending an instant message to advanced operations combining AI and machine-to-machine communication, the performance of all smart devices we handle each day is based on data transfer among these operations. Data Centers are the storehouse of these shared applications and data.



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The reliability of these datacenters determines the performance of anything happening in the data and communication. Amphenol provides a wide range most advanced interconnect solutions for modern Data Centers and all its components to ensure seamless performance.

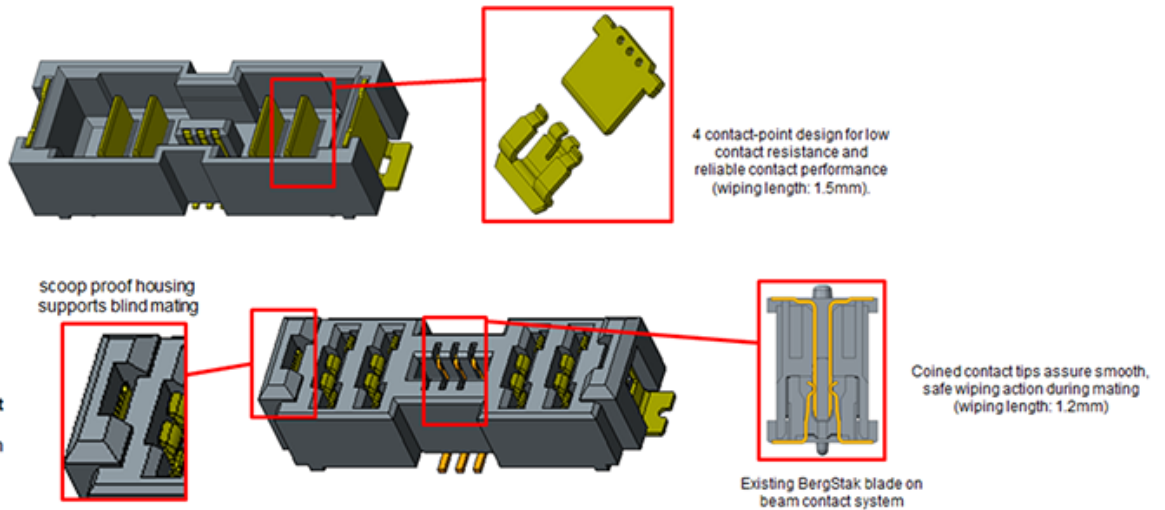
Amphenol's latest addition to the power board-to-board connector family, [ComboStak® and PowerStak®](#) are compact interconnects designed to support various components of [Datacenters](#). These new connectors are available in both hybrid and power versions. The hybrid version ComboStak® is a reliable and space saving combination of existing BergStak® 0.80mm signal pins and 2.00mm power blades. While the 2.0mm pitch for [power contacts](#) provide high current carrying capacity within the miniaturized shape, the double row 0.80mm pitch creates a strong signal system, featuring all the benefits of [BergStak® 0.80mm](#). Whereas PowerStak® as the name suggests, is the power only version offered in 2.00mm pitch.

ComboStak® is a symmetrical board-to board-connector with an even number of power contacts from 2 up to 10 positions at both ends of the connector and signal contacts from 6 up to 140 positions placed in between, and available in stack heights from 5mm to 20mm in 1mm increments . With signal speeds up to 12Gb/s, these connectors form a double row, mezzanine system with surface-mount solder tails. Whereas PowerStak® supports stack heights from 5mm to 20mm in 1mm increments.

Both [ComboStak® and PowerStak®](#) offer a four-point contact system to support current ratings up to 20A/pin and to offer reliable mating force and excellent contact performance. These cost effective connectors also support secure blind mating and automatic assembly with a scoop-proof housing having ± 0.9 mm misalignment tolerance. While the additional metal hold down on the housing guarantees stable PCB retention force, the locating pegs enable easy manual assembly.

ComboStak™

Hybrid and Power



- Power distribution and control in 1 connector
- Terminals cannot be damaged during mating
- Long wiping lengths for reliable contact
- Positions: 2- 10 Power; 6 – 140 Signal
- Stack height: 5.0 to 12.0 mm (1mm increments)
- Current rating: 20A/pin, with all pin powered
- Speed: PCIe Gen3, 12Gbps

Both these connectors provide high signal and current density within a wide range of stack heights, making them suitable for a wide range of applications. The UL94V-0 high temperature LCP material provides a high flammability rating with operating temperatures up to 125°C. These connectors are Lead-Free, RoHS compliant and Halogen-free, making them an environmental friendly option. In addition to Datacenters, both ComboStak® and PowerStak® connectors are ideal for other applications in the Mobile Networks and Industrial markets. They meet USCAR-2 V2 shock and vibration standards making it suitable for Automobile industry.

Check out to know more about Amphenol's new [ComboStak® and PowerStak® Connectors](#).