

3M Twin Axial Cable Solution Increases Efficiency of Servers for HPC

- Dense server systems for high performance computing benefit from the flat, foldable ribbon design -

Super Computing Conference – 3M is thinking inside the box to increase efficiencies inside the data center and boost high-performance computing (HPC) power. The low-profile capabilities of [3M's Twin Axial Cable Assemblies](#) save a substantial amount of internal space and help alleviate congestion inside dense server systems—giving design engineers considerably more room for server architecture options. The ultra-flat, foldable ribbon design also optimizes airflow for better cooling to maintain the high speeds and processing power HPC environments demand.

3M's Twin Axial Cable is bringing this capability to Dell's new PowerEdge™ C4130 rack servers, the latest in Dell's PowerEdge Server Portfolio and a purpose-built solution to support HPC environments within the scientific and medical research, financial, industrial and data-intensive computing fields.

This technology will be on display this week at the Supercomputing Conference (SC14), Nov. 16-21 in New Orleans, La. The conference brings together the HPC community to see and talk about the latest and greatest technologies in the industry.

Industry-standard discrete pair internal high-speed cable assemblies typically found in high-performance servers are bulky—between 4-8 mm thick. This type of cabling creates awkward configuration and assembly challenges, difficulties accessing system components and obstructions in airflow, all of which can impact the TCO of the data center.

Alleviating these challenges with a thin, bendable design, 3M's Twin Axial Cable features a flat ribbon, less than 0.9 mm thick, and an incredibly tight bending radius that takes up considerably less space and provides improved access to system components. The cable's pliable format also allows for multiple turns and sharp folds with little or no impact on performance in a low profile assembly that provides uniform, reliable signal integrity.

Powerful systems like Dell PowerEdge C4130 are designed to accelerate the most complex HPC workloads and enable innovation and discovery through the processing of enormous data sets. These dense servers benefit from the foldable ribbon format of 3M's Twin Axial Assembly, which provides flexible solutions to demanding computing needs of today's enterprises.

"HPC solutions are critical to addressing the toughest problems across industry, academics and government labs," said Brian Payne, executive director of Server Solutions at Dell. "Dell is raising the bar on how Dell PowerEdge servers support the most demanding computing applications with the innovative PowerEdge C4130. The C4130, with 3M's inventive cable design, sets a new standard for GPGPU density in a 1U platform. We are excited about the PowerEdge C4130 and the computing performance that it brings to supercomputing professionals and their efforts to overcome today's academic, research and entrepreneurial challenges."

"The 3M Twin Axial cable met many of the density challenges that HPC system design engineers have struggled with for so long," said Tim Mertens, business director, 3M Electronics Materials Solutions Division. "It is rewarding to see innovation like the Dell PowerEdge C4130 servers in action."

To learn more about 3M Twin Axial Cable Assemblies, visit www.3Mtwinax.com. More information on Dell servers is available at www.dell.com.

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The low-profile capabilities of 3M's Twin Axial Cable Assemblies save a substantial amount of internal space and help alleviate congestion inside dense server systems - giving design engineers considerably more room for server architecture options. (Photo: Business Wire)

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