**BUSINESS CHALLENGE**

Massive increases in data usage are dramatically changing the enterprise storage industry, requiring a new standard interface to enable faster transfer rates.

Storage systems are becoming larger and more distributed due to the rapid growth of data needed for everything from business analytics and information retention to on-demand entertainment and the Internet of Things (IoT). This need for increased bandwidth made it necessary for the T10 Standards Committee to increase the performance of the SAS channel which included the connector interface.

The Molex iPass+™ HD was chosen by the members of the INCITS T10 Technical Committee to be the connector of choice for the SAS standard when the data rate was increased from 3 Gbps to 6 Gbps. At that time, the iPass+ HD system doubled the port density as well as doubling the data rate. This time the committee chose to double the data rate to 12 Gbps but not to change the physical connector so as to preserve interoperability between SAS generations.

Molex accepted this challenge and with a unique redesign within the connector form factor, introduced the new 12 Gbps solution for the T10 SAS-3 standard. As a result of this redesign activity, enterprise server and storage companies are now able to focus on their need to provide system-level solutions capable of delivering the higher bandwidth needed for today’s applications.

**SOLUTION**

**The iPass+™ HD (High Density) Interconnect System from Molex was selected as the 12 Gbps SAS-3 standard.**

Designed for large-scale data-center storage systems, industry-leading iPass+ HD Interconnects support SAS 3.0 (12 Gbps) and are backward compatible with SAS 2.1 (6 Gbps) systems. As the developer, Molex licenses the technology to other connector suppliers to ensure the products are interchangeable and intermateable, helping to encourage earlier adoption of this significant improvement in I/O technology.

- External passive copper cable assemblies (4x and 8x)
- Internal passive cable assemblies (4x and 8x)
- External integrated cage and receptacles (4x, 8x and 16x)
- Internal right angle and vertical receptacles (4x, 8x and 16x)
- External Active Optical Cable assemblies (4x AOCs)
CUSTOMER BENEFITS

The first-to-market, comprehensive iPass+ HD Interconnect System from Molex helps data center architects design and deploy larger, faster and more reliable storage systems while allowing enterprise users to upscale their storage capabilities as their requirements evolve and grow.

The iPass+ HD Interconnect System is just one example of a Molex solution that has extended through the standardization process. Molex is strongly committed to being an active partner with standard setting committees and groups and works with them from the earliest stages of product development to design innovative solutions that benefit the entire industry.

To learn more visit www.molex.com/ab/ipassplushd.html