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SATA-IO Unveils Revision 3.2 Specification

Latest SATA Specification Includes SATA Express, New Form-Factors, Power Management Enhancements and Optimizations for Solid State Hybrid Drives

Beaverton, Ore. – August 8, 2013 – Serial ATA International Organization (SATA-IO), the industry consortium dedicated to sustaining the quality, integrity and dissemination of Serial ATA (SATA™) technology, today announced the ratification of its revision 3.2 specification. The latest specification includes SATA Express, a new specification that enables the coexistence of SATA and PCIe storage devices, as well as enhancements in power management, new SATA form-factors, and optimizations for solid state hybrid drives (SSHDs).

"SATA technology continues to evolve to accommodate ever-changing storage industry requirements," said Mladen Luksic, SATA-IO President. "The updates featured in the revision 3.2 specification, such as SATA Express and enhancements for emerging solid state hybrid drives, are driven by current market trends. These new features demonstrate SATA-IO's ongoing commitment to providing low-cost, high-performance storage solutions."

Initially introduced in January 2013, the SATA Express specification enables a client storage ecosystem that allows SATA and PCIe solutions to coexist. A host implemented to this specification will connect to and function with either a SATA or PCIe storage device. PCIe technology enables increased interface speeds of up to 2GB/s (2 lanes of PCIe 3.0), compared with today's SATA technology at 0.6GB/s (6Gb/s). The increased speed of PCIe provides a cost-effective solution for optimizing performance of Solid State Drives (SSDs) and emerging SSHDs. Storage devices not requiring the increased speed of PCIe, such as traditional hard disk drives (HDDs) and optical drives, will continue to be supported by SATA.

SATA revision 3.2 also incorporates the M.2 form factor, enabling small form-factor M.2 SATA SSDs suitable for thin devices such as tablets and notebooks. M.2 (formerly known as NGFF

and defined by PCI-SIG®) is a small form factor card that supports a variety of applications including WiFi, WWAN, USB, PCIe and SATA.

Additional key features and enhancements of revision 3.2 include:

- **microSSD** – standard for embedded solid state drives (SSDs) that enables developers to produce single-chip SATA implementations for embedded storage applications.
- **Universal Storage Module (USM)** – enables removable and expandable storage for consumer electronic devices. SATA revision 3.2 introduces USM Slim, which reduces module thickness, allowing smaller removable storage solutions.
- **DevSleep** – the lowest yet level of power management where the drive is almost completely shut down, to meet the requirements of new always on, always connected mobile devices such as Ultrabooks™.
- **Transitional Energy Reporting** – provides the host with detailed information about the SATA storage device, facilitating better power management.
- **Hybrid Information** – provides a mechanism in which the host can communicate data caching information to the drive, improving solid state hybrid drive (SSHD) performance.
- **Rebuild Assist** – speeds the data reconstruction process in RAID configurations.

For more information on revision 3.2 and the complete SATA ecosystem, visit SATA-IO at booth #806 at the Flash Memory Summit on August 13-15, 2013 in Santa Clara, CA. SATA-IO will also be presenting "SATA v3.2: SATA Evolves" in the Standards session on August 13 from 4:35 to 5:45 p.m. at the event.

SATA specifications are available for members to download at no cost. Non-members may purchase the specification for a nominal fee. To access the SATA specifications, visit SATA-IO Website Downloads. For more information on SATA technologies, visit http://www.sata-io.org/technical-overview.

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About SATA-IO

Formed in September 2004, SATA-IO is the International Organization that owns and manages Serial ATA specifications as open industry standards. The organization defines and implements the Serial ATA storage specification as the industry's storage needs evolve. It is dedicated to sustaining the quality, integrity and dissemination of the SATA technology by maintaining the

specifications, promoting and marketing the benefits of the technology and creating future interface features and specifications that carry storage into the next decade. Additional information about the organization, its nearly 200 participating companies and membership is available at www.sata-io.org.