SATA-IO Frequently Asked Questions

What is SATA-IO?

The Serial ATA International Organization (SATA-IO) is an independent, non-profit organization developed by and for leading industry companies. Officially formed in July 2004, the SATA-IO provides the storage industry with guidance and support for implementing the SATA specification.

The SATA-IO is dedicated to sustaining the quality, integrity and distribution of SATA supported technology by maintaining the specification and creating future interface features and specifications that promote SATA storage into the next decade.

Does SATA-IO produce products?

No, the SATA-IO does not produce products, but it promotes products with the SATA specification. Members of the SATA-IO have the ability to influence, or directly contribute to the development of the SATA specifications as SATA-IO members.

When is SATA 4.0 at 12Gb/s coming?

There are no plans to extend SATA bandwidth beyond the current 6Gb/s transfer rate since the change requires signigicant changes to the PHY section of the specification, the impact to compliance testing and compatibility. SATA-IO will continue to maintain and make improvements to the specification to insure the stability, compatibility and reliability that SATA has and will continue to deliver into the future.

What is new in SATA Technology?

New revisions to the SATA 3.3 specification include:

- SMR (Shingled Magnetic Recording) that provides a 25 percent or greater increase in HDD capacity by overlapping tracks on the media.
- Transmitter secification improvements that increases interoperability and reliability between host and devices
- Power Disable feature that enables a host to remotely power-down a SATA drive and a Rebuild Assist function that speeds up the rebuild process.
- For more SATA revision 3.3 details, refer the the latest release of the SATA specification

Why is SATA adoption widespread?

SATA continues to be the interface of choice deployed across all segments of the storage market. On average, it has been the best value storage solution on the market vs. all other storage solutions. SATA supports the following storage market segments:

- Consumer electronics (SATA MicroSSD, SATA USM, SATA SSD BGA)

- Desktop (SATA M.2, mSATA, eSATA, SATA Express)
- Embedded (SATA MicroSSD, SATA SSD BGA)
- Mobile (SATA M.2, mSATA, SATA SSD BGA, eSATA)
- Enterprise (U.2 [SFF-8639/9639])

According to recent data from storage industry research firm TRENDFOCUS[i], both SATA SSDs and HDDs maintain a significant market share majority over other interfaces for both the client and enterprise storage markets. Major factors driving this trend are SATA technology's support for higher capacities and overall cost effectiveness – SATA continues to be the tried-and-true solution.

What in store for the future of SATA?

SATA is a cost effective, robust interface with multiple form factors to solve most storage needs. The SATA-IO plans to maintain and where improvements make sense, extend functionality to meet the the evolving needs of the storage industry.

SATA will continue to support and improve low power features including Device Sleep (DEVSLP), Zero Power Optical Disk Drives (ZPODD) and Remote Power Disable. Power efficiency requirements are increasing with expected regulations coming in the near future. The SATA specification continues to offer proven low power standards to meet these imminent challenges.

SATA supports technologies that increase storage capacity with Shingled Magnetic Recording (SMR) and other related technologies that extend reliability and feature capabilities to meet the emerging storage challenges of the future. SATA technology is the solution of choice providing the optimal balance of power, performance and cost benefits; all on a single I/O lane per device and with fewer control and power rail requirements than other technologies.

SATA is everywhere and continues to be the most dominant interface across all segments of the storage market.

[i] Jeanette, D. TRENDFOCUS. (2016). *SATA is EVERYWHERE…REALLY!* pgs. 2-4.