ENSURING INTEROPERABILITY

To facilitate the identification of high quality SATA products in the marketplace, SATA-IO recently introduced the certified logo program to complement its well-established interoperability test program. Devices that pass SATA-IO interoperability testing can use certified logos to indicate adherence to SATA specifications. SATA-IO certified logos provide another level of awareness of SATA technology, enabling manufacturers and users the ability to quickly and easily identify SATA-certified products.

Integrity of the SATA specification is ensured through SATA-IO's interoperability program, which is based on documented procedures and testing guidelines for all SATA products. Program benefits include SATA-IO hosted Interoperability Workshops for testing of products at various stages of development, and the promotion of certified SATA products on the SATA-IO Integrators List. The Integrators List is the central reference guide for the industry to determine the interoperability of SATA components per the guidelines of the Interoperability Program. Any product that has passed Interoperability Testing and is listed on the Integrator's List is eligible to use the new certified SATA logos.

Interoperability testing is available year-round from certified third-party test labs. Through test events and certified labs, SATA-IO strives to ensure that interoperability testing is readily available to the industry, and with it, the expansion of devices that demonstrate the ease of interoperability which SATA technology enables.

For more information on the Interoperability Program visit
http://www.sata-io.org/interoperability.asp

FAQs available at
http://www.sata-io.org/interopfaq.asp

JOIN SATA-IO

SATA-IO encourages companies invested in SATA technology to join the growing ecosystem of leading member companies dedicated to the advancement and promotion of Serial ATA technology worldwide. Visit our online membership roster at http://www.sata-io.org/members.asp.

SATA-IO member benefits include:

- Contribution to the development and promotion of the Serial ATA specification protocol
- Access to early revisions of Serial ATA specifications
- Participation in SATA-IO working groups for Contributor level members
  - CabCon Working Group
  - Digital Working Group
  - Logo Working Group
  - Marketing Working Group
  - Phy Working Group
  - Technical Integration Committee
- Invitations to member meetings and events
- Access to the SATA-IO Members Only Web area
- Company promotion and links through the SATA-IO Web site
- Ability to attend SATA-IO testing events at reduced rates
- Ability to list certified products on the Integrators List at no fee

To become a member of the Serial ATA International Organization visit:
http://www.sataio.org/joinsata.asp
or call SATA-IO Administration:
+1 503-619-0572.

WWW.SATA-IO.ORG

SERIAL ATA

SERIAL ATA INTERNATIONAL ORGANIZATION (SATA-IO)

DESIGNING SERIAL ATA FOR TODAY'S APPLICATIONS AND TOMORROW'S STORAGE NEEDS

SATA PRODUCT FEATURES

SATA Speeds

SATA 1.5Gb/s: Initial interface speed for 150MB/s data transfer rate

SATA 3Gb/s: Enhanced interface speed for 300MB/s data transfer rate, backward compatible

SATA 6Gb/s: Most recent interface speed increase providing 600MB/s data transfers and backward compatiblity

External SATA

eSATA or "external SATA" is designed to deliver data from inside the PC to outside the PC in a fast, reliable and flexible way

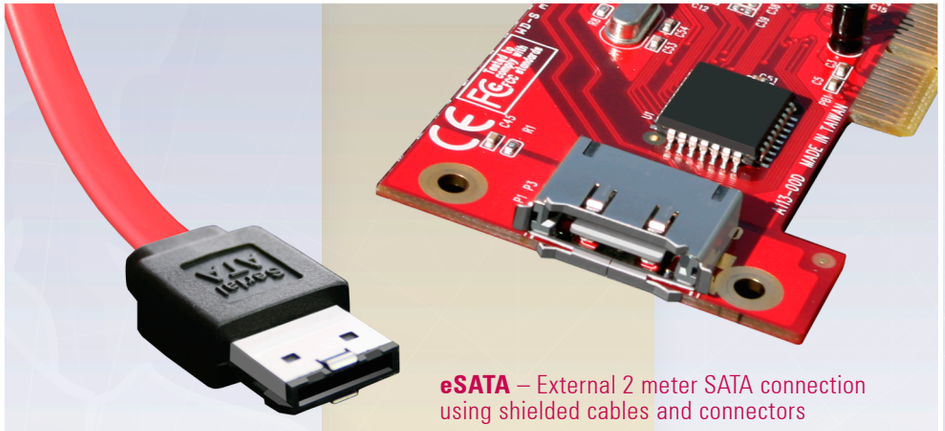
xSATA: External 8 meter SATA connection using shielded cables and connectors

Connections

SATA ClickConnect: Latching connector designed to securely mate internal device and host side

SATA Hot Plug: The ability to connect and disconnect devices without prior notification

New Connectors: For smaller form factors



eSATA – External 2 meter SATA connection using shielded cables and connectors

SATA-IO: ENABLING THE FUTURE

Serial ATA (SATA) is the primary internal storage interconnect for desktop and mobile PCs, connecting the host system to peripherals such as hard drives, solid state drives, optical drives, and removable magnetic media drives. SATA technology benefits include faster speed, simpler upgradeable storage devices and easier configuration at lower cost than other storage interfaces.

SATA Hard disk drives are also gaining a significant presence in enterprise applications, enabling more cost effective and higher capacity storage solutions. External SATA (eSATA) extends SATA technology outside the PC, where fast transfer rates and protocol efficiencies make it the highest-performing storage connection for external devices.

The Serial ATA International Organization (SATA-IO) is an independent, non-profit organization of more than 200 industry leading member companies dedicated to sustaining the quality, integrity and adoption of SATA technology by maintaining the specifications, promoting interoperability, marketing technology benefits and creating future SATA features to carry storage into the next decade.

Additional Capabilities

SATA Port Multiplier: Hardware multiplexer, aggregating one host to many storage devices (up to 15) using 4 bit address field

SATA Port Selector: Hardware multiplexer supporting many hosts (up to 15) to one device for redundant host connect, using a sideband signal

Native Command Queuing: Reordering of commands for efficient data transfer and data streaming support

Staggered Spin-up: Drive spin-up sequencing to avoid power surges

Interface Power Management: Intelligent power management techniques with hardware control

Asynchronous Notification: Device-to-host notification feature that eliminates polling

Spread Spectrum Clocking: Spreads radiated emissions over a range of frequencies to lower overall emissions for agency testing

SATA SPEC DOUBLES SPEED TO 6GB/S

SATA 6Gb/s delivers on the increasing need for speed and data movement. As end-users amass ever-increasing amounts of high-resolution photos, videos, music, and other data, basic transfer rates become crucial. It enables consumers to move large amounts of data at a much faster rate than previously possible.

In addition to doubling data transfers from drives, the latest SATA Revision 3.0 specification also maintains backward compatibility with earlier SATA specifications. It preserves the same cost-conscious design while minimizing changes to existing implementations and infrastructure by maintaining the existing SATA connector configurations.

The new SATA Revision 3.0 specification features a number of enhancements for increased functionality. These enhancements include:

- A new Native Command Queuing (NCQ) streaming command to enable isochronous data transfers for bandwidth-hungry audio and video applications
- An NCQ Management feature that helps optimize performance by enabling host processing and management of outstanding NCQ commands
- Improved power management capabilities
- A small Low Insertion Force (LIF) connector for more compact 1.8-inch storage devices
- A connector designed to accommodate 7mm optical disk drives for thinner and lighter notebooks
- Alignment with the INCITS ATA8-ACS standard