Built with Purpose, Designed for Performance.

Intel® Data Center SSDs based on EDSFF*; the perfect fit

Break free from the limitations of legacy data center SSD form factors with the revolutionary new E1.L and E1.S Intel® SSDs based on EDSFF*. Featuring a common connector and pinout, the array of flexible, future-ready features enable a broad range of interoperable designs. Purpose-built to meet your toughest storage challenges and to always be the perfect fit.

Simply Revolutionary

Designed from the ground up, these revolutionary new EDSFF-based SSDs deliver flexible building blocks for scalable solutions, increased operational efficiency at scale and space-efficient capacity consolidating the storage footprint.

EDSFF was created to limit storage form factor proliferation by defining revolutionary industry standard form factors. This was driven by three guiding principles: enable scale, optimize total cost of ownership, and enable a dynamic range of solutions.

These principles were driven by key data center storage challenges, as surveyed from top IT decision makers: ability to scale capacity to support data and application growth, driving down the cost of storage—lowering operating and capital expenditures, while increasing storage agility, and to deliver required application performance without compromises. With a healthy and growing ecosystem, Intel supports EDSFF as the data center form factor standard of the future.

Now You Have Options

The E1.L and E1.S give you options for a variety of data center needs.

E1.L is a purpose-built form factor optimized for disaggregated systems. Providing high per server capacity, enabling up to 32 drives per rack unit for massive storage power. In addition to capacity, this form factor provides key features of thermal efficiency, full serviceability, scalability, and future ready performance.

E1.S provides the best of U.2 and M.2. E1.S in a scalable, flexible, power, and thermally efficient SSD building block. This form factor was designed for high-volume hyperscale, and allows system flexibility, increased storage density, modular scaling, improved serviceability, and more efficient cooling optimized for 1U servers.
Optimized Capacity

EDSFF drives were designed to optimize capacity per drive. With 36 media sites on the E1.L, this drive can scale to higher capacities without expensive and complex die stacking. The Intel® E1.L will scale up to 30.72TB of capacity in 2019. Using the 30.72TB E1.L form factor, you will be able to reach nearly 1PB of storage in 1U. This provides up to 10 times rack consolidation compared to 8TB U.2 15mm drives.

Space Isn't All it Saves

E1.L provides programmable LEDs to quickly locate failed drives, offline drives, and un-populated slots. With a carrier-less design and an integrated latch, the E1.L removes the need for drive carriers. Advanced enclosure management with slot level power control enables single drive isolation. The E1.L is up to 2 times more thermally efficient than U.2 15mm drives, while the E1.S is up to 3 times more thermally efficient than U.2 7mm drives. With a combination of built in serviceability and thermal efficiency, EDSFF drives allow you to increase operational efficiency at scale.

Intentional Design

The inspiration for EDSFF, the Intel® SSD DC P4500 in the “ruler” form factor won an International Design Excellence Award (IDEA) in 2019. This award is a benchmark of design and positions Intel® SSDs based on EDSFF to become an icon in the storage industry. A shift toward intentional industrial design in the storage industry, Intel® SSDs based on EDSFF show how Intel is reimagining data center storage for flash.