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Information Technologies

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SENYUM Supermicro 1U-STR-NVMe

OPEN-E JOVIANDSS
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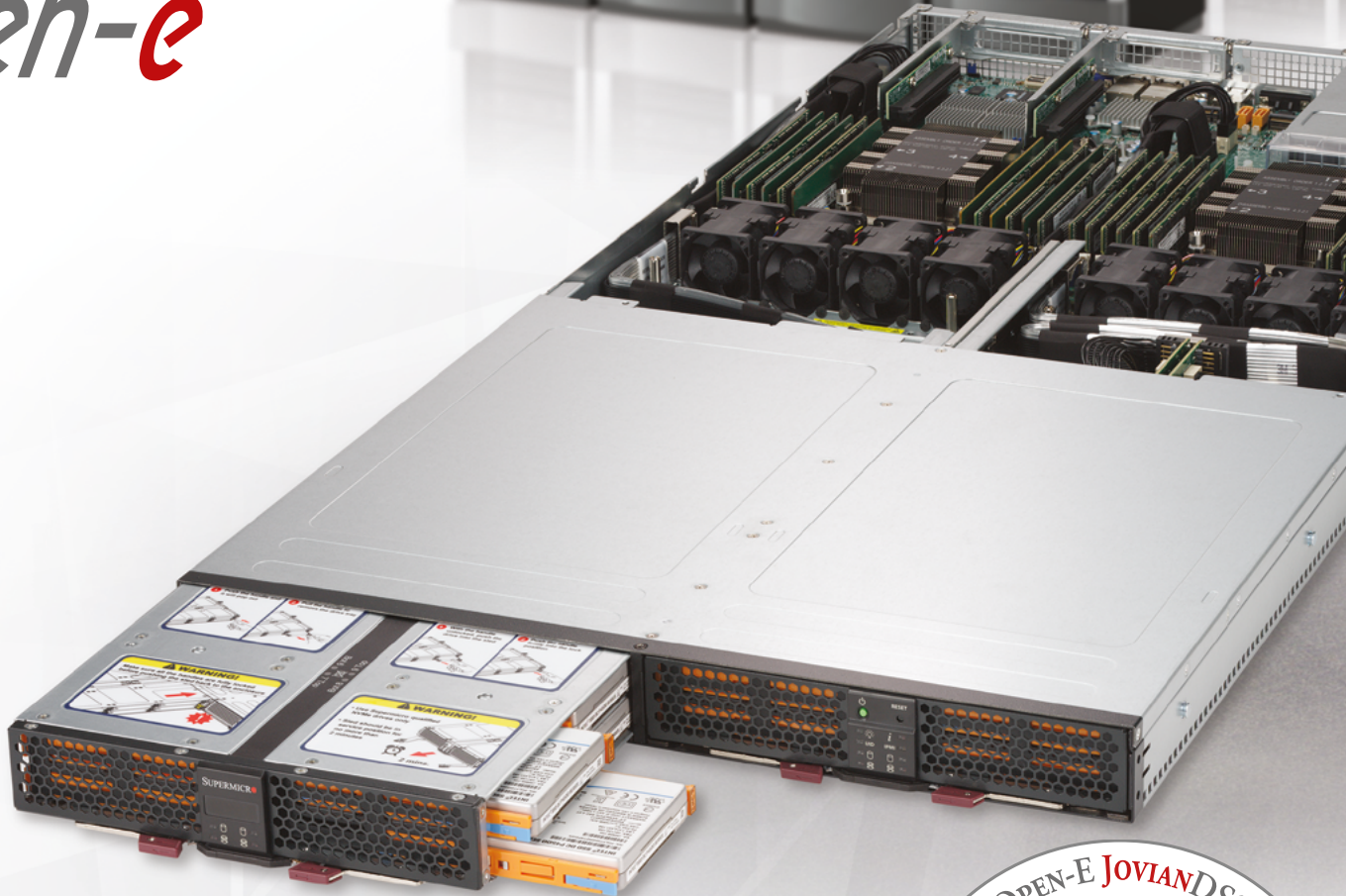
SENYUM is the first and only Open-E Platinum Partner in IBERIA and SENYUM 1U-STR-NVMe powered by the ZFS- based Open-E JovianDSS software is their first common certified solution. With the 1U-STR-NVMe storage appliance SENYUM provides an extremely fast, reliable and ultra-compact solution for companies that need storage designed especially for VDI and databases and other demanding high performance. The technology of the motherboard and the chassis, specially designed for NVMe disks provides high performance with any configuration. This

compact storage can hold up to 32 NVMe on just 1U, increasing the speed the more discs are added. The combination of this hardware with Open-E JovianDSS software results in a robust and scalable solution that can be offered as a single node appliance or as a cluster solution. The 1U-STR-NVMe appliance is easy to integrate in the network and can be accessed via several protocols. The appliance can store critical data and backups thanks to the Open-E JovianDSS integrated backup technology on the same unit.

› Guaranteed data protection
› Enhanced storage performance
› Flexible scalability
› Optimized for Data Centers
› Data integrity check
› Data compression
› Unlimited number of snapshots and clones
› Thin, thick and over-provisioning

Fast and reliable SENYUM 1U-STR-NVMe

Guaranteed data protection

Data is your most important resource. This is why the Open-E JovianDSS-based 1U-STR-NVMe includes several mechanisms for data protection. Automatic and scheduled multi-layer data integrity checks ensure data consistency, while unlimited snapshots and clones make it is easy to implement a disaster protection strategy and to instantly roll back to a previous point-in-time. At the same time, a scheduled self-healing mechanism fixes malfunctions and automatically restores full data redundancy in the system. Even when a disk fails, the software-based spare function offers one disk to several RAID arrays, saving you money on extra hardware without compromising data safety.

Flexible scalability

The 1U-STR-NVMe will let you experience unlimited flexibility and minimize unappreciated downtime. Open-E JovianDSS uses a 128-bit file system that includes unlimited snapshots for easy backup, unlimited clones for easy duplication, unlimited capacity with volume sizes up to one Zetabyte, as well as unlimited amount of disks which can be increased on the fly without effort by using thin provisioning. There are no limitations and you may easily control the total cost of ownership and expand your storage infrastructure as data grows.
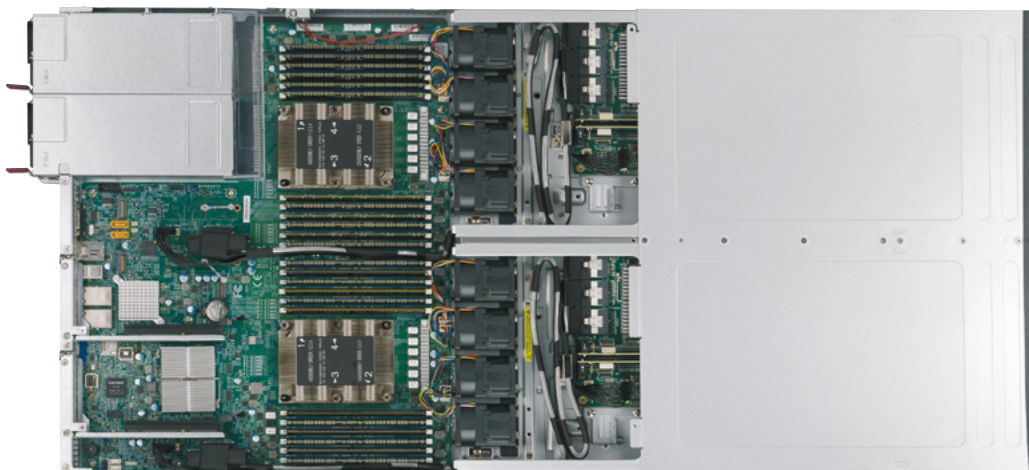

Enhanced storage performance

Nowadays, enterprise storage has to provide big capacity while also being fast, affordable and include reliable support. This is exactly what 1U-STR-NVMe has to offer. Open-E JovianDSS-based 1U-STR-NVMe is an innovative hybrid storage system fusing the capacity of HDDs with the performance of SSDs in a single solution that offers high performance while lowering cost. Additionally, by leveraging capacity optimization technologies and advanced tiered SSD and RAM caching, 1U-STR-NVMe provides an overall efficiency boost and increased cache performance. On top of that, powerful tuning tools allow the system to optimize on I/O heavy databases or high throughput video editing equally well.

Optimized for Data Centers

1U-STR-NVMe is optimized for the modern data center and ready for compute-intensive applications that involve big data, intensive virtualization workloads and higher-density server configurations. The server allows administrators an intuitive management of storage infrastructures and maintaining continuous operations during updates or refreshes. By choosing 1U-STR-NVMe you benefit from flexible CPU power, networks running 1, 10 or 40 Gb Ethernet, as well as knowledge and experience of SENYUM in 1U-STR-NVMe and developing servers specialized for datacenter.

Data integrity check

The 1U-STR-NVMe storage system effectively detects data corruption, as even minor integrity violations could cause loss of data. 1U-STR-NVMe ensures reliability by check-summing individual blocks of data and once faulty blocks have been detected they are automatically rewritten. If the same error is found several times the data blocks are moved to different parts of the HDD. Each read/write is checked automatically plus you can schedule to perform checks on not accessed blocks. All actions are done in atomic writes to ensure consistency of your data and to reduce data loss, even during power cuts.
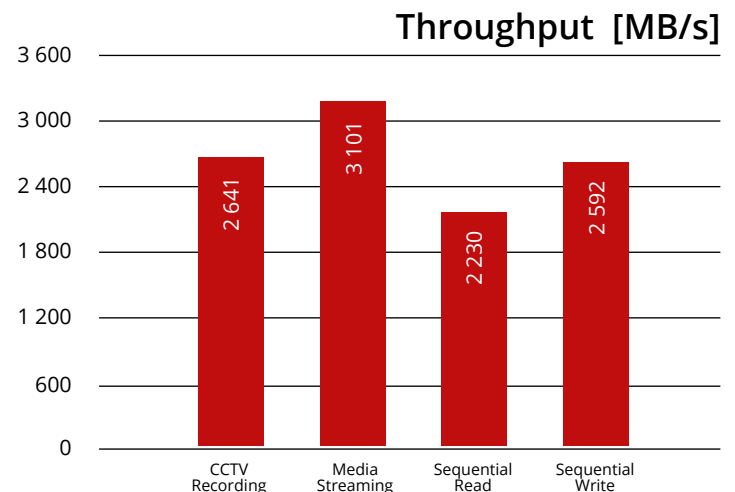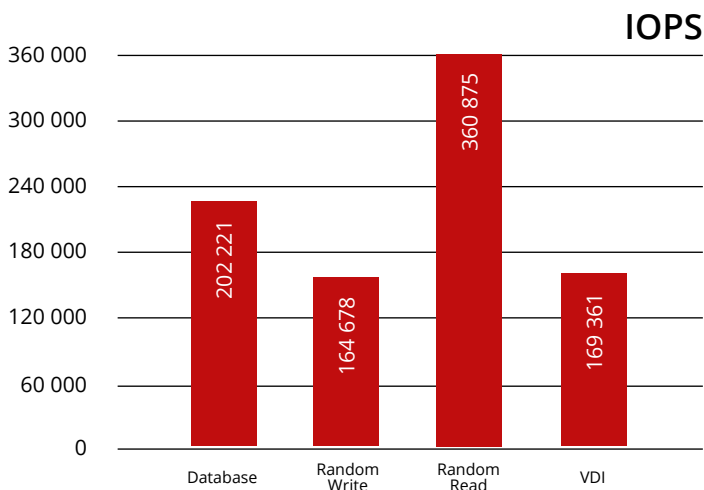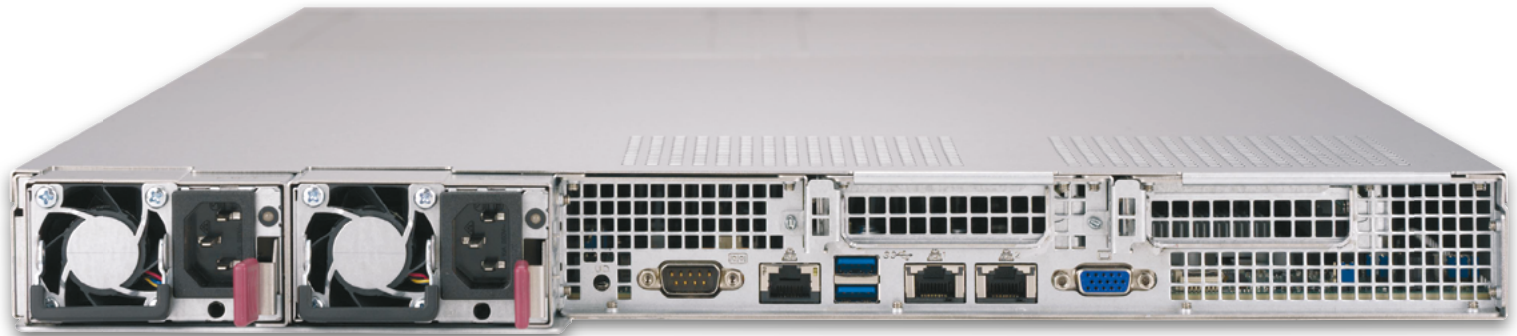
Data compression

The Open-E JovianDSS-based 1U-STR-NVMe offers data compression for minimizing your storage capacity usage. Smaller data blocks mean that the system can read and write quicker, ultimately boosting performance and taking less space on your storage. In 1U-STR-NVMe you will find resource-friendly compression protocols (lz4) with low system resource utilization at medium compression rates, but also protocols that are able to achieve very high rates for archiving or backup (as gzip-9). Compression in combination with deduplication, virtualization or high availability solutions further reduce acquisition costs, power and cooling costs, and rack space throughout the system lifecycle.

Unlimited number of snapshots and clones

Every Open-E JovianDSS-based 1U-STR-NVMe allows an unlimited number of snapshots and clones – greatly simplifying back-ups, replications and data recreation in case of accidental deletes or viruses. Snapshots are read-only points-in-time and allow for easy roll-back. They are a must-have option for effective disaster recovery scenarios and in 1U-STR-NVMe you may schedule snapshots for months, weeks, hours or even minutes. Whereas, a clone is a writable copy of a snapshot and allows to easily duplicate virtual machines and scale out for virtual networks instantly and without duplicating data.

Thin, thick and over-provisioning

The 1U-STR-NVMe uses thin provisioning to improve your storage utilization by allocating just the exact amount of server space at the time it is required. You'll eliminate the cost of unused storage space and never again have to pre-allocate storage up front and buy too much hardware. In 1U-STR-NVMe there is no need for evaluating storage requirements and take the risk of rebuilding the entire system when it runs out of space. With this system it is easy to manage storage capacity and set notifications when physical space shrinks. This is a highly scalable solution – just add physical disks as your data grows.

IOPS

Category	IOPS
Database	202 221
Random Write	164 678
Random Read	360 875
VDI	169 361

Throughput [MB/s]

Category	MB/s
CCTV Recording	2 641
Media Streaming	3 101
Sequential Read	2 230
Sequential Write	2 592

Hardware details

	Default configuration	Options
Motherboard	Supermicro X11DPS-RE	-
CPU	2x Intel® Xeon® Silver 4208 CPU 2.10GHz	2nd Generation Intel® Xeon® Scalable Processors (Cascade Lake-SP), Intel® Xeon® Scalable Processors.
RAM	4x 16GB hynix HMA82GR7CJR8N-VK	Up to 6TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 6TB 3DS ECC LRDIMM, DDR4-2933MHz, in 24 DIMM slots;
Storage raw capacity	16TB	-
HDDs	4x 4TB Intel® SSD DC P4510	Up to 32 NVMe discs
Network interface	2x Supermicro AOC-STG-i2T 1x Supermicro AOC-S25G-M2S-O	-

NOTE: The LED light blinking in the disk localizer functionality is not supported for NVMe drivers.

About SENYUM

SENYUM is an IT consultant company from Barcelona, Spain. We offer an Integral Service focus to SMEs needs. We are specialized in IT & ERP services and through them we offer both basic and specialist solutions, providing support, consulting, network & security, virtualization or storage solutions. We offer our support services as an MSP and we build integrations with cloud solutions. Our goal is to always offer the best customer experience, regardless of their knowledge of the technology.

SENYUM has created and packaged specific solutions for backup online, Security as a Service, Storage or Hyperconverged Solutions with leaders on the market. In the field of Storage and hyperconverged Solutions SENYUM is focused on Open-E and VMware integration, offering best technology to every customer need with a low-price impact on acquisition and deployment.

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About Open-E

Open-E, founded in 1998, is a well-established developer of IP-based storage management software. Its flagship product Open-E JovianDSS is a robust, award-winning storage application which offers excellent compatibility with industry standards, and is the easiest to use and manage. Additionally, it is of the most stable solutions on the market and undisputed price performance leader.
Thanks to its reputation, experience and business reliability, Open-E has become the technology partner of choice for industry-leading IT companies. Open-E accounts for over 30,000 installations world-wide and has received numerous industry awards and recognition, also with its product Open-E DSS V7.
For further information about Open-E, its products and partners, visit
http://www.open-e.com/

About the Open-E JovianDSS Server Certification

Open-E JovianDSS delivers software-defined storage which results in a wide variety of different hardware requirements such as performance range, capacity capability, and connectivity. To ensure compatibility and robust storage environments, all selected partners offer storage systems which are tested, benchmarked and certified by Open-E. This way, customers are able to use solutions that require exceptional security and redundancy, without compromising performance.