



## Ahead-IT.eu Supermicro DIS224A Single Node



The Supermicro DIS224A storage server with Open-E JovianDSS Single Node is a 2U high performance and scalable solution optimized for extreme low latency and for users demanding highest speed and best efficiency.

The server distributed by Ahead-IT offers out-of-the-box preconfigured turn-key high availability storage solutions with integrated backup and disaster recovery.

Their solutions are ideal for hosting users' critical virtual servers and NFS/SMB/iSCSI/FC shares, requiring the highest performance, IOPS and low latency.

- › Enhanced storage performance
- › Optimal resource utilization
- › Flexible scalability
- › Optimized for Data Centers
- › Data integrity check
- › Data compression
- › Tiered RAM and SSD Cache
- › Thin, thick and over-provisioning

# Ultra-Low Latency Full Flash Storage Server

## Enhanced storage performance

Nowadays, enterprise storage has to provide big capacity while also being fast, affordable and include reliable support. This is exactly what Supermicro DIS224A has to offer. Open-E JovianDSS-based Supermicro DIS224A is an innovative hybrid storage system combining 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, Supermicro DIS224A 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.

## Flexible scalability

The Supermicro DIS224A 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.



## Optimal resource utilization

Supermicro DIS224A fully utilizes your storage resources thanks to many high-end features included in Open-E JovianDSS. These features are especially crucial when deploying virtual environments. With deduplication and compression you are able to virtually increase your storage size and use thin provisioning to easily grow physical storage capacity without downtime. More efficient use of disk space also allows for longer disk retention periods. Tiered caching will allow reaching high performance values from all disks which can be managed and monitored in Supermicro DIS224A. This server fully leverages hybrid storage, combining high performance and high capacity at an affordable price.

## Optimized for Data Centers

Supermicro DIS224A 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 you benefit from flexible CPU power, networks running 1, 10 or 40 Gb Ethernet, as well as knowledge and experience of Ahead-IT in Supermicro DIS224A and developing servers specialized for datacenter.

# High performance and optimal data security

## Data integrity check

The Supermicro DIS224A storage system effectively detects data corruption, as even minor integrity violations could cause loss of data. Supermicro DIS224A 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

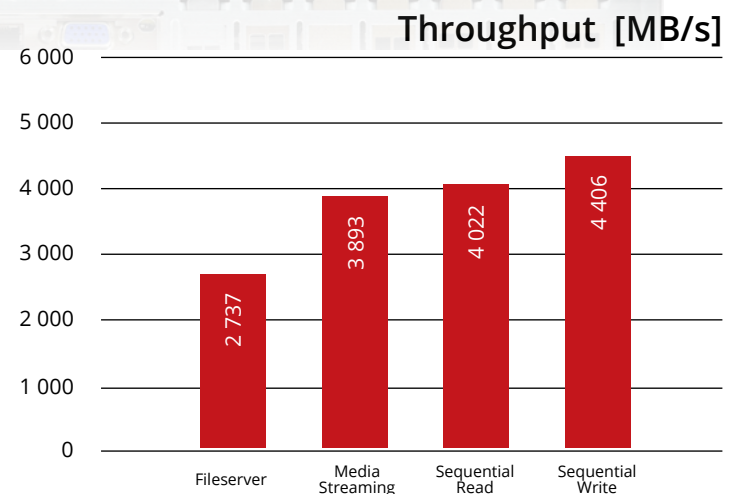
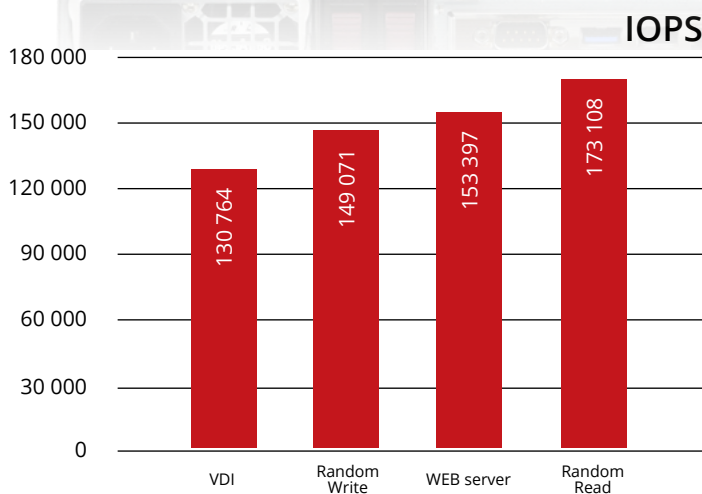
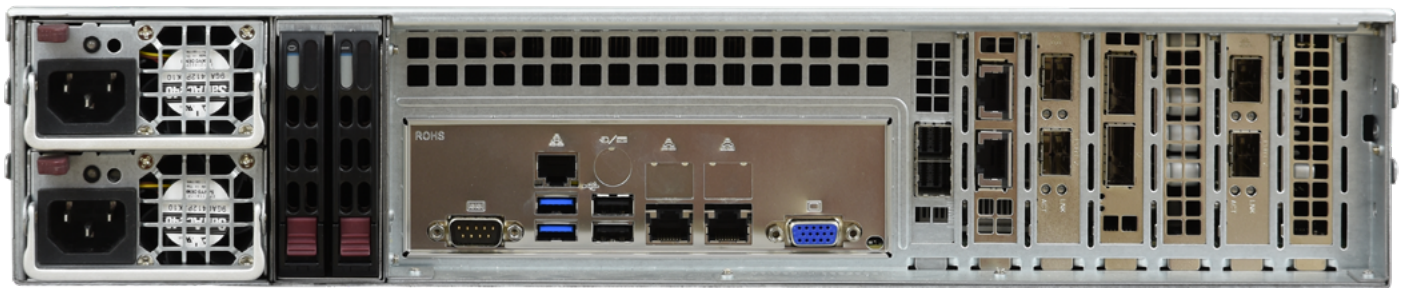
The Open-E JovianDSS-based Supermicro DIS224A offers data compression for minimizing your storage capacity usage. Smaller data blocks means that the system can read and write quicker, ultimately boosting performance and taking less space on your storage. In Supermicro DIS224A you will find resource-friendly 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.

## Tiered RAM and SSD Cache

Open-E JovianDSS-based Supermicro DIS224A works as a tiered storage environment - dramatically speeding up access to frequently accessed files. It uses a caching algorithm to cache "often used" and "recently used" data separately, and provides the best performance for your storage by tiering hot data between RAM and SSD Cache. In Supermicro DIS224A data is always saved on HDDs and only Hot Data is stored in RAM and SSD to ensure data safety and increase performance.

## Thin, thick and over-provisioning

The Supermicro DIS224A uses thin provisioning to improve your storage utilization by allocating an exact amount of storage space at the required time. You'll eliminate the cost of unused storage space and never again have to pre-allocate storage up front and buy too much hardware. There is no need for evaluating storage requirements and taking the risk of rebuilding the entire system when it runs out of space. With Supermicro DIS224A it is easy to manage storage capacity and set notifications when physical space shrinks.



# Hardware details

	Default configuration	Options
Motherboard	Supermicro X11DPi-NT	-
CPU	2x Intel® Xeon® Silver 4116 CPU 2.10GHz	Upscale
RAM	8x 16GB Samsung M393A2G40DB0-CPB DDR4 ECC REG	Up to 2TB
Storage raw capacity	8TB	Up to 2PB
HDDs	20x 240GB SAMSUNG MZ7KM240MHQ-00005	Flexible
Read cache	2x 400GB Intel® DC P3600 Series	Flexible
Write log	2x 800GB Intel® DC P3700 Series	Flexible
Drive controller	1x LSI SAS 3008-8I Host Bus Adapter	Extra HD SAS external connection for JBOD expansion
Network interface	2x Intel® Ethernet Controller X540-AT2 1x Mellanox ConnectX®-4 Lx 25Gb/s 1x Mellanox ConnectX®-4 100Gb/s 1x Intel® Ethernet Controller X722 for 1GbE	Flexible
Form factor	2U	4U with 72 x 2.5"



## About Ahead-IT

Ahead-IT is a supplier of outstanding virtualization, storage and server solutions. From our office in Wetteren - Belgium, we cater for regional, national as well as international customers. Private individuals, SMEs as well as large businesses rely on our expertise and know-how of reliable quality servers with service.

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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.