

# Supermicro Storage Appliances

## Featuring WekaFS™ Software

### FEATURES



**PRECONFIGURED AND FULLY TESTED**  
Best-in-class components engineered to work together



**EASY TO MANAGE**  
Simple, intuitive management via GUI, API, or CLI



**INTEGRATED STORAGE TIERING**  
Tier to multiple S3 targets for infinite capacity scaling and lowest cost



**INDUSTRY LEADING PERFORMANCE**  
World's fastest file system with native NVMe supports CPU and GPU workloads



**EXASCALE CAPACITY**  
Scale to petabytes of NVMe and exabytes of Object storage



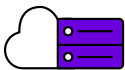
**UNIFIED ACCESS**  
POSIX compliant with support for NFS and SMB



**ADVANCED DATA PROTECTION**  
Distributed data protection and end-to-end data integrity



**TRANSPARENT SNAPSHOT CAPABILITY**  
Integrated backup and disaster recovery



**HYBRID CLOUD INTEGRATION**  
Backup or burst to the cloud for near unlimited resources



**BREAKTHROUGH ECONOMICS**  
High rack density and low power and cooling consumption

### ACCELERATE HIGH-PERFORMANCE AND TECHNICAL COMPUTE WORKLOADS

The boom of Big Data in today's world has created amazing new opportunities for innovation but unforeseen problems as well, particularly in the areas of artificial intelligence (AI), machine learning (ML), deep learning (DL), and high-performance computing (HPC) workloads. These workloads hold the promise of finding solutions for major challenges across industries, including healthcare and financial services. To accelerate the process of obtaining insight from mountains of data, these workloads require a modern infrastructure with extreme performance in compute, storage, and networking resources. There is a solution that addresses these needs and can help you gain the insight that you need to gain a competitive advantage, deliver customer value, and grow your business.

The Supermicro Storage Appliances, featuring WekaFS, the world's fastest and most scalable file system, are preconfigured and optimized for maximum acceleration and reduced training times, delivering unmatched performance at scale. This family of appliances is ideal for today's data-intensive applications in artificial intelligence and technical computing. It has proven scalable performance, delivering over 10x more performance than blade-based, all-flash, scale-out NAS and 3x more than locally attached NVMe SSDs. This solution supports deep learning workloads that are akin to HPC, but with unique storage requirements. Because these workloads consist of billions of small files, the storage system must be able to deliver high throughput, low latency, and excellent metadata performance at extreme scale to keep graphics processing units (GPUs) and applications saturated with data. This is unattainable by legacy storage systems, but made possible with WekaIO's modern NVMe-optimized, distributed, and parallel file system running on Supermicro servers.

### CHOOSE A PRE-CONFIGURED SOLUTION THAT DELIVERS PERFORMANCE, FLEXIBILITY, AND VALUE

Based on the Supermicro Ultra SuperServer® and BigTwin™ server platforms, WekaFS software, and Mellanox network adapters, you can take advantage of a plug-and-play engineered solution that helps extract greater value from data. This solution is available in a set of appliances that allows you to easily select a choice that best suits your performance, capacity, and footprint requirements. You can make your decision based on your need for:

- entry-level capacity with granular scaling of nodes (1U model)
- the best value per GB with granular scaling of nodes (1U model)
- best performance density per RU (2U model)

The 1U models offer flexibility, an attractive entry price, and the highest number of drives and performance per server node; the 2U model offers the highest performance density per rack unit and great power and space economy. The Supermicro BigTwin 2U Storage Appliance is the industry's first 2U multi-node system with high-performance processors, memory, storage, and I/O. Furthermore, it can lower energy consumption in the data center with an incredible 30 percent better thermal capacity. Performance and capacity can be easily increased with expansion storage for each appliance and drives for partially populated appliances.

WekaFS is a POSIX-compliant file system that distributes both data and metadata evenly across the entire storage cluster to ensure massively parallel access. WekaFS reduces time to innovation by

delivering more data to the applications that need it, faster than any other storage system. With a single namespace that can offer on-premises storage and cloud connectivity, the software delivers simplified storage management and data protection. Its performance is 3x that of local file systems and 10x that of traditional NAS. Mellanox adapters provide the choice of either InfiniBand or Ethernet to deliver 100Gb/sec bandwidth in a single network port, the lowest available latency, 150 million messages per second, and application hardware offloads, satisfying even the most demanding application requirements. The SPEC SFS®2014 results show that WekaFS has performance that is far superior to all competitors in Overall Response Time (ORT) for database, Electronic Design Automation (EDA), Video Data Acquisition (VDA), Virtual Desktop Infrastructure, and software build workloads.\*

## DERIVE BENEFITS FOR YOUR BUSINESS

These high-performance storage solutions not only address your specific needs based on workload types and performance and capacity requirements but go beyond that to provide greater overall benefits for your business:

- optimization of your IT environments with a modern storage infrastructure and simplified storage management
- data center agility with faster data access and effective resource utilization
- data transformation for machine learning and analytics with faster time to value and insight.

WekaIO delivers a differentiated solution that goes beyond current market and performance standards for storage. In partnership with Supermicro, a best-of-breed-technology alliance partner, WekaIO delivers the best solutions for your IT and business challenges.

## SUPERMICRO SUPERSERVER STORAGE APPLIANCES (8-NODE MINIMUM)

	ENTRY LEVEL CAPACITY WITH GRANULAR SCALING OF NODES	BEST VALUE PER GB WITH GRANULAR SCALING OF NODES	BEST FOR PERFORMANCE DENSITY PER RU
<b>Appliance</b>	SRS-AF1U08-WEKA-01	SRS-AF1U08-WEKA-03	SRS-AFBT08-WEKA-01
<b>Storage Server</b>	8x SYS-1029U-TN10R-W1 (8 nodes)	8x SYS-1029U-TN10R-W3 (8 nodes)	2x SYS-2029BT-HNR-W1 (8 nodes)
<b>Total Rack Units</b>	8U	8U	4U
<b>CPUs per Node</b>	2 x Intel® Xeon® 12-Core		
<b>NVMe Drives per Node</b>	10	10	6
<b>Total NVMe Drives</b>	80	80	48
<b>Raw Storage</b>	307.20TB	614.40TB	368.64TB
<b>Networking</b>	<ul style="list-style-type: none"> <li>• Mellanox EDR InfiniBand / 100GbE Ethernet QSFP28</li> <li>• 10GBASE-T Ethernet</li> </ul>		
<b>Software</b>	WekaFS™ Software		
<b>Software License (per Usable TB)</b>	161TB	322TB	193TB
<b>Data Protection</b>	<ul style="list-style-type: none"> <li>• Distributed Data Protection (N+2 or N+4)</li> <li>• Drive Hot Sparring</li> <li>• Error Detection: End-to-end Data Protection</li> <li>• In-flight and at-rest Data Encryption</li> </ul>		
<b>Protocols</b>	POSIX, NFS, SMB, S3 gateway		
<b>Snapshots and Clones</b>	File System Level, Up to 1024 Snapshots		
<b>Tiering</b>	S3 Compatible Cloud Object Store (Public or Private), and Ceph		
<b>System Monitoring</b>	Cloud-based Monitoring and Analytics for Application Tuning and Remote Support		
<b>Performance</b>	Sequential read performance up to 45GB/sec		
<b>Max Power</b>	6,560W		3,960W
<b>Dimensions</b>	8 Rack Units, 437 x 344 x 724 (mm, W x H x D)		4 Rack Units, 447 x 176 x 730 (mm, W x H x D)
<b>Support Term</b>	<ul style="list-style-type: none"> <li>• Software 3-year including Same Day Support</li> <li>• Hardware 3-year Next Business Day Support</li> </ul>		

Configuration details are subject to change without notice. Additional capacity, drive and server configurations available. Please call your Supermicro representative or your local WekaIO reseller for more information. \* SPEC® SFS2014 Results: <https://bit.ly/35UHLdk>

Additional Resource: WekaFS™ Data Sheet: <https://bit.ly/36BRJdc>

