Supermicro AS -2015A-TR

Intro

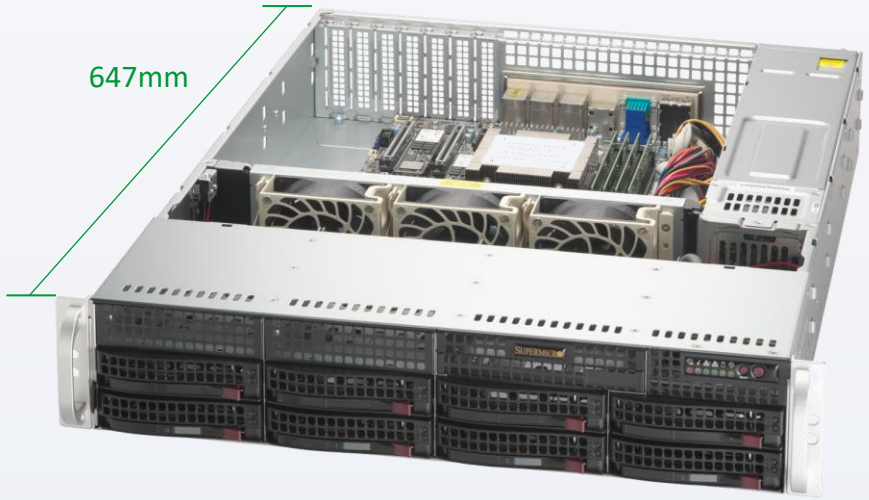
UP Workstation System Team

November 2023

SUPERMICRO AS -2015A-TR RYZEN 7000 SERIES FOR ELECTRONIC TRADING

LEADERSHIP PERFORMANCE	◦ Up to 16 high performance cores ◦ High frequencies for low latency response ◦ 16c up to 4.5Ghz (base) / 5.7GHz (boost) ◦ Energy efficient TDP from 65W to 170W ◦ Official STAC-N1 report with record breaking results
MULTI-LAYERED SECURITY FEATURES	◦ Integrated AMD secure processor ◦ AES-128 encryption key for memory protection
SERVER GRADE PLATFORMS	◦ IPMI: remote management with Latest BMC ◦ ECC-enabled memory subsystem

AS -2015A-TR 2U Specifications



Key Features

- Designed for FSI (Financial Service Institute) customers.
- Record breaking STAC-N1 results with AMD Xilinx X2522 NICs
- Dual High-throughput PCIe Gen5 x16 slots (16/NA or 8/8)
- Redundant Titanium level power supply
- Ultra fast storage with 2x M.2 PCIe 5.0 (2280/22110 support)
- Dual 1GbE LAN ports with 1 Dedicated IPMI port
- Support AMD Xilinx Solarflare X2 and X3 Ethernet adapters
- Custom BIOS for FSI

Processor Support – Single Socket AMD AM5

- AMD Ryzen™ 7000 (Zen4) processors (LGA1718), up to 16 Core / 170W TDP
- B650 PCH

Memory Capacity – 4 DIMM Slots

- 4x DDR5 ECC/Non-ECC UDIMM slots, up to 5200MT/s (1DPC) or 3600MT/s (2DPC)
- Capacity up to 128GB

Expansion Slots– 1 PCI-E Slots

- 2x PCI-E 5.0 x16 slots (16/NA or 8/8), can support up to 2 network accelerate cards

Rear I/O – multi displays, 2 LAN ports, 6 USB ports

- 2x USB3.2 Gen2 Alternate Mode (support DP), 1x USB 3.2 Gen2x2 Type C(20Gb)
- 3x USB 3.2 Gen2x1 Type A (10Gb)
- 2x 1Gbit LAN ports (Intel i210AT), 1x dedicated IPMI port
- 1x VGA (share with IPMI), 1x HDMI 2.0b, 1x DP1.4a
- 1x COM, HD Audio 7.1 channel connector via Realtek ALC888S-VD

Front I/O –

- 1x Power button, 1x System Reset Button

Drive Bays –

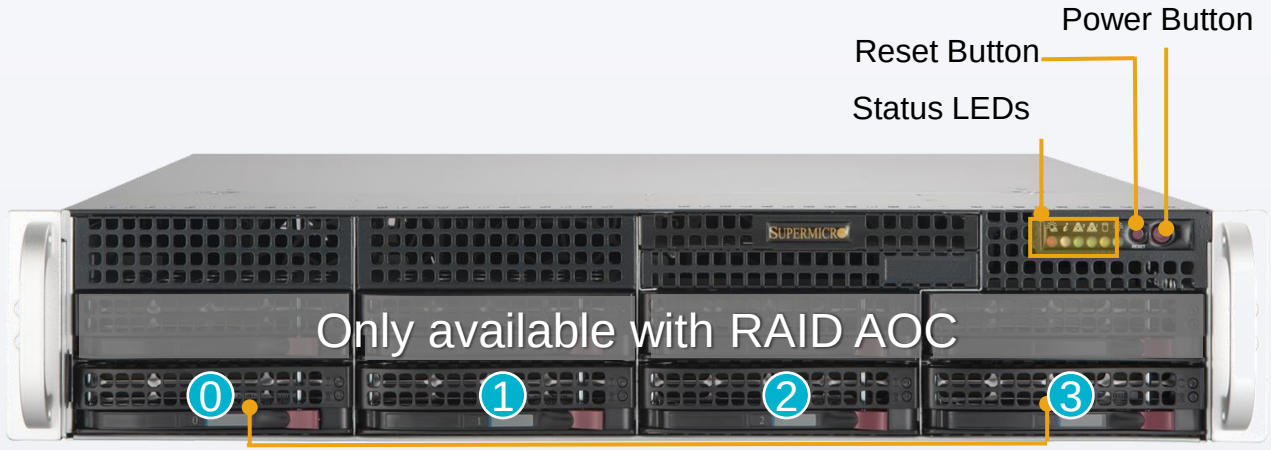
- 2x PCI-E 5.0 x4 M-Key NVMe M.2
- 4x 3.5" SATA drive bays (or up to 8x 3.5"/2.5" SATA/SAS drive bays via optional RAID AOC)

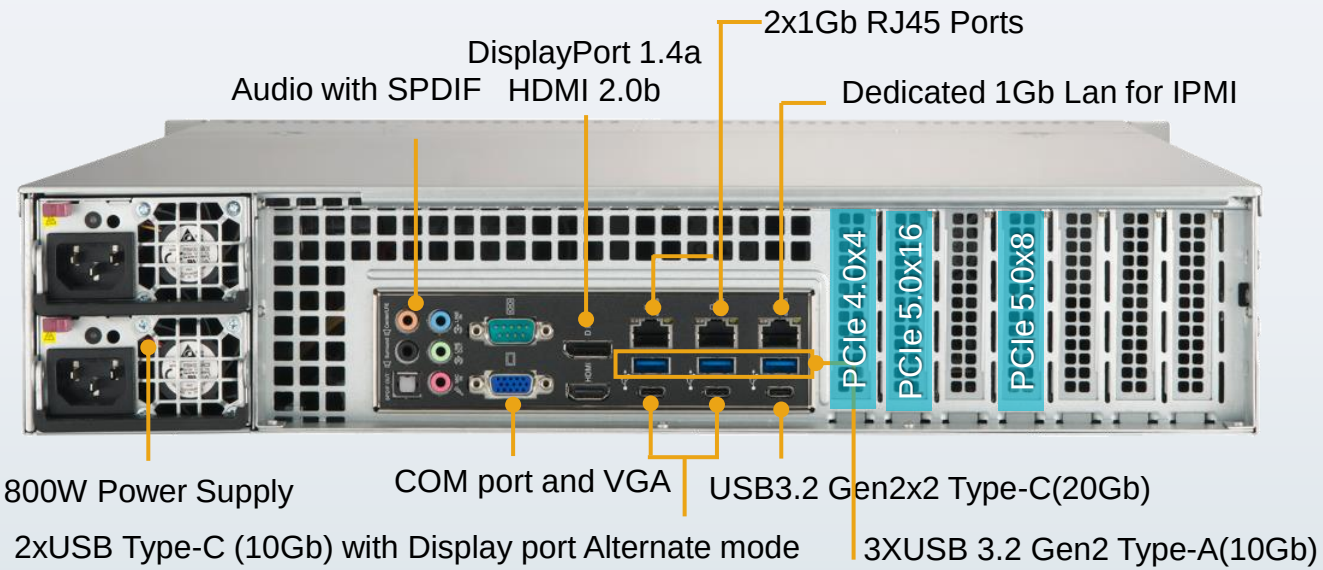
Power Supply – 1+1 800W Redundant High-Efficiency Power Supply Titanium Level Certified

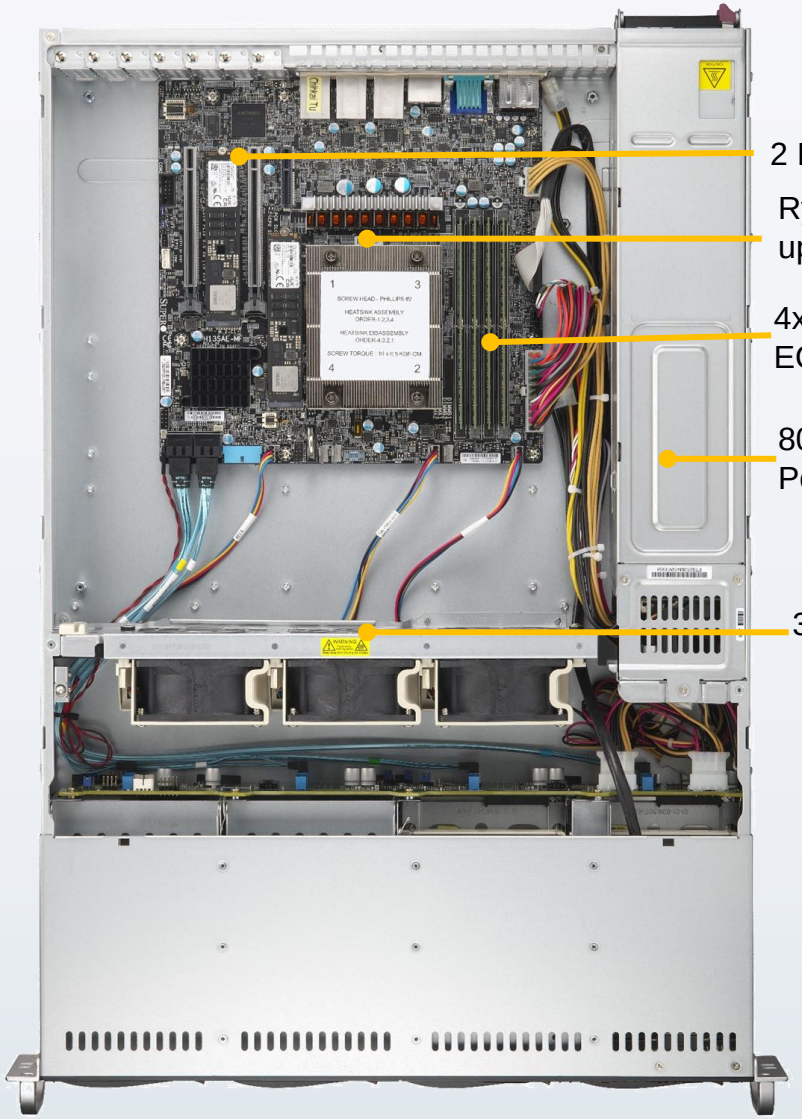
Dimensions– 2U Rack

- 89mm H x 437mm W x 647mm D

AS -2015A-TR 2U Top/front/rear View







STAC-N1™ Benchmark Results

Key Results

Base Rate (STAC.N1.β1.PINGPONG.LAT1):

- Lowest mean, median, 99th percentile, and maximum latency.

Maximum Throughput (STAC.N1.β1.PINGPONG.TPUT1):

- Highest tested throughput at 1.6 million messages per second.

Highest Rate SupplyToReceive Latency (STAC.N1.β1.PINGPONG.LAT2):

- Lowest mean, median, 99th percentile, and maximum SupplyToReceive latency.

Highest Rate SendToReceive Latency (STAC.N1.β1.PINGPONG.LAT3):

- Lowest mean, median, 99th percentile, and maximum SendToReceive latency.

Benchmark Achievement

- Demonstrated exceptional latency and throughput capabilities.
- Illustrated the effectiveness of the hardware and software configuration.

Test Environment

- Servers: Supermicro A+ AS-2015A-TR (2 servers)
- Processor: AMD Ryzen™ 7950X (16-core) @ 4.5 GHz (5.7 GHz Boost)
- Adapter: AMD Xilinx XtremeScale™ X2522-25G-PLUS
- Software: Red Hat Enterprise Linux 9.2
- Networking: 25GbE cross connects (No FEC)

STAC Report: STAC-N1 with AMD Ryzen in Supermicro server | STAC -SUT ID AMD231005
Insight for the Algorithmic Enterprise | STAC (stacresearch.com)

DISCLAIMER

Super Micro Computer, Inc. may make changes to specifications and product descriptions at any time, without notice. The information presented in this document is for informational purposes only and may contain technical inaccuracies, omissions and typographical errors. Any performance tests and ratings are measured using systems that reflect the approximate performance of Super Micro Computer, Inc. products as measured by those tests. Any differences in software or hardware configuration may affect actual performance, and Super Micro Computer, Inc. does not control the design or implementation of third party benchmarks or websites referenced in this document. The information contained herein is subject to change and may be rendered inaccurate for many reasons, including but not limited to any changes in product and/or roadmap, component and hardware revision changes, new model and/or product releases, software changes, firmware changes, or the like. Super Micro Computer, Inc. assumes no obligation to update or otherwise correct or revise this information.

SUPER MICRO COMPUTER, INC. MAKES NO REPRESENTATIONS OR WARRANTIES WITH RESPECT TO THE CONTENTS HEREOF AND ASSUMES NO RESPONSIBILITY FOR ANY INACCURACIES, ERRORS OR OMISSIONS THAT MAY APPEAR IN THIS INFORMATION.

SUPER MICRO COMPUTER, INC. SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. IN NO EVENT WILL SUPER MICRO COMPUTER, INC. BE LIABLE TO ANY PERSON FOR ANY DIRECT, INDIRECT, SPECIAL OR OTHER CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF ANY INFORMATION CONTAINED HEREIN, EVEN IF SUPER MICRO COMPUTER, Inc. IS EXPRESSLY ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

ATTRIBUTION


SUPERMICRO
AMD