## 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

**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)
- 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

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

- **Ryzen™ 7000 Series up to 170W TDP**
- **3 Internal Fans**
- **800W Platinum level Power supply**
- **4x DDR5 DIMM Slots, ECC/Non-ECC UDIMM**
- **Audio with SPDIF, HDMI 2.0b, DisplayPort 1.4a, USB3.2 Gen2 Type-C(20Gb), 2xUSB Type-C (10Gb) with Display port Alternate mode, 3XUSB 3.2 Gen2 Type-A(10Gb)**
- **2x1Gb RJ45 Ports**
- **Dedicated 1Gb Lan for IPMI**
- **2 PCIe 4.0x4, PCIe 5.0x16, PCIe 5.0x8**
- **Only available with RAID AOC**
- **4x 3.5" Hot-swap SATA drive bays**
- **2 PCIe 5.0 M.2 (228/22110)**
- **4x Internal Fans**
- **800W Power Supply**
- **Power Button**
- **Status LEDs**
- **Reset Button**
- **2x1Gb RJ45 Ports**
- **DisplayPort 1.4a**
- **Audio with SPDIF, HDMI 2.0b**
- **PCIe 5.0x8, PCIe 5.0x4, PCIe 4.0x4**
- **COM port and VGA**
- **USB3.2 Gen2x2 Type-C(20Gb)**
- **3XUSB 3.2 Gen2 Type-A(10Gb)**
STAC-N1™ Benchmark Results

Key Results

Base Rate (STAC.N1.81.PINGPONG.LAT1):
  • Lowest mean, median, 99th percentile, and maximum latency.

Maximum Throughput (STAC.N1.81.PINGPONG.TPUT1):
  • Highest tested throughput at 1.6 million messages per second.

Highest Rate SupplyToReceive Latency (STAC.N1.81.PINGPONG.LAT2):
  • Lowest mean, median, 99th percentile, and maximum SupplyToReceive latency.

Highest Rate SendToReceive Latency (STAC.N1.81.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)
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