



Supermicro Scalable Liquid-Cooled Supercomputing Cluster Deployed at Lawrence Livermore National Laboratory for COVID-19 Research

Over 1,500 Nodes of TwinPro™ 2U 4 Node Servers Support Advanced Computationally Intensive Workloads for Pioneering Experimentation and Analysis

San Jose, Calif., November 12, 2020 -- Super Micro Computer, Inc. (Nasdaq: SMCI), a global leader in enterprise computing, storage, networking solutions, and green computing technology, today announced that it has deployed an additional cluster at Lawrence Livermore National Laboratory (LLNL) to augment existing computing capabilities available for national security and to help discover therapeutics for SARS-CoV-2, the virus that causes COVID-19.

Called the “Ruby” cluster, Supermicro’s TwinPro 2U 4 node servers leverage advanced Second Intel® Xeon® Platinum processors with built-in AI acceleration and have 192 gigabytes (GB) of onboard memory. The cluster includes a total of almost 85,000 cores that reach an estimated six petaflops of peak performance. With over 1,500 nodes in 26 racks and 16 2U TwinPro servers in each rack (64 nodes), the racks are liquid-cooled using a direct-to-chip approach. These very dense racks, coupled with liquid cooling, enable a significantly smaller data center footprint and lower energy costs. Liquid cooling can provide up to 40-50% TCO savings by reducing air conditioning and cooling fan usage. Supermicro staged, tested, and orchestrated the rack-level integration and delivered complete plug-n-play systems to LLNL.

“Supermicro’s advanced TwinPro and Ultra 2U dual CPU servers were selected for their extreme density, support for large compute workloads, and the flexible server Building Block Solutions® approach so that LLNL could build exactly the best cluster configuration for their requirements,” said Charles Liang, president, and CEO of Supermicro. “We recognize the importance of LLNL’s work to support research on the devastating global pandemic and help to discover a vaccine for the COVID-19.”

Scalable Multi-Node 2U Servers for Lawrence Livermore National Laboratory



Ultra



TwinPro



LLNL, Ruby Cluster

Funded by the National Nuclear Security Administration’s (NNSA) Advanced Simulation and Computing Program, the Laboratory’s Multi-programmatic and Institutional Computing (M&IC) program, and the Coronavirus Aid, Relief, and Economic Security (CARES) Act, the

supercomputing cluster will be used for unclassified programmatic work in support of NNSA's stockpile stewardship mission, LLNL open science, and the search for therapeutic drugs and designer antibodies against SARS-CoV-2, the virus that causes COVID-19.

"Ruby provides a substantial computing resource in our open collaboration zone, which has experienced a heavy increase in demand due to an uptick in telecommuting and a growth in external collaborations," said Chris Clouse, acting program director for LLNL's ASC program. "A resource like Ruby provides a venue for leveraging expertise and tools in the open community for areas that are important to our programmatic missions."

"The Ruby supercomputer will help drive tremendous advancements in scientific research and discovery across a range of disciplines, including COVID-19 research," said Trish Damkroger, Intel vice president and general manager of high-performance computing at Intel.

About Super Micro Computer, Inc.

Supermicro (Nasdaq: SMCI), the leading innovator in high-performance, high-efficiency server and storage technology is a premier provider of advanced server Building Block Solutions® for Enterprise Data Center, Cloud Computing, Artificial Intelligence, and Edge Computing Systems worldwide. Supermicro is committed to protecting the environment through its "We Keep IT Green®" initiative and provides customers with the most energy-efficient, environmentally-friendly solutions available on the market.

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