



Arista Announces Rack-Scale Architectures for Scale-Up and Scale-Out AI Fabrics

2026-10-07

Engineered with AMD, Arm, Broadcom, d-Matrix, Meta, Microsoft, and Qualcomm to deliver extreme compute and networking density for AI

SANTA CLARA, Calif.--(BUSINESS WIRE)-- Arista Networks (NYSE: ANET), a leader in AI fabric networking, today announced its open Ethernet rack-scale portfolio to power high-density scale-up and scale-out **AI infrastructure**. Engineered in partnership with leading compute technology companies such as AMD, Arm, Broadcom, d-Matrix, Meta, Microsoft, and Qualcomm, see quotes [here](#), this effort leverages the Ethernet for Scale-up Networks (ESUN) initiative. With this set of platforms, Arista extends Ethernet into scale-up domains with liquid-cooled racks built for extreme density, power, and thermal demands, supporting up to 144 accelerators per rack and even more via cross-rack architecture. The result is an open, standards-based alternative to proprietary compute islands, enabling cloud titan operators to scale AI infrastructure with their preferred architecture.

"The network in the AI era is no longer just an independent pipe between servers. It's now a tightly integrated rack-scale backplane that is essential to maximizing compute," said Tyson Lamoreaux, Senior Vice President, Cloud and AI Networking at Arista Networks. "Arista is delivering an open, Ethernet-based framework for both scale-up and scale-out fabrics. By combining liquid cooling solutions with the choice of **Arista EOS®** or open NOS, we empower cloud titans and enterprise innovators to scale heterogeneous compute and optimize their token economics without proprietary lock-in."

Innovative Rack Scale-Up Designs

As AI models expand, the demand for tightly coupled communication across vast accelerator pools has outpaced the limits of local PCIe and proprietary interconnects. In response, Arista is introducing Etherlink SU-144, an Ethernet-based scale-up architecture that expands unified computing domains up to 144 accelerators (XPU) in a single-hop network and scales to 1,024 XPU through cross-rack topologies. Arista is pioneering Ethernet-based scale-up across three physical form factors, giving operators the flexibility to optimize for any accelerator's needs.

1. Orthogonal Chassis: A single-hop, single-rack architecture purpose-built for extreme bandwidth and density in intensive AI training and inference workloads, offering 100–400kW liquid cooling support.
2. Cabled Backplane: Combines a high-density cabled backplane with a modular, highly serviceable rack structure optimized for signal integrity, performance, and long-term operational efficiency.
3. Cross-Rack System: Delivers a fully modular standalone fabric, giving operators maximum flexibility to expand and adapt to future generations of scale-up acceleration via flexible interconnection across multiple racks.

Rack-Scale Architectures for Scale-Out Fabrics

Arista is also introducing rack-scale open Ethernet-based scale-out networking solutions designed for extensibility and flexibility while supporting a variety of scale-up protocols, including ESUN, Nvidia's NVLink®, NVLink Fusion, or PCIe. Built on a common Netdi™ foundation, customers get full operational consistency whether running Arista EOS or an open Network Operating System (NOS). The scale-out fabric incorporates advanced **Ultra Ethernet Consortium (UEC)** standards, Multipath Reliable Connection (MRC) fabric resiliency, multi-plane routing, and intelligent Dynamic Load Balancing (DLB) and Cluster Load Balancing (CLB) to optimize job completion times and token generation efficiency.

Rack designs feature multiple liquid-cooled **7060EX7 switches** (102.4 Tbps capacity per switch), fiber patch panels, integrated liquid-cooling manifolds, drip trays with active leak detection, rack management controllers, and power shelves with Backup Battery Units (BBU).

Density Quadruples with Next-Generation Optics

Arista's rack-scale solution features full integration of switches, optics, liquid cooling, and rack control, scaling to higher rack capacity with next-generation optics such as **XPO** and open CPO/NPO. Compared to today's OSFP-based switches, which deliver 1.6 Pb/s per rack, next-generation optics increases that to 6.5 Pb/s per rack. This massive densification translates to nearly a 50% reduction in the overall data center footprint, resulting in significant time and financial savings.

For more information on Arista's continued commitment to AI innovations and open standards, please read our **blog post** and visit Booth E61 at the **OCP Global Summit** (October 12–15, 2026) to see demonstrations of Arista's rack-scale networking solutions.

About Arista Networks

Arista Networks is an industry leader in data-driven, client-to-cloud networking for large AI, data center, campus, and routing environments. Its platforms deliver availability, agility, automation, analytics, and security through an advanced network operating stack. Arista is a recent S&P 100 member and was recognized on the 2026 Fortune 500 list of the largest United States corporations by revenue. For more information, visit www.arista.com

ARISTA, EOS, Netdi, and Arista AVA are among the registered and unregistered trademarks of Arista Networks in jurisdictions worldwide. Other company names or product names may be trademarks of their respective owners. Additional information and resources can be found at www.arista.com. This press release contains forward-looking statements including, but not limited to, statements regarding the performance and capabilities of Arista's products and services. All statements other than statements of historical fact are statements that could be deemed forward-looking statements. Forward-looking statements are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in the forward-looking statements, including rapid technological and market change, customer requirements, and industry standards, as well as other risks stated in our filings with the SEC available on Arista's website at www.arista.com and the SEC's website at www.sec.gov. Arista disclaims any obligation to publicly update or revise any forward-looking statement to reflect events that occur or circumstances that exist after the date on which they were made.

Media Contact:

Amanda Jaramillo
Corporate Communications
Tel: (408) 547-5798
amanda@arista.com

Investor Contact:

Rudolph Araujo / Rod Hall
Investor Relations
Tel: (408) 547-8080
ir@arista.com

Source: Arista Networks