



Arista 7300 Series

## Arista 7300 X-Series Introduction

The Arista 7300 Series are the benchmark for performance, scale and power efficiency in modular data center switches. Increased adoption of 10G servers is accelerating the need for flexible, dense 10GbE/40GbE solutions. The Arista 7300 Series extends the industry leading 7000 Series with increased performance, scalability, density and features designed for software defined networking.

The Arista 7300 Series are a range of modular systems, a 4-slot and 8-slot, with a choice of three 10GbE and 40GbE linecards for high performance, low latency and scalable multilayer switching powered by Arista EOS, the worlds most advanced network operating system.

## High Performance

- 20Tbps system capacity
- Up to 15 billion packets per second
- Wire speed unicast & multicast
- Class leading latency
- High density 10G/40G
- 12MB buffer per port group
- Under 12W per 40G port

## Feature Rich

- High Availability
- DC optimized airflow
- Rich L2 and L3 features
- 64-Way MLAG
- 64-Way ECMP
- VXLAN gateway
- Zero Touch Provisioning
- Hitless MLAG ISSU

## High Scalability

- System scalability
- 256 x 40G
- 1024 x 10G
- 384 x 10G-T and 32 x 40G
- Scalable Spline designs
- MAC 288K / IPv4 Hosts 208K
- Routes: 16K IPv4 / 8K IPv6
- UFT – IPv4/v6 144K/77K

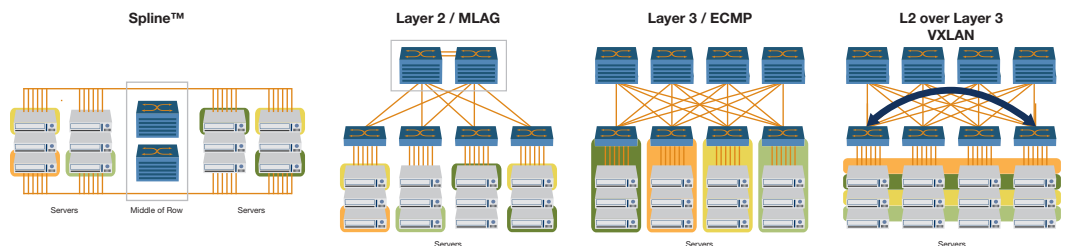
## Advanced Monitoring

- CloudVision
- LANZ microburst detection
- DANZ advance monitoring
- AEM proactive management
- sFlow for network visibility
- SSD for local monitoring
- VM Tracer integration
- RAIL for Big Data and Hadoop

## 7300 Deployment Scenarios

Scale out network designs allow solutions to start small and expand over time; simple highly scalable one and two-tier network designs are built with MLAG, ECMP and VXLAN technologies.

### Cloud Networking: 2-tier Leaf/Spine or 1-tier Collapsed Spine



The 7300 Series are ideal for a number of deployment scenarios inside the data center. With a choice of three systems each capable of 10G and 40G they are ideal for use as a single tier collapsed leaf and spine or at both the leaf and spine layers of two-tier networks. The Arista universal network architecture is optimized for all application types ranging from large cloud to enterprise deployments. The following are a selection of use cases:

- Collapsed Spline™ server access as middle of row or end of row supporting full range of 1G, 10G and 40G connection options
- Leaf-Spine — open standards based L2 and L3 with monitoring and visibility features — LANZ, DANZ, Tracers
- ECMP designs up to 64-way — cost-effective 8 way multi-pathing using open protocols and 7050X or 7060X as spine and 64-way using 7300X
- Software Defined Networking — with support for OpenFlow, DirectFlow, eAPI and VXLAN
- Enterprise modular switch with high availability features and choice of 40G and 10G density up to 256 x 40G or 1024 x 10G and full L2 and L3 features
- Grid / HPC — designs requiring cost effective and power efficient systems to enable non-blocking or minimal over-subscription
- Spine for hadoop and big data applications with east-west connectivity
- Directly connected 40GbE attached storage – dense NFS systems, requiring high performance and predictable latency

## Arista EOS

Arista EOS is a modular switch operating system with a unique state sharing architecture that cleanly separates switch state from protocol processing and application logic. Built on top of a standard Linux kernel, all EOS processes run in their own protected memory space and exchange state through an in-memory database. This multi-process state sharing architecture provides the foundation for in-service-software updates and self-healing resiliency.

## 7300 Series Systems

Arista 7300 Series support redundant hot-swappable power supplies, fabric and fan redundancy, EOS high availability, a choice of L2 and L3 multi-pathing designs and powerful EOS innovations for visibility, application level performance monitoring and virtualization.

| Feature                        | Description  |
|--------------------------------|--|
| CloudVision                    | Network-wide workflow automation and workload orchestration as a turnkey solution for Cloud Networking             |
| Wirespeed VXLAN Gateway        | Seamless integration between VXLAN and L2/L3 environments, physical and virtualized networks                       |
| Smart System Upgrade           | Optimized SW upgrades to reduce the impact of software upgrades and avoid network convergence                      |
| 64-way ECMP and LAG            | Improve network scalability and balance traffic across large-scale leaf-spine designs or server load balancers     |
| Latency Analyzer               | A solution to improve monitoring and visibility at both 10G and 40G for congestion from persistent or microbursts. |
| Cloud Control                  | Support for Openflow and OpenStack automation and self-service provisioning with cloud scale economics             |
| Scalable Tables — ALPM and UFT | Flexible allocation of L2 and L3 forwarding table resources for greater design choice                              |

|                   | 7308            | 7304             |
|-------------------|-----------------|------------------|
| Linecards         | 8               | 4                |
| 10G RJ45 Ports    | 384             | 196              |
| 10G SFP Ports     | 384             | 192              |
| Maximum 10G Ports | 1024            | 512              |
| 40G Ports         | 256             | 128              |
| Capacity          | 20Tbps / 15Bpps | 10Tbps / 7.5Bpps |
| Total Buffer      | 192MB           | 96MB             |
| Latency           | 2 $\mu$ s       | 2 $\mu$ s        |
| Size              | 13RU            | 8RU              |

A choice of three linecards provide a wide range of interfaces:

**7300X-32Q** — 32 QSFP+ ports supports a flexible combination of 128x 10GbE or up to a full 32x 40GbE ports.



**7300X-64S** — 48 SFP+ and 4 QSFP+ ports supports a flexible combination of 48x 10GbE and 4x 40GbE or up to a full 64x 10GbE ports.



**7300X-64T** — 48 10G-T and 4 QSFP+ ports supports a flexible combination of 48x 100M/1G/10G and 4x 40GbE or 16x10GbE.

