

Arista 7300X3 Series

Arista 7300X3 Series Introduction

The Arista 7300X3 Series are the benchmark for performance, scale and power efficiency in modular data center and campus switches. Adoption of 25G servers is accelerating the need for flexible, dense 100GbE/40GbE solutions with support for both 10GbE and 25GbE speeds. The Arista 7300X3 Series extends the industry leading 7300 Series with increased performance, scalability, density and features designed for software driven cloud networking.

The Arista 7300X3 Series are a range of modular systems, a 4-slot and 8-slot, with a choice of 10/25GbE and 100GbE line cards for high performance, low latency and scalable multilayer switching powered by Arista EOS, the worlds most advanced network operating system.

High Performance

- Over 50Tbps system capacity
- Up to 32 billion packets per second
- Wire speed unicast & multicast
- Class leading latency
- High density 40G/100G
- 32MB buffer per port group
- Under 1.7W per 10Gb performance

Feature Rich

- High Availability
- DC optimized airflow
- Rich L2 and L3 features
- 64-Way MLAG
- 128-Way ECMP
- VXLAN and VMTracer
- Zero Touch Provisioning
- Smart System Upgrade *
- Hitless MLAG ISSU

High Scalability

- Wirespeed L2 and L3 forwarding
- 256 x 100G and 40G
- Quad 10G and 25G - 1024 ports
- Scalable Spine and Spline designs
- UFT: MAC 288K / IPv4 Hosts 168K
- ALPM: Max Routes: 384K IPv4 / 192K IPv6

Advanced Monitoring

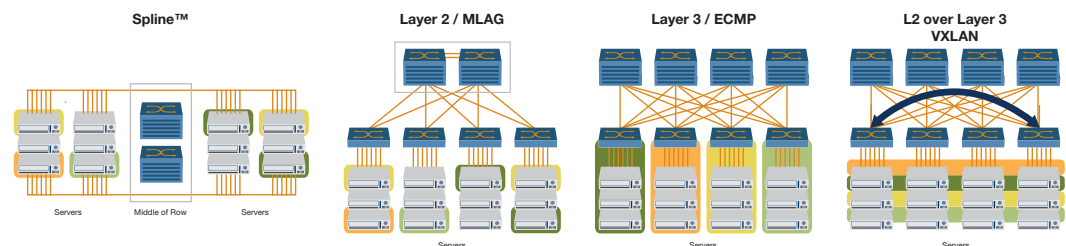
- CloudVision
- LANZ microburst detection *
- AEM proactive management
- sFlow for network visibility
- IEEE 1588 precision timing *
- SSD for local monitoring
- VM Tracer integration
- RAIL for Big Data and Hadoop

7300X3 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.

The 7300X3 Series are ideal for a number of deployment scenarios inside the data center. With a choice of systems each capable of high density 100G and 40G they are ideal for use as a single tier collapsed leaf and spine or at the spine layers of two-tier networks. The Arista universal network architecture is optimized for all application types ranging from large cloud to enterprise deployments.

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



The following are a selection of use cases:

- **Collapsed Spine™** server access as middle of row or end of row supporting full range of, 10G, 25G and 100G connection options
- **Leaf-Spine** — open standards based L2 and L3 with monitoring and visibility features — LANZ, DANZ, Tracers
- **ECMP designs up to 128-way** — cost-effective 100GbE multi-pathing using open protocols
- **Cloud Scale modular switch** with high availability features and choice of 40G and 100G density up to 256 x 40G or 100G and full L2 and L3 features
- **Consolidated campus** core and aggregation layers with collapsed Spine™ approach to build simple single tier with high availability
- **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** 25GbE, 40GbE and 50GbE 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

7300X3 Series Systems

Arista 7300X3 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 Routing | Seamless integration between VXLAN and L2/L3 environments, physical and virtualized networks |
| IEEE 1588 PTP * | Build and scale accurate timing solutions with sub-microsecond accuracy |
| Fully shared packet buffer | Advanced traffic manager with 32MB of packet buffer that is fully shared across all ports in the port group |
| 128-way ECMP & 64-way MLAG | Improve network scalability and balance traffic across large-scale leaf-spine designs or server load balancers |
| Latency Analyzer * | Real time visibility of port latency and per port high watermarks to provide immediate feedback and precision monitoring |
| Network Address Translation * | Network Address translation with no performance impact to resolve overlapping addressing challenges without penalty |
| Flexible Architecture | Add support for new capabilities to the data plane for quicker deployment of new networking solutions |
| Dynamic Load Balancing * | Enhanced load distribution for optimal traffic distribution and link utilization for intensive data center workloads |
| Time Stamping * | Monitor end to end network performance with accuracy |
| IEEE 25GbE 802.3by | IEEE standard ensuring interoperability, long reach optics and long term investment protection |

| | 7308X3 | 7304X3 |
|-----------------|-----------------|-----------------|
| Linecards | 8 | 4 |
| 100G Ports | 256 | 128 |
| 40G Ports | 256 | 128 |
| 10G Ports | 1024 | 512 |
| 25G Ports | 1024 | 512 |
| 50G Ports | 512 | 256 |
| System Capacity | 50Tbps / 32Bpps | 25Tbps / 16Bpps |
| Total Buffer | 512MB | 256MB |
| Latency | 2.5 μ s | 2.5 μ s |
| Size | 13RU | 8RU |

The **7300X3-32C** QSFP100 line cards provide a wide range of interfaces. With 32 QSFP100 based ports, the module supports a flexible combination of 32 x 100GbE or 40GbE with QSFP transceivers and cables or up to a full 128x 10GbE or 25GbE with breakout cables and optics. The line card delivers 6.4Tbps throughput using under 1.7W per 10Gb of performance.

