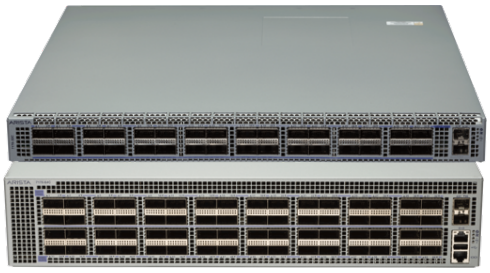


Arista 7170 Series

High Performance

- Up to 12.8 Tbps system capacity
- Up to 4.8 billion packets per second
- Wire speed unicast & multicast
- Class leading latency as low as 800ns
- High density 40G/100G systems
- Quad 10G and 25G or Dual 50G modes
- Up to 22MB packet buffer
- Under 5W per 100G

Feature Rich

- High Availability
- DC optimized airflow
- Rich L2 and L3 features
- 64-Way MLAG
- 128-Way ECMP or UCMP
- Zero Touch Provisioning
- Smart System Upgrade *
- Hitless MLAG ISSU
- Large Scale NAT
- AlgoMatch for network policy

High Scalability

- Wirespeed L2 and L3 forwarding
- 64 x 100G or 40G with optics and cables
- Up to 256 x 25G or 10G or 128 x 50G using breakout cables
- Scalable MAC & IPv4 Hosts and Routes
- Wirespeed Network Address Translation

Advanced Monitoring

- CloudVision
- LANZ microburst detection *
- AEM proactive management
- IEEE 1588 precision timing *
- sFlow for network visibility *
- VM Tracer integration
- Advanced telemetry with packet traces and user defined triggers

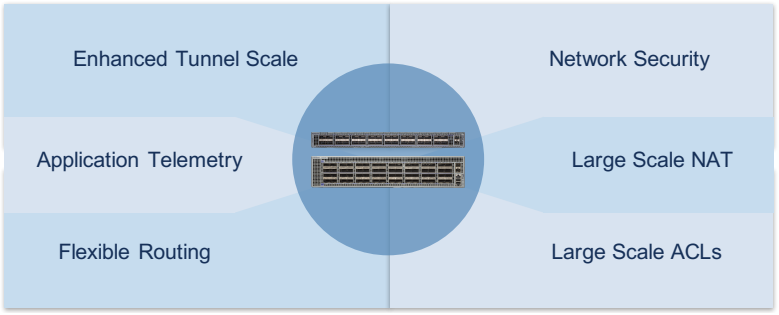
Arista 7170 Series Introduction

Highly dynamic cloud data center networks continue to evolve with the introduction of new protocols and server technologies. The Arista 7170 series are purpose built, programmable fixed configuration data center switches for flexible, dense 100GbE solutions at spine layer and 25/50GbE solutions for storage and compute.
Combining Arista EOS and a highly programmable switch architecture with customizable system resources, the 7170 Series delivers unique features for traditional and new network based applications and services.

7170 Series Deployment Scenarios

With 32 and 64 port QSFP100 port fixed configuration systems in compact form factors, the 7170 series are 100GbE systems that can support a flexible combination of up to 64x 40/100GbE, 128x 50GbE or 256x 10/25GbE of wire speed performance powered by Arista EOS, the worlds most advanced network operating system.
The 7170 series supports a unique programmable pipeline with the flexibility to change the packet parser dynamically through profiles defined in P4, to add new functionality, vary table sizes and order of operations. This provides phenomenal investment protection along with opening the possibility to support highly personalized use cases to solve traditional and new network challenges which are otherwise not feasible with traditional switching platforms. The following are a selection of such use cases

- **Network Services Offload** in a bare metal environment freeing up compute resources and accelerating applications
- **Tunnel termination** in a multi-tenant design
- **Large Scale NAT** for address and port translation
- **Flexible Routing** to support MPLS label modification or custom protocols
- **Network and Application Telemetry** with flow level visibility, timestamping and end to end latency measurement
- **Network Security** with stateful and hierarchical ACLs, rule based policies, and conditional filtering for enhanced security and application monitoring



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.

7170 Series Systems

Arista 7170 Series support hot-swappable power supplies and N+1 fan redundancy, EOS high availability, a choice of L2 and L3 multi-pathing designs and powerful EOS innovations for visibility, network security, application level performance monitoring and virtualization.

Feature *	Description
CloudVision	Network-wide workflow automation and workload orchestration as a turnkey solution for Cloud Networking
Smart System Upgrade *	Optimized SW upgrades to reduce the impact of software upgrades and avoid network convergence
Hitless Speed Changes	Eliminate downtime when configuring different speeds and bringing up new links
128 way ECMP and 64 way MLAG	Improve network scalability and balance traffic across large-scale leaf-spine designs or server load balancers
Programmable Packet Processor	Multi-stage pipeline which allows reconfiguration of the packet forwarding logic programmatically
Flexible Resource Profiles	Flexible allocation of L2 and L3 forwarding table resources for greater design choice. New profiles implemented via EOS
Network Telemetry	Identify application performance in real time by parsing packets, combining flow and packet level information and exporting for analysis
IEEE 25GbE 802.3by	IEEE standard ensuring interoperability, long reach optics and long term investment protection
Packet Timestamping	Monitor end to end network performance with accuracy
Large Scale NAT	Network Address translation with no performance impact to resolve overlapping addressing challenges

	7170-64C	7170-32C 7170-32CD
Description	64-Port QSFP100 and 2 SFP+	32-Port QSFP100 and 2 SFP+
Maximum 100G Ports	64	32
Maximum 40G Ports	64	32
Maximum 10G Ports	258	130
Maximum 25G Ports	256	128
Maximum 50G Ports	128	64
Maximum System Throughput	12.8Tbps	6.4Tbps
Maximum Forwarding Rate	4.8Bpps	2.4Bpps
Port to Port Latency	800ns	800ns
Total System Buffer	22MB	20MB
Typical Power per port	5W	7W
Airflow	Front-Rear or Rear-Front	Front-Rear or Rear-Front

High Availability

- 1+1 hot-swappable power supplies and
- Four N+1 hot-swap fans
- Color coded PSU's and fans

Arista 7170 2RU Rear View: Front to Rear airflow (red)

Arista 7170 2RU Rear View: Rear to Front airflow (blue)

Arista 7170 1RU Rear View: Front to Rear airflow (red)

Arista 7170 1RU Rear View: Rear to Front airflow (blue)

* Not currently supported in EOS