Arista 7500E Series

High Performance

- 30Tbps system capacity
- Up to 14.4 billion packets per second
- Wire speed unicast & multicast
- Under 4us latency (64 byte)
- High density 10G/40G/100G
- Ultra large 500MB buffer per 40G port
- Under 12W per 40G port

Feature Rich

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

High Scalability

- 96 x 100G
- 288 x 40G
- 1152 x 10G
- 256K MAC/IPv4/IPv6 Hosts
- Routes: 48K+ IPv4 / 8K IPv6

High System Availability

- 2+2 Grid redundant power system
- 1+1 Supervisor redundancy
- N+1 Fabric module redundancy
- N+1 Fan module redundancy

Advanced Monitoring

- LANZ microburst detection
- DANZ advance monitoring
- AEM proactive management
- IEEE 1588 precision timing
- sFlow for network visibility
- SSD for local monitoring
- VM Tracer integration

Arista 7500 E-Series Introduction

Combining high density 10/40 and 100GbE with low latency and wire speed performance the Arista 7500E Series are designed for large virtualized data centers, cloud networks and mission critical environments. A deep buffer VoQ architecture and compact design deliver a highly scalable and power efficient system that scales to 1,152 ports of 10GbE or 288 ports of 40GbE and support for 96 ports of wire-speed 100GbE. The flexible 100G port options provide single mode or multi mode capabilities up to 10km and 10G distances up to 80km.

With a choice of a 4 slot and 8 slot system the 7500E series deliver scalable L2 and L3 resources with advanced features for network monitoring, precision timing and network virtualization to deliver flexible and deterministic network performance for the most demanding data center networks.

With front-to-rear airflow, redundant and hot swappable supervisor, power, fabric and cooling modules the system is purpose built for high availability and continuous operations.

7500E Advantages

- Support for over 1,000 10Gb Ethernet ports - 1,152 x 10G, 288 x 40G and 96 x 100G Ethernet interfaces
- Seamless investment protection with the first generation 7500 Series
- Unique monitoring and provisioning features – LANZ, DANZ, AEM, IEEE 1588 PTP, ZTP, VM Tracer, VXLAN, and eAPI
- Embedded 100G optical modules enable a high density multi-speed capability with flexible support for 10G, 40G and 100G on a single interface to support mixed modes and investment protection during migration from 10G to 100G
- Dense 10/40/100G modules with removable transceivers for flexible short and long reach connectivity options supporting a full range of IEEE interfaces and cost effective options including copper and optical cables.
- Comprehensive L2 and L3 feature set for open multi-vendor networks with no proprietary lock-in
- Balanced L2 and L3 table resources allow deployment flexibility in both large L2 and L3 environments with any workload suitability
- Network–wide virtualization platform for next generation cloud bursting with wire-speed VXLAN hardware-based Tunnel Endpoint (VTEP) termination

	DCS-7508	DCS-7504
Supervisors	2	2
Linecards	8	4
10GbE Ports	1,152 Ports	576 Ports
40GbE Ports	288 Ports	144 Ports
100GbE Ports	96 Ports	48 Ports
Maximum Throughput	30 Tbps / 14.4 Bpps	15 Tbps / 7.2 Bpps
Total Packet Buffer	144GB	72GB
Size	11RU	7RU

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.

7500E Series Systems

Arista 7500E Series deliver powerful EOS innovations for advanced traffic control, performance monitoring and virtualization features in addition to L2 and L3 multi-pathing scalability that improve the agility of modern high performance environments, with solutions for data monitoring, precise timing and next-generation virtualization.

Feature	Description
DANZ Tap Aggregation	10/40/100G Tap Aggregation with best-in-class performance and high density up to 96 100G Tap/Tool ports
Wirespeed VXLAN Gateway	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
64-way ECMP & 128-way MLAG	Improve network scalability and balance traffic across large-scale leaf-spine designs or server load balancers
Latency Analyzer	Microsecond granularity on port utilization using buffering watermarks to provide immediate feedback and precision monitoring
Network Wide Virtualization	Multi-vendor API Support with eAPI, VXLAN and NSX, and other encapsulation techniques

7500E Deployment Scenarios

- **Virtualized and Cloud data centers:** Largest scale, flexible interface choices, balanced resources, deep buffers and non-blocking performance coupled with a rich L2/L3 feature set and innovative provisioning and monitoring features
- **High Performance Compute (HPC) and Research:** Low and predictable latency, non-blocking with high density 40G and 100G, precision timing, precision monitoring, and support for flexible 10G, 40G and 100G
- **Big Data and Hadoop:** High performance, high density, flexible 1G/10G/40G/100G, advanced monitoring and traffic control features for deterministic performance
- **IP Storage:** Dense 10G and 40G with deep buffers and predictable low latency in a non-blocking system

The 7500E offers a choice of line cards, with consistent supporting for the full set of 7500E features:

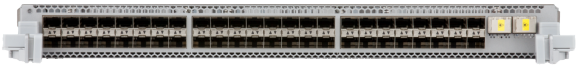
7500E-6C2 — 6 CFP2 100G ports that support up to 10km LR4 optics with CFP2 standard optics

7500E-12CQ —12 QSFP 100G ports capable of broadest range of 40G QSFP+ and 100G QSFP100 modules

7500E-12CM — 12 MXP ports with 10/40/100G capability using standards based SR optics up to 400M over OM4 and up to 144x 10G ports

7500E-36Q — 36 port QSFP+ 10/40G capable line card with 36x 40G or 144x10G using breakout cables

7500E-72S — 48 SFP+ and 2 MXP ports allowing dense SFP+ ports while providing 2 MXP ports for an additional 24x 10G, 6x 40G, or 2x100G



7500E-48S — 48 SFP+ ports allowing 48x 10G using standards based SFP+