High Performance

- 150Tbps system capacity
- Up to 69 billion packets per second
- Wire speed unicast & multicast
- Under 4us latency (64 byte)
- High density 10G/25G/40G/100G
- Ultra large buffer per 100G port
- Under 25W per 100G port

Feature Rich

- High Availability
- DC optimized airflow
- Rich L2 and L3 features
- 128-Way MLAG and ECMP
- VXLAN gateway and routing
- Zero touch provisioning
- Hitless MLAG ISSU
- Integrated wirespeed 802.1AE MACsec

High Scalability

- Up to 576 x 100G
- Up to 576 x 40G
- Up to 2304 x 25G
- Up to 2304 x 10G
- FlexRoute™ Engine
- ACL scalability to 192K entries
- 768K MAC/IPv4/IPv6 Hosts
- Over 2M IPv4/IPv6 Unicast LPM Routes

Scalable Architecture

- 100% efficient cell based fabric
- Deep packet buffer (24GB per line card)
- Up to 13,824 Virtual Output Queues per port to eliminate head of line blocking
- 9.6Tbps per slot fabric capacity

High System Availability

- Grid and PS redundant power system
- 1+1 Supervisor redundancy
- N+1 Fabric module redundancy
- N+1 Fan module redundancy
- Designed for NEBS

Advanced Monitoring

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

Arista 7500R Series Introduction

Combining high density 10/40 and 100GbE with low latency and wire speed performance the Arista 7500R Series are designed for large virtualized data centers, internet peering, cloud networks and mission critical environments. A deep buffer VoQ architecture with large routing tables in a compact design delivers a highly scalable and power efficient system.

The Arista 7500R Series FlexRoute engine provides the flexible scalability to support deployment as a routing platform with Internet scale routing enabling innovation not natively available in merchant chipsets. 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.

7500R Advantages

- Support for over 2,300 10Gb and 25Gb Ethernet ports - 2304 x 10G / 25G, 576 x 40G / 100G Ethernet interfaces
- Broad choice of compact to highly scalable chassis ranging from 16 slot to 4 slot systems
- Seamless investment protection with 7500E line cards, fabric and supervisor
- Streaming network state for advanced analytics with CloudVision
- Unique monitoring and provisioning features – LANZ, DANZ, AEM, PTP, ZTP, VM Tracer, VXLAN, and eAPI
- Comprehensive L2 and L3 feature set for open multi-vendor networks with no proprietary lock-in
- Scalable L2 and L3 table resources allow deployment flexibility in both large L2 and L3 environments and internet peering with any workload suitability
- AlgoMatch™ for flexible and scalable solutions for access control and network telemetry
- Network-wide virtualization platform for next generation cloud bursting with wire-speed VXLAN routing
- Directly connected 25GbE, 40GbE and 50GbE attached storage systems, requiring high performance and predictable latency
- Performance optimized DCI solution with line rate encryption with MACSec and coherent optics for long haul connectivity

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.
7500R Series Systems

**Universal Spine**: Delivering high bandwidth with density with resiliency, rapid convergence and large routing tables

**Internet Peering**: With support for large tables and rapid convergence the 7500R can be leveraged for both peering and DC

**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 interface speeds including 10G, 25G, 40G, 50G and 100G

**Big Data and Hadoop**: High performance spine for east-west traffic patterns with advanced monitoring and traffic control features for deterministic performance

**IP Storage**: Storage requiring performance, deep buffers and predictable low latency in non-blocking system

The 7500R offers a choice of line cards, with consistent support for the full set of 750R features:

<table>
<thead>
<tr>
<th>Line Card</th>
<th>10G</th>
<th>25G</th>
<th>40G</th>
<th>50G</th>
<th>100G</th>
</tr>
</thead>
<tbody>
<tr>
<td>7500R2AK-48YQCQ</td>
<td>48 + 8</td>
<td>12 + 8</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>7500R-48S2CQ</td>
<td>48 + 8</td>
<td>8</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>7500R-36Q</td>
<td>96</td>
<td>24</td>
<td>36</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>7500R2-18CQ</td>
<td>72</td>
<td>72</td>
<td>18</td>
<td>36</td>
<td>18</td>
</tr>
<tr>
<td>7500R-36CQ</td>
<td>144</td>
<td>144</td>
<td>36</td>
<td>72</td>
<td>36</td>
</tr>
<tr>
<td>7500R2AK-36CQ</td>
<td>144</td>
<td>144</td>
<td>36</td>
<td>72</td>
<td>36</td>
</tr>
<tr>
<td>7500R2A-36CQ</td>
<td></td>
<td></td>
<td>36</td>
<td>72</td>
<td>36</td>
</tr>
<tr>
<td>7500R2-36CQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>7500RM-36CQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>7500R2M-36CQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>7500R-8CFPX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
</tbody>
</table>

1 IEEE 25G Support  2 MACsec Support