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Avaya Ethernet Routing Switch 5500 Series

Ethernet Routing Switch 5500 Series

The Avaya Ethernet Routing Switch 5500 Series is a premium Stackable Chassis system providing high-performance, convergence-ready and resilient Ethernet switching connectivity. Available in 5 model variants supporting 10/100/1000 connectivity, switching, comprehensive Layer 3 routing, Power-over-Ethernet and 10 Gigabit Ethernet uplink options, the Ethernet Routing Switch 5500 Series is ideally suited for high-end wiring closets, high-capacity data centers and network core applications. The Ethernet Routing Switch 5500 Series is part of the 10 model Ethernet Switch 5000 Series which is 100% stack-compatible across the product family for true mix and match capabilities.[1]

Highlights of the Ethernet Routing Switch 5500 Series

- **Always-on** – Best in class end-to-end resiliency, with switch clustering and hot-swappable unit replacement within a Stack Chassis.
- **Convergence-ready** – Support for PoE, true plug and play capabilities for IP phone deployments, advanced QoS capabilities.
- **Powerful** – Wire-speed performance, true pay-as-you-grow Stack Chassis capacity, delivering up to 400 ports and up to 640 Gbps of virtual backplane throughput.
- **Comprehensive Layer 3 services** - Advanced routing features enable traffic segregation ideal for data center and network core applications.
- **Greater Security** – Standards-based 802.1x with integration to Avaya's Identity Engines portfolio for centralized, policy-based authenticated network access.
- **Flexible** – Mix-and-match "hybrid" stacking with the Avaya ERS 5600 Series enables versatile deployment and investment protection.[1]

The Ethernet Routing Switch 5500 provides resilient Stackable Chassis capabilities, high-performance Layer 2 connectivity, Layer 3 routing and switch clustering for a truly flexible, multi-role platform. It can be positioned for any of the following customer scenarios:

- Enterprise wiring closet – with advanced convergence features, including PoE, security, QoS and optional 10 Gig uplinks, the ERS 5500 is a flexible high-performance switching option for converged edge deployments, especially for larger enterprises.
- Network core – its active / active "switch-clustering" failover and advanced Layer 3 routing services — unusual in a fixed-format switch — make the ERS 5500 a cost-effective core solution especially suited for small to mid-market enterprises.
- Data Center – as a cost-effective 1 Gigabit Top-of-Rack solution, the ERS 5500 can connect data center servers across racks while reducing latency and increasing server-to-server performance.

The Ethernet Routing Switch 5500 Series is 100% stack-compatible with Avaya's ERS 5600 Series.[1] Its unique "hybrid-stacking" capability provides great versatility and investment protection across the ERS 5000 Series family. Any combination of 5500 and 5600 models can be stacked together up to eight units high, to a maximum of 400 ports. Total stacking bandwidth is 80 Gbps per switch, and 640 Gbps when eight switches are combined.

The ERS 5500 Series also delivers highly-scalable and flexible Ethernet and Power-over-Ethernet, with medium and high-density models to simplify deployment in high-intensity convergence-centric networks.

An external redundant power solution ensures both power redundancy and full PoE power.

Summary

The ERS 5500 is a flexible solution suited to address the various demands of today's high-end wiring centers, high-capacity data centers and network core environments. The ERS 5500, along with other Avaya products, can increase profitability and productivity, streamline business operations, lower costs and help your business gain a competitive edge.

[1] Mixed ERS 5500/5600 stacking supported up through Release 6.3 only.

Avaya Ethernet Routing Switch 5500 Series	
Model	**Link and Uplink Ports**
ERS 5510-24T	24 x 1000BASE-T, including 2 x combo 1000BASE-T/SFP
ERS 5510-48T	48 x 1000BASE-T, including 2 x combo 1000BASE-T/SFP
ERS 5520-24T-PWR	24 x 1000BASE-T with Power-over-Ethernet, including 4 x combo 1000BASE-T/SFP
ERS 5520-48T-PWR	48 x 1000BASE-T with Power-over-Ethernet, including 4 x combo 1000BASE-T/SFP
ERS 5530-24TFD	24 x 1000BASE-T, including 12 x combo 1000BASE-T/SFP, plus 2 x 10GBASE-XFP Slots

All Switches include built-in high-speed stacking connections that can scale up to 640Gbps of total throughput and are fully compatible with the new ERS 5600 series models. A full stack can include up to 8 switches or up to 384 ports; enabling a highly-versatile solution able to meet port count and port type combinations for every application.

Specifications

General & Performance

- Switch Fabric performance: 80 – 192 Gbps
- Frame Forwarding rate: 35.7 – 71.4 Mpps
- Latency: 9 µsec
- Jitter: 12-14 µsec
- Frame length: 64 – 1518 Bytes (802.1Q Untagged), 64 – 1522 bytes (802.1Q Tagged)
- Jumbo Frame support: up to 9,000 Bytes (802.1Q Tagged)
- Multi-Link Trunks: up to 32 Groups, with 8 Links per Group
- VLANs: up to 1,024 Port/Protocol/802.1Q-based
- Multiple Spanning Tree Groups: 8
- MAC Address: up to 16k
- DHCP Snooping: up to 1,024 table entries
- ARP Entries: up to 1,792
- IP Interfaces: up to 64
- IPv4 Routes: up to 4k
- OSPF Instances: up to 4
- OSPF Adjacencies: up to 16
- Auto-MDIX

Pluggable Interfaces

- 1000BASE-T up to 100m over CAT5E or better UTP Cable (RJ-45)
- 1000BASE-SX up to 550m reach on MMF (Duplex LC)
- 1000BASE-SX up to 550m reach on MMF (Duplex MTRJ)
- 1000-BASE-LX up to 550m reach on MMF, and up to 10 km on SMF (Duplex LC)
- 1000BASE-XD CDWM up to 40 km reach on SMF (Duplex LC)
- 1000BASE-ZX CDWM up to 70 km reach on SMF (Duplex LC)
- 1000BASE-EX up to 120 km reach on SMF (Duplex LC)
- 1000BASE-BX up to 10 and 40 km reach variants on SMF (LC)
- Ethernet-over-T1 up to 2,874m reach over 22AWG Cable (RJ-48C)
- 10GBASE-SR up to 300m reach over MMF (Duplex LC)
- 10GBASE-LRM up to 220m over FDDI-grade MMF (Duplex LC)
- 10GBASE-LR/LW up to 10km reach over SMF (Duplex LC)
- 10GBASE-ER/EW up to 40km reach over SMF (Duplex LC)
- 10GBASE-ZR/ZW up to 80km reach over SMF (Duplex LC)

Specifications (cont.)

IEEE & IETF Standards Compatibility

- IEEE 802.1D Spanning Tree Protocol
- IEEE 802.1p Prioritizing
- IEEE 802.1Q VLAN Tagging
- IEEE 802.1X EAPoL
- IEEE 802.1s Multiple Spanning Tree Groups
- IEEE 802.1w Rapid Spanning Tree
- IEEE 802.1ab Link Layer Discovery Protocol
- IEEE 802.3 Ethernet
- IEEE 802.3 (ANSI) Auto-negotiation
- IEEE 802.3u Fast Ethernet
- IEEE 802.3x Flow Control
- IEEE 802.3z Gigabit Ethernet
- IEEE 802.3ab Gigabit Ethernet over Copper
- IEEE 802.3ad Link Aggregation
- IEEE 802.3af Power over Ethernet
- RFC 768 UDP
- RFC 791/950 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 854 Telnet
- RFC 894 IP over Ethernet
- RFC 951 BootP
- RFC 1058 RIP v1
- RFC 1112 IGMPv1
- RFC 1157 SNMP
- RFC 1213 MIB-II
- RFC 1215 SNMP Traps Definition
- RFC 1271/1757/2819 RMON
- RFC 1350 TFTP
- RFC 1361/1769 Simple Network Time Protocol (SNTP)
- RFC 1493 Bridge MIB
- RFC 1573/2863 Interfaces Group MIB
- RFC 1583 OSPF v2
- RFC 1643/2665 Ethernet MIB
- RFC 1757 RMON
- RFC 1850 OSPF v2 MIB
- RFC 1905/3416 SNMP
- RFC 1906/3417 SNMP Transport Mappings
- RFC 1907/3418 SNMP MIB
- RFC 1945 HTTP v1.0
- RFC 1981 Path MTU Discovery for IPv6
- RFC 2011 SNMPv2 MIB for IP
- RFC 2012 SNMPv2 MIB for TCP
- RFC 2013 SNMPv2 MIB for UDP
- RFC 2131 BootP/DHCP Relay Agent
- RFC 2138 RADIUS
- RFC 2236 IGMPv2
- RFC 2328 OSPF v2
- RFC 2453 RIP v2
- RFC 2460 IPv6 Specification
- RFC 2461 Neighbor Discovery for IPv6
- RFC 2462 IPv6 Auto-configuration of link local addresses
- RFC 2474 DiffServ
- RFC 2475 DiffServ
- RFC 2576/3584 Co-existence of SNMP v1/v2/v3
- RFC 2660 HTTPS (Secure Web Server)
- RFC 2674 Q-BRIDGE-MIB
- RFC 2737 Entity MIBv2
- RFC 2819 RMON MIB
- RFC 2865 RADIUS
- RFC 2866 RADIUS Accounting
- RFC 2869 RADIUS Extensions
- RFC 3046 DHCP Relay Agent Information Option
- RFC 3164 BSD Syslog Protocol
- RFC 3315 DHCP for IPv6
- RFC 3410 SNMPv3
- RFC 3411 SNMP Frameworks
- RFC 3412 SNMP Message Processing
- RFC 3413 SNMPv3 Applications
- RFC 3414 SNMPv3 USM
- RFC 3415 SNMPv3 VACM
- RFC 3576 RADIUS
- RFC 3917 IP Flow Information Export
- RFC 3993 DHCP Subscriber-ID sub-option
- RFC 3954 NetFlow Services Export v9
- RFC 4007 Scoped Address Architecture
- RFC 4022 TCP MIB
- RFC 4113 UDP MIB
- RFC 4193 Unique Local IPv6 Unicast Addresses
- RFC 4250 SSH Protocol Assigned Numbers
- RFC 4251 SSH Protocol Architecture
- RFC 4252 SSH Authentication Protocol
- RFC 4253 SSH Transport Layer Protocol
- RFC 4254 SSH Connection Protocol
- RFC 4291 IPv6 Addressing Architecture
- RFC 4293 IPv6
- RFC 4443 Internet Control Message Protocol (ICMPv6)
- RFC 4673 RADIUS Dynamic Authorization Server MIB
- RFC 4675 RADIUS Attributes for VLAN and Priority Support

Weights & Dimensions

- Height: 4.45 cm – 1RU
- Width: 43.82 cm
- Depth: 38.74 cm
- Weight: 5.8 – 7.13 kg

Power Specifications

- Input Voltage: 100-240 VAC
- Input Current
  - 1.3 – 6.5A @ 100-120 VAC
  - 0.65 – 3.25A @ 200-240 VAC
- Power Consumption: 135 – 600 W
- Thermal Rating: 460 – 850 Btu/h

Environmental Specifications

- Operating temperature: 0°C – 50°C
- Storage temperature: -40 to 85°
- Operating humidity: 0 to 85% maximum relative humidity, non-condensing
- Storage humidity: 10 to 90% maximum relative humidity, non-condensing
- Operating altitude: 0 to 3,024 maximum
- Storage altitude: 0 to 12,192 m maximum
- Acoustic Noise: less than 56dB at 35°C

Safety Agency Approvals

- Global basis for certification: EN 60950 current edition with CB national member deviations
- Mexico: complies with NOM

Electromagnetic Emissions & Immunity

- Global basis for certification: CISPR 22 Class A & CISPR 24, IEC 60950 with CB member national deviations
- US: complies with FCC CFR47 Part 15
- Canada: complies with ICES Class A
- Europe: complies with EN 55022 Class A; EN 55024; EN 300386 V1.3.3 Class A
- European Union & EFTA: complies with EN 55022; EN 55024; EN 61000-3-2; EN 61000-3-3
- Japan/Nippon: complies with VCCI
- Taiwan: complies with BSMI CNS 13428 & 14336, Class A
- Korea: complies with MIC Class A

Specifications (cont.)

Redundant Power

- Redundant Power Supply 15 Chassis
- Redundant Power Supply 15 600W Power Supplies
- DC-to-DC Converter & Non-PoE Connecting Cable for use with 5510 Switches
- PoE Connecting Cable for use with 5520/5530 Switches

MTBF Values

- 161,379 – 210,361 hours (18.4 – 24.0 years)

Warranty

- Lifetime Next Business Day hardware replacement
- Lifetime Basic Technical Support
- 90-Day Advanced Technical Support
- Optional Software Release Service also available: GW5300ASG / GW6300ASG

Country of Origin

- China (PRC)

About Avaya

Avaya is a leading, global provider of customer and team engagement solutions and services available in a variety of flexible on-premise and cloud deployment options. Avaya's fabric-based networking solutions help simplify and accelerate the deployment of business critical applications and services. For more information, please visit**www.avaya.com**.

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