The Avaya Ethernet Routing Switch 4800 Series is a Stackable Chassis system providing high-performance, convergence-ready, secure and resilient Ethernet switching connectivity. Available in 4 model variants supporting 10/100/1000 switching and routing, Power-over-Ethernet/Power-over-Ethernet+ and 1 and 10 Gigabit Ethernet SFP+ uplink options, the Ethernet Routing Switch 4800 Series is ideally suited for your next-generation network edge deployments. The Ethernet Routing Switch 4800 are part of the 17 model Ethernet Routing Switch 4000 product family that meets your needs by enabling true mix and match capabilities.

AVAYA

The Power of We™

Avaya Ethernet Routing Switch 4800 Series

Highlights Of The Ethernet Routing Switch 4800 Series

- **Always-on** – Best in class end-to-end resiliency solution, hot-swappable unit replacement within a Stack Chassis and integrated power redundancy.
- **Convergence-ready** – Support for PoE and PoE+, optimized for high-definition video surveillance, true plug and play capabilities for IP Phone deployments, advanced QoS capabilities.
- **Energy efficient** – On average 36% more energy efficient than competitive solutions,* energy saver functionality further reduces power consumption for both Switch and IP Phone without losing telephony connectivity.
- **Powerful** – Wire-speed performance, true pay-as-you-grow Stackable Chassis capabilities, delivering up to 400 ports and 384 Gbps of virtual backplane throughput.
- **Secure** – Standards-based 802.1x with integration with Avaya's Identity Engines portfolio for centralized, policy-based authenticated network access.
- **Flexible** – Mix-and-match best-in-class stacking capabilities with support for PoE/PoE+ and optional 1GbE / 10GbE SFP+ uplinks.
- **Future-ready** – Hardware ready for advanced services such as Wireless Split-Plane and Virtual Services Fabric; emerging technologies in Avaya's Virtual Enterprise Networking Architecture (VENA) strategy.

The Ethernet Routing Switch 4800 Series provide high bandwidth, resilient Stackable Chassis capabilities, high performance Layer 2 switching and Layer 3 routing, advanced convergence features and a full suite of security, QoS and management capabilities. The ERS 4800 hardware is based on a next-generation ASIC technology that combines wire-speed performance and non-blocking throughput with sophisticated QoS capabilities to support even the most demanding suite of applications.

Positioned for customers who are looking for Gigabit Ethernet to the desktop, PoE

*Miercom, August 2011

and PoE+, SFP+ connectivity and field replaceable redundant AC power supplies, the ERS 4800 provides a flexible high-performance platform to meet the demands of the converged edge.

Through support for PoE and PoE+ customers have the ability to support any mix of end devices. Although the vast majority of IP-based end points do not require the increased power that PoE+ delivers, its support provides piece of mind that as new devices are brought onto the network they can be supported regardless of the power requirements.

Integrated SFP+ ports deliver flexibility in terms of uplink speeds – allowing either 1 Gigabit or 10 Gigabit SFP+ devices to be installed. Customers can start with 1 Gig and then migrate to 10 Gigabit uplinks, as required.

Integrated field replaceable AC power supplies save cost and rack space. In addition, the ERS 4800 is hardware ready for advanced services such as wireless split-plane and the Avaya Virtual Services Fabric - emerging technologies in Avaya VENA. These services enable customer to deal effectively with the explosion of wireless traffic and the proliferation of HD video traffic while simplifying design, deployment and management of their next-generation network.

To ensure full interoperability across the complete ERS 4000 portfolio, the rear-mounted Stackable Chassis interfaces used on the ERS 4800 are consistent with those used on the other ERS 4000 models. Each ERS 4000 Stackable Chassis delivers up to 384 Gbps when eight units are combined.

Requirement	ERS 4500 Models	ERS 4500 PoE+ Models	ERS 4800 Models
Fast Ethernet to the desktop	Yes	Yes	Yes
Gigabit Ethernet to the desktop	Yes	No	Yes
IEEE 802.3 af PoE	Yes	Yes	Yes
IEEE 802.3 at PoE+	No	Yes	Yes
10 Gig Uplink sockets	XFP	No	SFP+
Redundant power	Yes - available through external RPS 15)	Yes – internal field-replaceable PSUs	Yes – internal field-replaceable PSUs
Hardware-ready for advanced services (Wireless Split-Plane, Virtual Services Fabric)	No	No	Yes

With 17 different models, the ERS 4000 Series offers a wide range of capabilities that meet a diverse range of edge requirements.

Summary

The ERS 4800 Series is a future-ready solution well suited for the next-generation wiring closet. Along with other Avaya products, the Ethernet Routing Switch 4800 Series can increase profitability and productivity, streamline business operations, lower costs and help your business gain a competitive edge.

Avaya Ethernet Routing Switch 4800 Series	
ERS 4826GTS	24 10/100/1000BASE-T ports, including 2 shared SFP Uplink ports, plus 2 additional SFP+ Uplink ports
ERS 4826GTS-PWR+	24 10/100/1000BASE-T ports supporting 802.3at PoE+, including 2 shared SFP Uplink ports, plus 2 additional SFP+ Uplink ports
ERS 4850GTS	48 10/100/1000BASE-T ports, including 2 shared SFP Uplink ports, plus 2 additional SFP+ Uplink ports
ERS 4850GTS-PWR+	48 10/100/1000BASE-T ports supporting 802.3at PoE+, including 2 shared SFP Uplink ports, plus 2 additional SFP+ Uplink ports

Product Specifications

ERS 4826GTS

Switch Details	24 10/100/1000 Gigabit Ethernet ports 2 shared SFP ports Plus 2 x 1/10Gigabit SFP+ ports Plus 2 x rear HiStack ports delivering up to 384Gbps of Stackable Chassis throughput System CPU operates at 533 MHz Switch is configured with 256MB RAM RJ-45 Console port provides industry standard serial port connectivity Ships with 1 x 46cm HiStack cable Ships with 1 set of 44mm/19" rack mount brackets (specific to the ERS 4800/ ERS 4500 POE+ models)
Dimensions:	4.4cm – 1RU (H), 44.0cm (W), 43.68cm (D)
Weight:	11.05 Kg
Power and Thermal	Supplied with 1 x 300 watt Field Replaceable AC power supply Supports addition of second Field Replaceable AC power supply for redundancy
Maximum PoE power	75 watts Thermal Rating 256 BTU/hr

ERS 4826GTS-PWR+

Switch Details	24 10/100/1000 Gigabit Ethernet ports 24 ports support both IEEE 802.3af POE and IEEE 802.3at POE+ 2 shared SFP ports Plus 2 x 1/10Gigabit SFP+ ports Plus 2 x rear HiStack ports delivering up to 384Gbps of Stackable Chassis throughput System CPU operates at 533 MHz Switch is configured with 256MB RAM RJ-45 Console port provides industry standard serial port connectivity Ships with 1 x 46cm HiStack cable Ships with 1 set of 44mm/19" rack mount brackets (specific to the ERS 4800/ ERS 4500 POE+ models)
Dimensions:	4.4cm – 1RU (H), 44.0cm (W), 43.68cm (D)
Weight:	11.50 Kg
Power and Thermal	Supplied with 1 x 1000 watt Field Replaceable AC power supply Supports addition of second Field Replaceable AC power supply for redundancy or additional PoE Maximum Power 88 watts (without PoE Load) Thermal Rating 300 BTU/hr
Maximum PoE power	855 watts when operating on one 1000w power supply 1855 watts when operating on two 1000w power supply

ERS 4850GTS

Switch Details	48 10/100/1000 Gigabit Ethernet ports 2 shared SFP ports Plus 2 x 1/10Gigabit SFP+ ports Plus 2 x rear HiStack ports delivering up to 384Gbps of Stackable Chassis throughput System CPU operates at 533 MHz Switch is configured with 256MB RAM RJ-45 Console port provides industry standard serial port connectivity Ships with 1 46cm HiStack cable Ships with 1 set of 44mm/19" rack mount brackets (specific to the ERS 4800/ ERS 4500 POE+ models)
Dimensions:	4.4cm – 1RU (H), 44.0cm (W), 43.68cm (D)
Weight:	11.48 Kg
Power and Thermal	Supplied with 1 x 300 watt Field Replaceable AC power supply Supports addition of second Field Replaceable AC power supply for redundancy Maximum Power 95 watts Thermal Rating 323 BTU/hr

ERS 4850GTS-PWR+

Switch Details	48 10/100/1000 Gigabit Ethernet ports 48ports support both IEEE 802.3af POE and IEEE 802.3at POE+ 2 shared SFP ports Plus 2 1/10Gigabit SFP+ ports Plus 2 rear HiStack ports delivering up to 384Gbps of Stackable Chassis throughput Ships with 1 46cm HiStack cable Ships with 1 set of 44mm/19" rack mount brackets (specific to the ERS 4800/ ERS 4500 POE+ models)
Dimensions:	4.4cm – 1RU (H), 44.0cm (W), 43.68cm (D)
Weight:	11.98 Kg
Power and Thermal	Supplied with 1 x 1000 watt Field Replaceable AC power supply Supports addition of second Field Replaceable AC power supply for redundancy or additional PoE Maximum Power 112 watts (without PoE Load) Thermal Rating 383 BTU/hr
Maximum PoE power	855 watts when operating on one 1000w power supply 1855 watts when operating on two 1000w power supply

General Performance	
Switch Fabric performance: 128Gbps to 184Gbps	DHCP Snooping: up to 1,024 table entries
Frame forwarding rate: 66 to 102Mpps	802.1X Clients: up to 768
Stack Throughput: 384Gbps	LLDP Neighbors: up to 800
Latency (64 byte packet): 3.5 microseconds	ARP Entries: up to 1,792
Jitter (64 byte packet): 0.84 microseconds	IP Interfaces: up to 64
Frame length: 64 to 1518 Bytes (802.1Q Untagged), 64 to 1522 bytes (802.1Q Tagged)	IPv4 Routes: up to 512
Jumbo Frame support: up to 9,000 Bytes (802.1Q Tagged)	OSPF Instances: up to 4
Multi-Link/LAG Trunks: up to 32 Groups, with 8 Links per Group	OSPF Adjacencies: up to 16
VLANs: up to 1,024 Port/Protocol/802.1Q-based	ECMP Paths: up to 4
Multiple Spanning Tree Groups: 8	VRRP Instances: up to 256
MAC Address: up to 8k	IPFIX Sampled Flows: up to 100,000

Pluggable Interfaces	
1000BASE-T SFP up to 100m over CAT5E or better UTP Cable (RJ-45)	100BASE-FX SFP up to 2km reach over MMF (Duplex LC)
1000BASE-SX SFP up to 550m reach on MMF (Duplex LC)	Ethernet-over-T1 SFP up to 2,874m reach over 22AWG Cable (RJ-48C)
1000-BASE-LX SFP up to 550m reach on MMF, and up to 10 km on SMF (Duplex LC)	10GBASE-SR SFP+ up to 300m reach over MMF (Duplex LC)
1000BASE-XD CDWM SFP up to 40 km reach on SMF (Duplex LC)	10GBASE-LRM SFP+ up to 220m over FDDI-grade MMF (Duplex LC)
1000BASE-ZX CDWM SFP up to 70 km reach on SMF (Duplex LC)	10GBASE-LR SFP+ up to 10km reach over SMF (Duplex LC)
1000BASE-EX SFP up to 120 km reach on SMF (Duplex LC)	10GBASE-ER SFP+ up to 40km reach over SMF (Duplex LC)
1000BASE-BX SFP up to 10 and 40 km reach variants on SMF (LC)	10GBASE-X SFP+ Direct Attach Cables, in 3, 5, & 10m lengths

Standards Compatibility	
IEEE 802.1D Spanning Tree Protocol	RFC 792 ICMP
IEEE 802.1w Rapid Spanning Tree	RFC 793 TCP
IEEE 802.1s Multiple Spanning Tree Groups	RFC 826 ARP
IEEE 802.1p Prioritizing	RFC 854 Telnet
IEEE 802.1Q VLAN Tagging	RFC 894 IP over Ethernet
IEEE 802.1X Ethernet Authentication Protocol	RFC 951 BootP
IEEE 802.1ab Link Layer Discovery Protocol	RFC 958 NTP
IEEE 802.3 Ethernet	RFC 1058 RIP v1
IEEE 802.3u Fast Ethernet	RFC 1112 IGMPv1
IEEE 802.3x Flow Control	RFC 1157 SNMP
IEEE 802.3z Gigabit Ethernet	RFC 1213 MIB-II
IEEE 802.3ab Gigabit Ethernet over Copper	RFC 1215 SNMP Traps Definition
IEEE 802.3ad Link Aggregation	RFC 12711757 / 2819 RMON
IEEE 802.3ae 10Gbps Ethernet	RFC 1350 TFTP
IEEE 802.3af Power-over-Ethernet	RFC 1361/1769 Simple Network Time
IEEE 802.3at Power-over-Ethernet Plus	Protocol (SNTP)
RFC 768 UDP	RFC 1493 Bridge MIB
RFC 783 Trivial File Transfer Protocol	RFC 1583 OSPF v2
RFC 791/950 IP	

Standards Compatibility (cont.)	
RFC 1573/2863 Interface MIB	RFC 2863 Interfaces Group MIB
RFC 1643/2665 Ethernet MIB	RFC 2865 RADIUS
RFC 1757 RMON	RFC 2866 RADIUS Accounting
RFC 1850 OSPF v2 MIB	RFC 3046 DHCP Relay Agent Information Option
RFC 1905/3416 SNMP	RFC 3246 Expedited Forwarding
RFC 1906/3417 SNMP Transport Mappings	RFC 3410 SNMPv3
RFC 1907/3418 SNMP MIB	RFC 3411 SNMP Frameworks
RFC 1945 HTTP v1.0	RFC 3412 SNMP Message Processing
RFC 1981 Path MTU Discovery for IPv6	RFC 3413 SNMPv3 Applications
RFC 2011 SNMP v2 MIB for IP	RFC 3414 SNMPv3 USM
RFC 2012 SNMP v2 MIB for TCP	RFC 3415 SNMPv3 VACM
RFC 2013 SNMP v2 MIB for UDP	RFC /3584 Co-existence of SNMP v1/v2/v3
RFC 2131 BootP/DHCP Relay Agent	RFC 3576 RADIUS
RFC 2138 RADIUS	RFC 3768 Virtual Router Redundancy Protocol (VRRP)
RFC 2236 IGMPv2	RFC 3917 IP Flow Information Export
RFC 2328 OSPF v2	RFC 3993 DHCP Subscriber-ID sub-option
RFC 2453 RIP v2	RFC 3954 NetFlow Services Export v9
RFC 2460 Internet Protocol v6	RFC 4007 Scoped Address Architecture
RFC 2461 Neighbour Discovery for IPv6	RFC 4022 TCP MIB
RFC 2462 Auto-configuration of link local addresses	RFC 4113 UDP MIB
RFC 2474 DiffServ	RFC 4291 IPv6 Addressing Architecture
RFC 2475 DiffServ	RFC 4293 IPv6
RFC 2665 Ethernet MIB	RFC 4432 SSH RSA
RFC 2674 Q-BRIDGE-MIB	RFC 4673 RADIUS Dynamic Authorization Server MIB
RFC 2737 Entity MIBv2	RFC 4443 Internet Control Message Protocol (ICMPv6)
RFC 2819 RMON MIB	RFC 5101 - Specification of the IP Flow Information Export (IPFIX)
	RFC 5186 IGMPv3

Power Specifications	
up to 8.5A @ 100-120VAC	up to 4.3A @ 200-240VAC

Environmental Specifications	
Operating temperature: 0°C to 50°C (32°F to 104°F)	Operating altitude: 0 to 3,048m (0 to 10,000ft) maximum
Storage temperature: -40°C to 85°C (-13°F to 158°F)	Storage altitude: 0 to 12,192m (0 to 40,000ft) maximum
Operating humidity: 0 to 95% maximum relative humidity, non-condensing	Acoustic Noise:
	less than 50dbA at 35°C
Storage humidity: 10 to 90% maximum relative humidity, non-condensing	less than 57dbA at 50°C

Safety Agency Approvals
Global basis for certification: IEC 60950 current edition with all CB member deviations CB Scheme Certification with Member Deviations EN60950 Europe Safety (CE) UL60950 United States of America Safety CSA22.2, #60950 Canada Safety NOM Mexico Safety S-mark Argentine Safety Anatel Brazilian Safety

Electromagnetic Emissions & Immunity	
CISPR22 International EMC Emissions CIRPR24 International EMC Immunity EN55022:2006 European EMC Emissions (CE) EN55024 European EMC Immunity (CE) EN61000 Additional European EMC Specifications (CE) FCC Part 15 US EMC Emissions	ICES-003 Canadian EMC Emissions VCCI Japan EMC Emissions AN/NZS 3548 Australia/New Zealand EMC Emissions CNS13438 Taiwan EMC Emissions MIC Korean EMC Certification Anatel Brazilian EMC Certification

MTBF Values
214,542 to 311,104 hours (24.49 to 35.31 years)

Warranty	
Lifetime Next Business Day advanced 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 global provider of business collaboration and communications solutions, providing unified communications, contact centers, data solutions and related services to companies of all sizes around the world. For more information please visit **www.avaya.com**.

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