

# Ethernet Switching Product Features

Avaya's Ethernet Switching product line provides complete coverage ranging from entry-level Branch Office through premium high-performance Wiring Closet, to Campus Core and Data Center applications. Our continuous development and improvement program has led to the delivery of the Ethernet Routing Switch 5600 models that feature the industry's first and only Terabit-capable Stackable Chassis solution, and to the Ethernet Routing Switch 8800 which is an evolutionary high-performance solution supporting next-generation highly-virtualized Campus environments.

## Avaya's Ethernet Switching portfolio:

- Ethernet Routing Switch 8800
- Ethernet Routing Switch 8300
- Ethernet Routing Switch 5000 Series
- Ethernet Routing Switch 4500 Series
- Ethernet Routing Switch 2500 Series

## Core Ethernet Switching

The core plays a pivotal role in determining overall network availability and performance.

Positioned at the heart of the network, Core Ethernet Switches provide the aggregation point between Users (connected to the Access Switches) and applications (running to the Data Center infrastructure). 'Switch Clustering', a technology that delivers simplified always-on resiliency that extends beyond the Switches to empower true end-to-end application availability, differentiates Avaya's Core strategy. The use of 'Horizontal Stacking' in the Server Access layer and lower energy costs based on reduced power consumption are also crucial advantages. The key to our competitive advantage in the LAN Switching segment is our field-proven ability to create more resilient networks that need fewer and less complex elements, and our network design and build approach that ensures delivery of the highest levels of performance and reliability.

## Access Ethernet Switching

Avaya's portfolio of fixed-format 'Stackable Chassis' Switches reflects the evolution of a number of innovative products that offer converged data and voice services for the Enterprise Branch and remote sites. We have completely refreshed our award winning Stackable line with solutions that provide even greater resiliency, performance, efficiency, and flexibility. A common thread that links the portfolio is our truly resilient, high-performance 'Stackable Chassis' architecture – leveraging Flexible Advanced Stacking Technology (FAST) – one of many differentiators that makes our solutions genuinely unique and superior to competitive offerings.

## Learn More

To learn more about the Avaya Ethernet Switching product line, contact your Avaya Account Manager or Authorized Partner. Or, visit us online at [avaya.com](http://avaya.com).

Avaya Stackable Ethernet Feature Matrix		STACKABLE														ACCESS SWITCHING & SMALL CORE										
		ERS 2500 Series				ERS 4500 Series										ERS 5000 Series										
		2526T	2526T-PWR	2550T-PWR	2550T-PWR	4526FX	4526T	4526T-PWR	4580T	4580T-PWR	4524GT	4524GT-PWR	4548GT	4548GT-PWR	4526GT	4526GT-PWR	5510-24T	5510-48T	5520-24T-PWR	5520-48T-PWR	5530-24TFO	5627FO	5650FO	5650FO-PWR	5680FO	5680FO-PWR
Avaya's UVP	Avaya Stackable Chassis	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Avaya Switch Clustering																									
	Avaya Virtual Link Aggregation Control Protocol	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Avaya PoE Dynamic Power Management	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Avaya Automatic QoS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Avaya Energy Saver					Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SPEEDS & FEEDS	100BASE-FX					24																				
	10/100BASE-TX	24	24	48	48		24		48																	
	10/100BASE-TX 802.3 PoE		12 <sup>1</sup>		24 <sup>1</sup>			24		48																
	1000BASE-T	2 <sup>3</sup>	2 <sup>3</sup>	2 <sup>3</sup>	2 <sup>3</sup>																					
	1000BASE-T 802.3 PoE																									
	10/100/1000-T	2	2	2	2	2	2	2	2	2	24					24	48				24			48		96
	10/100/1000-T 802.3 PoE											24												48		96
	1000BASE-X SFP	2 <sup>2</sup>	2 <sup>2</sup>	2 <sup>2</sup>	2 <sup>2</sup>	2 <sup>2</sup>	2 <sup>2</sup>	2 <sup>2</sup>	2 <sup>2</sup>	2 <sup>2</sup>	4 <sup>2</sup>	4 <sup>2</sup>	4 <sup>2</sup>	4 <sup>2</sup>	4 <sup>2</sup>	4 <sup>2</sup>	2 <sup>2</sup>	2 <sup>2</sup>	4 <sup>2</sup>	4 <sup>2</sup>	12 <sup>2</sup>	24			6 <sup>2</sup>	6 <sup>2</sup>
	10GBASE-X XFP													2	2						2	8	2	2	2	2
	MAC Addresses	16k	16k	16k	16k	8k	8k	8k	8k	8k	8k	8k	8k	8k	8k	8k	16k	16k	16k	16k	16k	16k	16k	16k	16k	16k
	Switch Fabric (Gbps)	12.8	12.8	15.6	15.6	48.8	48.8	48.8	77.6	77.6	88	88	184	184	128	128	80	160	80	160	192	384	288	288	384	384
	Forwarding Rate (Mpps)	9.5	9.5	11.6	11.6	6.6	6.6	6.6	10.2	10.2	36	36	72	72	66	66	35.7	71.4	35.7	71.4	65.5	154.7	101.2	101.2	172.7	172.7
Stacking Architecture (Gbps)	32	32	32	32	320	320	320	320	320	320	320	320	320	320	320	640	640	640	640	640	1152	1152	1152	1152	1152	
LAYER 2	802.1D Spanning Tree (STP)			Y							Y										Y					
	802.1s Multiple STP			Y							Y										Y					
	802.1w Rapid Reconfiguration STP			Y							Y										Y					
	Avaya Multiple Spanning Trees			Y							Y										Y					
	802.1Q VLANs			256							256										1,024					
	IPv6 VLANs			Y							Y										Y					
	Hardware Queues			4							8										8					
	802.1p/DSCP Quality of Service (QoS)			Y							Y										Y					
	Advanced QoS Filtering & Remarking			Y							Y										Y					
	Avaya Auto Discovery & Auto Configuration			Y							Y										Y					
802.1AB Media End-point Discovery			Y							Y										Y						
802.1AB Location TLV			Y							Y										Y						
LAYER 3	IP Static/Default Routing			Y						Y											Y					
	IP RIP v1/v2 Routing									Y											Y					
	IP OSPF Routing									Y											Y					
	IP VRRP										Y										Y					
	IP ECMP																				Y					
	IPv6 Routing																					Y			Y	
SECURITY	Multi-Netting																				Y					
	DHCP Snooping / ARP Inspection			Y						Y											Y					
	BPDU Filtering			Y						Y											Y					
	IP Source Guard			Y						Y											Y					
	802.1X EAPoL (Single Host Single Authentication)			Y						Y											Y					
	802.1X Multiple Host Single Authentication (MHMA)			Y						Y											Y					
	802.1X Multiple Host Multiple Authentication (MHMA)			Y						Y											Y					
	802.1X MHMA MultiVLAN									Y											Y					
	802.1X Guest VLAN			Y						Y											Y					
	802.1X Non-EAP			Y						Y											Y					
	802.1X/NEAP & Guest VLAN support									Y											Y					
	802.1X/NEAP Last Assigned RADIUS VLAN									Y											Y					
	802.1X/NEAP Fail-Open VLAN									Y											Y					
	802.1X/NEAP with VLAN Names			Y						Y											Y					
	RADIUS Accounting			Y						Y											Y					
	Secure Network Access - SSCP Mode									Y											Y					
	Secure Network Access - DHCP Mode			Y						Y											Y					
	MULTICAST	Identity Engines			Y					Y											Y					
IGMPv1				Y					Y											Y						
IGMPv2				Y					Y											Y						
IGMPv3																				Y						
PIM-SM																					Y					
RESILIENCY	Flexible Advanced Stacking Technology			Y					Y											Y						
	802.3ad Link Aggregation Control Protocol (LACP)			Y					Y											Y						
	Avaya Simple Loop Prevention Protocol (SLPP)																			Y						
	Multi-Link Trunking (MLT)			Y					Y											Y						
	Distributed MLT			Y					Y											Y						
MANAGEMENT	Single Link Trunking (SLT)									Y										Y						
	Standardized CLI			Y					Y											Y						
	GUI Management			Y					Y											Y						
	SNMPv3			Y					Y											Y						
	SSHv2			Y					Y											Y						
	TACACS+			Y					Y											Y						
	RADIUS Authentication			Y					Y											Y						
	Forced Stack Mode			Y					Y											Y						
	IPv6 Management			Y					Y											Y						
	IP Flow Information Export (IPFIX)									Y										Y						
Multi-Port Mirroring									Y										Y							
Software Licensing			Y					Y											Y							

Based on 2500 v4.3, 4500 v5.4, & 5000 v6.2

Notes:

- Half of the 100BASE-TX ports are PoE-enabled
- Combo Ports: SFP ports in combination with 10/100/1000 Copper ports
- Rear-panel Stacking ports can be used when in stand-alone mode (fixed at 1000Gbps)

Avaya Modular Ethernet Feature Matrix		MODULAR									
		MID-SIZED CORE & LARGE ACCESS					LARGE CORE & DATA CENTER				
		ERS 8300					ERS 8600/8800				
		MODULE	6-SLOT SWITCH	10-SLOT SWITCH	10-SLOT SWITCH CLUSTER	MODULE	3-SLOT SWITCH	6-SLOT SWITCH	10-SLOT SWITCH	10-SLOT SWITCH CLUSTER	
Avaya's DVP	Avaya Switch Clustering		Y				Y				
	Avaya Virtual Link Aggregation Control Protocol		Y				Y				
	Avaya PoE Dynamic Power Management		Y								
	Avaya Automatic QoS		Y				Y				
	Avaya IP-VPN-Lite						Y				
	Avaya Route Switch Processor						Y				
SPEEDS & FEEDS	100BASE-FX	24	96	192	384	24	48	96	192	384	
	10/100BASE-TX	48	192	384	768	48	96	192	384	768	
	10/100BASE-TX 802.3 PoE	48	192	384	768	48	96	192	384	768	
	1000BASE-T										
	1000BASE-T 802.3 PoE										
	10/100/1000-T	48	192	384	768	48	96	192	384	768	
	10/100/1000-T 802.3 PoE	48	192	384	768						
	1000BASE-X SFP	48	208 <sup>1</sup>	400 <sup>1</sup>	800 <sup>1</sup>	48	96	192	384	768	
	10GBASE-X XFP	8	36 <sup>2</sup>	68 <sup>2</sup>	136 <sup>2</sup>		12	24	48	96	
	Combo 10/100/1000+GbE+10GbE					8+24+2	16+48+4	32+96+8	64+192+16	132+384+32	
	MAC Addresses			16k				118k			
	Switch Fabric (Gbps)		272	464	928		200	400	720	1440	
	Forwarding Rate (Mpps)		202	345	690		90	179	360	720	
LAYER 2	802.1D Spanning Tree		Y				Y				
	802.1s Rapid Reconfiguration STP		Y				Y				
	802.1w Multiple STP		Y				Y				
	Avaya Multiple Spanning Trees		Y				Y				
	802.1Q VLANs		2k				4k				
	IPv6 VLANs		Y				Y				
	Hardware Queues		8				64				
	802.1p/DSCP QoS		Y				Y				
	Advanced QoS Filtering & Remarking		Y				Y				
	802.1AB Discovery		Y				Y				
	Avaya Automatic QoS		Y				Y				
	Avaya Auto Discovery & Auto Configuration		Y				Y				
LAYER 3	IP Static/Default Routing		Y				Y				
	IP RIP v1/v2 Routing		Y				Y				
	IP OSPF Routing		Y				Y				
	IP BGP Routing		Y <sup>3</sup>				Y				
	IP VRRP		Y				Y				
	IP VRRP Backup Master		Y				Y				
	IP ECMP		Y				Y				
	IPv6 Routing		Y				Y				
	Avaya VRF-Lite		Y				Y				
	RFC 4364/2547 IP VPN		Y				Y				
	Multi-Protocol Label Switching		Y				Y				
	Microsoft Network Load-Balancing (NLB)		Y				Y				
	Multi-Netting		Y				Y				
	Multi-Homing		Y				Y				
	SECURITY	DHCP Snooping / ARP Inspection		Y				Y			
BPDUI Filtering			Y				Y				
IP Source Guard			Y				Y				
802.1X EAPoL (Single Host Single Authentication)			Y				Y				
802.1X Multiple Host Single Authentication			Y				Y				
802.1X Multiple Host Multiple Authentication			Y				Y				
802.1X Guest VLAN			Y				Y				
802.1X Non-EAP			Y				Y				
RADIUS Accounting			Y				Y				
Secure Network Access - SSCP Mode							Y				
Secure Network Access - DHCP Mode			Y				Y				
Identity Engines			Y				Y				
MULTICAST	IGMP Snoop Querier		Y				Y				
	IGMPv1		Y				Y				
	IGMPv2		Y				Y				
	IGMPv3		Y				Y				
	Multicast VLAN Registration		Y				Y				
	PIM-SM		Y				Y				
	PIM-SSM		Y				Y				
	DVMRP		Y				Y				
RESILIENCY	MSDP		Y				Y				
	802.3ad Link Aggregation Control Protocol (LACP)		Y				Y				
	Avaya Simple Loop Prevention Protocol (SLPP)		Y				Y				
	Multi-Link Trunking (MLT)		Y				Y				
	Distributed MLT		Y				Y				
	Routed SMLT		Y				Y				
	Single Link Trunking (SLT)		Y				Y				
MANAGEMENT	Bi-directional Forwarding Detection (BFD)		Y				Y				
	Standardised CLI		Y				Y				
	GUI Management		Y				Y				
	SNMPv3		Y				Y				
	SSHv2		Y				Y				
	TACACS+		Y				Y				
	RADIUS Authentication		Y				Y				
	IPv6 Management		Y				Y				
	IP Flow Information Export (IPFIX)		Y				Y				
	Multi-Port Mirroring		Y				Y				
Software Licensing		Y				Y					

Based on 8300 v4.2 & 8800 v7.0

Notes:

- Includes SFP ports mounted on the 8393SF Modules
- Includes XFP ports mounted on the 8394SF Modules
- Implemented as BGP-Lite, a reduced-scale implementation of iBGP

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## About Avaya

Avaya is a global leader in enterprise communications systems. The company provides unified communications, contact centers, and related services directly and through its channel partners to leading businesses and organizations around the world. Enterprises of all sizes depend on Avaya for state-of-the-art communications that improve efficiency, collaboration, customer service and competitiveness. For more information please visit [www.avaya.com](http://www.avaya.com).



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References to Avaya include the Nortel Enterprise business, which was acquired as of December 18, 2009.

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