














AI Fabric Switches		100/400/800GbE Multi-rate		
Overview	High-performance, high-density 100/400/800GbE multi-rate aggregation and AI fabric switches			
Models	SN5600	Z9864F-ON	Z9664F-ON	Z9432F-ON
				
NPU	NVIDIA® Spectrum-4	Broadcom® Tomahawk™ 5	Broadcom Tomahawk 4	Broadcom Trident™ 4-X11
Form factor	2 U	2 U	2 U	1 U
Performance				
Switching capacity (Tbps, full duplex)	102.4	102.4	51.2	25.6
Forwarding capacity (Bpps)	33.3	20.3	10.2	5.2
Buffer size (MB)	160	165	114	132
Latency (ns)	N/A	<700	<850	<850
Ports*				
10GbE (SFP+)	256+1	2	256 (breakout) + 2	144 (breakout) + 2
25GbE (SFP28)	256+1	N/A	256 (breakout)	144 (breakout)
40GbE (QSFP+)	128	N/A	128 (breakout)	64 (breakout)
50GbE (QSFP28)	256	N/A	128 (breakout)	128 (breakout) + 16 (QSA) (PAM4)
50GbE (SFP56)	256	N/A	256 (breakout)	128 (breakout)
100GbE (QSFP28)	256	320 (breakout)	256 (breakout)	128 (breakout)
200GbE (QSFP28-DD)	256	256 (breakout)	128 (breakout)	64 (breakout)
400GbE (QSFP56-DD)	128	128 (breakout)	64	32
800GbE (QSFP112 PAM4)	64	64	N/A	N/A
Power and cooling				
Power consumption (W)	940 (normal)	2848 (max)/1500 (normal)	2125 (max)/500 (normal)	1404 (max)/900 (normal)
Power options	AC	AC or DC**		
Redundant power		2 hot swappable		
Airflow	Normal	Normal or Reverse, can be reversed in the field		
Features				
Operating Systems	NVIDIA Cumulus Linux, SONiC, Linux Switch	Enterprise SONiC Distribution by Dell Technologies	Dell SmartFabric OS10; Enterprise SONiC Distribution by Dell Technologies	
Industry-standard CLI (Console, Telnet, SSHv1/v2)	Cumulus Linux - NVUE with CLI and RESTAPI Support	Enterprise SONiC Distribution by Dell Technologies	Dell SmartFabric OS10	
iSCSI optimization	Optimized for RoCE	N/A	iSCSI optimization and FSB	
Max VLANs (Configured)	4K	4K per port		
Max MAC entries	239K	156K		
Link aggregation (Groups/Members)	80 member/LAG, up to 80 Mlags	32 links per group, 128 groups		16 links per group, 128 groups
Max routes (IPv4/IPv6)	256K/235K	400K/300K		340K/310K
Jumbo frames	9,216 bytes	9,216 bytes		
IPv4 routing	OSPFv2, BGP	OSPFv2, BGPv4	OSPF, BGP	
IPv6 routing	OSPFv3, BGP	BGPv6	MP-BGP, OSPFv3	
Multicast routing	PIM-SM or PIM-DM	IPv4 PIM-SSM	PIM-SM, PIM-SSM	
VXLAN	Routing and Bridging	Routing and Bridging***		









*SN5600 as 64 OSFP + 1 SFP28 connectors. Port configuration capacities represent HW supportable modes. SW support varies by OS. **In Roadmap, post-RTS for Z9864F-ON. *** SONiC only.



AI Fabric InfiniBand Switches			
Overview	Highest-performance, end-to-end 800Gb/s networking designed for massive-scale AI.		
Models	QM9700/9790	QA3200	QA3400/3401*
			
NPU	NVIDIA Quantum™2	NVIDIA Quantum 3	NVIDIA Quantum 3
Form factor	2 U	2 U	4 U
Performance			
Switching capacity (Tbps)	25.6	57.6	115.2
Latency (ns)	N/A	N/A	N/A
Ports**			
40Gb/s (QSFP)	64	72	N/A
56 Gb/s (QSFP)	64	72	N/A
100Gb/s (QSFP)	64	72	N/A
200Gb/s (QSFP)	64	72	N/A
400Gb/s (QSFP)	64	72	144
800Gb/s (QSFP)	N/A	72	144
800Gb/s (MPO)	N/A	N/A	N/A
Power and cooling			
Power consumption (W)	640-747	N/A	2,900-7,000
Power options	AC***		
Redundant power			
Airflow	Normal or reversed	N/A	
N/AFeatures			
Operating Systems	NVIDIA MLNX-OS	NVIDIA Networking OS Software (NVOS)	

*Estimated availability H2/2025
 **Plus 10/100/1000Mb Ethernet management interface (RJ45)
 ***DC busbar on Q3401-RA




S-Series Data Center Switches		10/25/40/50/100/200/400GbE				
Overview		High-performance, open networking 25GbE for compute and storage connectivity or 100/400GbE spine/leaf switches offering optimum flexibility and cost effectiveness				
Models	S5212F-ON	S5224F-ON	S5232F-ON	S5248F-ON	S5296F-ON	S5448F-ON
						
NPU	Broadcom Trident3-X5		Broadcom Trident3-X7			Broadcom Trident4-X9
Form factor	1 U compact	1 U	1 U	1 U	2 U	1 U
Performance						
Switching capacity (full duplex) (Tbps)	2.16	2.16	6.4	4.0	6.4	16
Forwarding capacity (Bpps)	880 Mpps	1.42	4.8	3.0	4.8	2.6
Buffer size (MB)	32					82
Latency (ns)	906	881	877	847	850	1135
Ports						
10GbE (SFP+)	12 + 12 (breakout)	24 + 16 (breakout)	124 (breakout) + 2	48 + 32 (breakout)	96 + 32 (breakout)	48 + 24 (breakout) + 2
25GbE (SFP28)	12 + 12 (breakout)	24 + 16 (breakout)	124 (breakout)	48 + 32 (breakout)	96 + 32 (breakout)	48 + 24 (breakout)
40GbE (QSFP28)	3	4	32	4 + 4 (breakout)	8	16 (Breakout)
50GbE (QSFP28)	6 (breakout)	8 (breakout)	64 (breakout)	16 (breakout)	16 (breakout)	16 (Breakout)
50GbE (SFP56)	N/A					48 + 24 (Breakout)
100GbE (QSFP28)	3	4	32	4 + 4 (breakout)	8	32 (breakout)
100GbE (SFP56-DD)	N/A					48
400GbE (QSFP56-DD)	N/A					8
Power and cooling						
Max. power consumption (W)	304 (max)/140 (normal)	455 (max)/200 (normal)	635 (max)/360 (normal)	647 (max)/310 (normal)	893 (max)/457 (normal)	920 (max)/250 (normal)
Power options	AC or DC					
Redundant power	2 fixed	2 hot swappable				
Airflow	Normal or Reverse	Normal or Reverse, can be reversed in the field				
Features						
Operating Systems	Dell SmartFabric OS10; Enterprise SONiC Distribution by Dell Technologies					
Industry-standard CLI (Console, Telnet, SSHv1/v2)	Dell SmartFabric OS10					
iSCSI optimization	iSCSI optimization and FSB					
Max VLANs (Configured)*	4K per port					
Max MAC entries*	160K					256k
Link aggregation (Groups/Members) *	16 links per group, 128 groups					
Max routes (IPv4/IPv6) *	128K/64K					875K/310K (IPv6/64 ALPM), 240K (IPv6/128 ALPM)
Jumbo frames	9,216 bytes					
IPv4 routing	OSPF, BGP					
IPv6 routing	MP-BGP, OSPFv3					
Multicast routing	PIM-SM, PIM-SSM					
VXLAN	Routing and Bridging					

*Hardware maximum. Refer to Network Operating System (NOS) scalability for actual supported numbers with the NOS

S-Series Data Center Switches				1/10/25/40/50/100GbE																
Overview									High-performance open networking 10GbE top-of-rack switches with 100GbE uplinks for compute and storage connectivity											
Models		S4112F-ON		S4112T-ON		S4128F-ON		S4128T-ON		S4148F-ON		S4148T-ON		S4348F-ON		S4348T-ON				
																				
NPU		Broadcom Maverick												Trident3-X5						
Form factor		1 U compact				1 U														
Performance																				
Switching capacity (full duplex) (Gbps)		840				960				1,760				2,016				2,016		
Forwarding capacity (Mpps)		625				720				1,320				1,007				1,007		
Buffer size (MB)						12								32				32		
Latency (ns)		<800				<800		<2.3 μs		<800		<2.3 μs		<650		<3.5 μs				
Ports																				
1/10GBase-T		N/A		12		N/A		28		N/A		48		N/A		48				
1GbE (SFP)		12 + 12 (breakout)		N/A		28 + 8 (breakout)		8 (breakout)		48 + 24 (breakout)		24 (breakout)		48		N/A				
10GbE (SFP+)		12 + 12 (breakout)		12 (breakout)		28 + 8 (breakout)		8 (breakout)		48 + 24 (breakout)		24 (breakout)		48 + 12 (breakout)		12 (breakout)				
25GbE (SFP28)		12 (breakout)				8 (breakout)				16 (breakout)				12 (breakout)				12 (breakout)		
40GbE (QSFP28)		3				2				4 + 2 (QSFP+)				6				6		
50GbE (QSFP28)		6 (breakout)				4 (breakout)				8 (breakout)				N/A				N/A		
100GbE (QSFP28)		3				2				4				6				6		
Power and cooling																				
Power consumption (W)		180 (max)/ 90 (normal)		200 (max)/ 120 (normal)		260 (max)/ 160 (normal)		300 (max)/ 250 (normal)		370 (max)/ 200 (normal)		440 (max)/ 320 (normal)		362 (max)/ 119 (normal)		393 (max)/ 222 (normal)				
Power options		AC				AC or DC														
Redundant power supplies		Fixed, redundant power supply and fan				2								Fixed, redundant power supply and fan						
Airflow		Normal or Reverse				Normal or Reverse, can be reversed in the field												Normal or Reverse		
Features																				
Operating Systems		Dell SmartFabric OS10												Enterprise SONiC Distribution by Dell Technologies						
Industry-standard CLI (Console, Telnet, SSHv1/v2)		Dell SmartFabric OS10												OpenConfig gNMI						
iSCSI optimization		iSCSI optimization and FSB												N/A						
Max VLANs (Configured)		4K/500				500 L3 VLANs												3965		
Max MAC entries		272K												64K (L3 mode) / 224K (L2 mode)						
Link aggregation (Groups/Members)		32 links per group, 128 groups																		
Max routes (IPv4/IPv6)		200K/130K												160K/65K (in route scale mode)						
Jumbo frames		9,216 bytes												9,216 bytes						
IPv4 routing		OSPF, BGP												OSPFv2, BGPv4						
IPv6 routing		OSPFv3, MP-BGP												BGPv6						
Multicast routing		PIM-SM, PIM-SSM												IPv4 PIM-SSM						
VXLAN		Routing and Bridging																		

Out-of-Band Management Switches		
Overview	Ethernet switches for out-of-band data center management	
Models	S3248T-ON	SN2201
		
NPU	Broadcom Trident3-X3	NVIDIA Spectrum
Form factor	1 U	1U
Performance		
Switching capacity (full duplex) (Gbps)	576	448
Forwarding Capacity (Mpps)	800	667
Buffer size (MB)	8	16
Latency (µs)	2.38	N/A
Ports		
1GBase-T	48	48
10GbE (SFP+)	4	16
100GbE (QSFP28)	2	4
Power and cooling		
Power consumption (W)	212 (max)	100 (typical)
Power options	AC or DC	AC
Redundant power supplies	2	2
Airflow	Normal or Reverse	Normal or reverse
Features		
Operating system	Dell SmartFabric OS10; Enterprise SONiC Distribution by Dell Technologies	NVIDIA Cumulus Linux, SONiC, Linux Switch
Industry-standard CLI	OpenConfig gNMI	Cumulus Linux - NVUE with CLI and RESTAPI Support
iSCSI optimization storage features	N/A	Optimized for RoCE
Max VLANs (Configured)	4096/1000	4K
Max MAC entries	55K	176K
Link aggregation (Groups/Members)	16 links per group, 128 groups	N/A
Max routes (IPv4/IPv6)	8K/4K	176K/120K
Jumbo frames (Bytes)	9,216	9,216
IPv4 routing	IPv4 and IPv6 functionality including BGP, VRF, BFD, PIM SSM, OSPFv2/v3	OSPFv2, BGP OSPFv3, BGP
IPv6 routing		
Multicast routing		
VXLAN	L2 and L3	Bridging and Routing

Edge switches

Overview	High performance open networking 1GbE and 10GbE multigigabit switches for modern workloads at the network edge		
Models	E3224F-ON	E3248P-ON	E3248PXE-ON
			
NPU	Broadcom® Trident3-X3		Broadcom Trident3-X5
Form factor	1U		
Switch capacity (Gbps)	528	576	1560
Forwarding capacity (Mpps)	733	800	2167
Buffer size	8 MB	8 MB	32 MB
1G	24 (SFP)	48 (GBase-T)	-
5GBase-T Multigig (1/2.5/5G)	-		
10GBase-T Multigig (1/2.5/5/10G)	-	-	48
10G (SFP+)	4	4	-
25G (SFP28)	-	-	4
100GbE (QSFP28)	2 (Rear side)		
Power-over-Ethernet ports	-	48x 802.3at (30W) PoE	48x 802.3bt Type-4 (90W) PoE
Power and cooling			
Max power consumption (watts)	230	1683	4869
Power options	AC	AC	AC
Internal power supplies	2 hot swappable redundant power supplies. 1 PSU included, 2nd PSU optional.		
Redundant power	550W AC	1050W AC	1600W AC
Airflow	I/O to power supply. Supports field replaceable fans with N+1 redundancy.		
Features			
Operating Systems	Dell SmartFabric OS10	Enterprise SONiC Distribution by Dell Technologies	
VLANs	4094		
VLAN support	Voice VLAN, Private Edge, Protocol and MAC-based, GVRP, 802.11x, Auto VLAN		
Layer 2 and 3	Layer 3 Advanced		
Jumbo frames	9216 bytes		
IPv4/IPv6 routing	IPv4 and IPv6 functionality including BGP, VRF, BFD, OSPFv2/v3		
Multicast routing	PIM-SM, PIM-DM, PIM-SSM		
Rapid Deployment	Deploy switch configuration files and firmware updates by simply inserting a USB device.		
Management and security			
Switch security	AAA, TACACS+ accounting and RADIUS support for comprehensive secure access. Port security 802.1x in E3248PXE, E3248P. MACsec support in E3248PXE-ON.		
SNMP support	SNMPv1/2/3		
sFlow	Yes		
Management	CLI via console, Telnet or serial connection.		