

Z-series		100/400/800GbE Multi-rate		
<b>Overview</b>		High-performance, high-density 100/400/800GbE multi-rate aggregation and AI fabric switches		
Models	Z9864F-ON	Z9664F-ON	Z9432F-ON	
NPU	Broadcom® Tomahawk™5	Broadcom Tomahawk 4	Broadcom Trident™4-X11	
Form factor	2 U	2 U	1 U	
<b>Performance</b>				
Switching capacity (Tbps, full duplex)	102.4	51.2	25.6	
Forwarding capacity (Bpps)	20.3	10.2	5.2	
Buffer size (MB)	165	114	132	
Latency (ns)	<850	<850	<850	
<b>Ports*</b>				
10GbE (SFP+)	2	256 (breakout) + 2	144 (breakout) + 2	
25GbE (SFP28)	N/A	256 (breakout)	144 (breakout)	
40GbE (QSFP+)	N/A	128 (breakout)	64 (breakout)	
50GbE (QSFP28)	N/A	128 (breakout)	128 (breakout) + 16 (QSA) (PAM4)	
50GbE (SFP56)	N/A	256 (breakout)	128 (breakout)	
100GbE (QSFP28)	320 (breakout)	256 (breakout)	128 (breakout)	
200GbE (QSFP28-DD)	256 (breakout)	128 (breakout)	64 (breakout)	
400GbE (QSFP56-DD)	128 (breakout)	64	32	
800GbE (OSFP112 PAM4)	64	N/A	N/A	
<b>Power and cooling</b>				
Power consumption (W)	2848 (max)/1500 (normal)	2125 (max)/500 (normal)	1404 (max)/900 (normal)	
Power options	AC or DC**			
Redundant power	2 hot swappable			
Airflow	Normal or Reverse, can be reversed in the field			
<b>Features</b>				
Operating Systems	Enterprise SONiC Distribution by Dell Technologies	Dell SmartFabric OS10; Enterprise SONiC Distribution by Dell Technologies		
Industry-standard CLI (Console, Telnet, SSHv1/v2)	Enterprise SONiC Distribution by Dell Technologies	Dell SmartFabric OS10		
iSCSI optimization	N/A	iSCSI optimization and FSB		
Max VLANs (Configured)	4K per port			
Max MAC entries	156K			
Link aggregation (Groups/Members)	32 links per group, 128 groups		16 links per group, 128 groups	
Max routes (IPv4/IPv6)	400K/300K		340K/310K	
Jumbo frames	9,216 bytes			
IPv4 routing	OSPFv2, BGPv4	OSPF, BGP		
IPv6 routing	BGPv6	MP-BGP, OSPFv3		
Multicast routing	IPv4 PIM-SSM	PIM-SM, PIM-SSM		
VXLAN	L2 & L3 16k			

\* Port configuration capacities represent HW supportable modes. SW support varies by OS.

\*\* In Roadmap, post-RTS for Z9864F-ON.

S-series		10/25/40/50/100/200/400GbE				
<b>Overview</b>		High-performance, open networking 25GbE for compute and storage connectivity or 100/400GbE spine/leaf switches offer 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 Trident3-X5	Broadcom Trident3-X7	Broadcom Trident4-X9
Form factor	1 U compact	1 U	1 U	1 U	2 U	1 U
<b>Performance</b>						
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
<b>Ports</b>						
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
<b>Power and cooling</b>						
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				
<b>Features</b>						
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		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
NPU	Broadcom Maverick					
Form factor	1 U compact		1 U		1 U	
<b>Performance</b>						
Switching capacity (full duplex) (Gbps)	840		960		1,760	
Forwarding capacity (Mpps)	625		720		1,320	
Buffer size (MB)	12					
Latency (ns)	<800		<800	<2.3 μs	<800	<2.3 μs
<b>Ports</b>						
1/10GBase-T	N/A	12	N/A	28	N/A	48
1GbE (SFP)	12 + 12 (breakout)	N/A	28 + 8 (breakout)	8 (breakout)	48 + 24 (breakout)	24 (breakout)
10GbE (SFP+)	12 + 12 (breakout)	12 (breakout)	28 + 8 (breakout)	8 (breakout)	48 + 24 (breakout)	24 (breakout)
25GbE (SFP28)	12 (breakout)		8 (breakout)		16 (breakout)	
40GbE (QSFP28)	3		2		4 + 2 (QSFP+)	
50GbE (QSFP28)	6 (breakout)		4 (breakout)		8 (breakout)	
100GbE (QSFP28)	3		2		4	
<b>Power and cooling</b>						
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)
Power options	AC			AC or DC		
Redundant power supplies	Fixed, redundant power supply and fan			2		
Airflow	Normal or Reverse		Normal or Reverse, can be reversed in the field			
<b>Features</b>						
Operating Systems	Dell SmartFabric OS10					
Industry-standard CLI (Console, Telnet, SSHv1/v2)	Dell SmartFabric OS10					
iSCSI optimization	iSCSI optimization and FSB					
Max VLANs (Configured)	4K/500		500 L3 VLANs		500 L3 VLANs	
Max MAC entries	272K					
Link aggregation (Groups/Members)	32 links per group, 128 groups					
Max routes (IPv4/IPv6)	200K/130K					
Jumbo frames	9,216 bytes					
IPv4 routing	OSPF, BGP					
IPv6 routing	OSPFv3, MP-BGP					
Multicast routing	PIM-SM, PIM-SSM					
VXLAN	Routing and Bridging					

## 1GbE open networking switches for data center management

**Overview** 1GbE out-of-band management switch

Models	N3248TE-ON
NPU	Broadcom Trident3-X3
Form factor	1 U
<b>Performance</b>	
Switching capacity (full duplex) (Gbps)	576
Forwarding Capacity (Mpps)	800
Buffer size (MB)	8
Latency (µs)	2.38
<b>Ports</b>	
1GBase-T	48
10GbE (SFP+)	4
100GbE (QSFP28)	2
<b>Power and cooling</b>	
Power consumption (W)	212 (max)
Power options	AC or DC
Redundant power supplies	2 hot swappable redundant power supplies. 1 PSU included, 2 <sup>nd</sup> PSU optional
Airflow	Normal or Reverse
<b>Features</b>	
Operating system	Dell SmartFabric OS10; Enterprise SONiC Distribution by Dell Technologies
Industry-standard CLI	Dell SmartFabric OS10
iSCSI optimization storage features	N/A
Max VLANs (Configured)	4096/1000
Max MAC entries	55K
Link aggregation (groups/Members)	16 links per group, 128 groups
Max routes (IPv4/IPv6)	8K/4K
Jumbo frames (Bytes)	9,216
IPv4 routing	IPv4 and IPv6 functionality including BGP, VRF, BFD, PIM-SM/SSM, OSPFv2/v3
IPv6 routing	
Multicast routing	
VXLAN	N/A

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