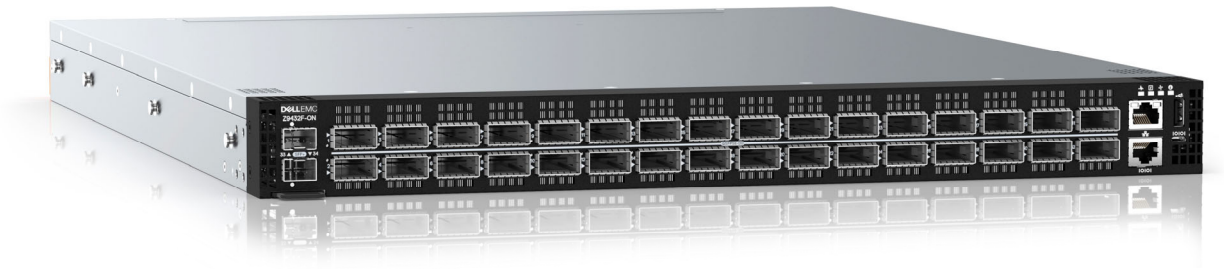
Dell EMC PowerSwitch Z9432F-ON Data Center Spine Switch

Frequently Asked Questions



Date: February 2021

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1. **What are the important details of this networking announcement?**
    a. *We are announcing the product release of the Dell EMC PowerSwitch Z9432F-ON, powering up the next-generation IP fabric with 2nd generation 400GbE open networking.*
        i. *The PowerSwitch Z9432F-ON helps organizations meet the need for higher density data center ToR 100/400GbE.*
        ii. *The PowerSwitch Z9432F-ON enables small-scale 400GbE leaf/spine data center fabric implementations.*
        iii. *The PowerSwitch Z9432F-ON with multi-rate capabilities provides data centers with a smooth migration path to 400GbE and the flexibility to meet emerging high-performance workloads and server connectivity transitioning to 50GbE[*] and 100GbE uplinks.*
    b. *This new Dell EMC PowerSwitch Open Networking switch adds to the top end of our software-defined networking Z-series family of switches for the core to help organizations with their IT transformation journey.*

2. **What models are included in this announcement?**
    a. ***Z9432F-ON** – 1RU with 32 x 400GbE ports in QSFP56-DD form factor*
        i. *32 ports of 400GbE in QSFP56-DD form factor or*
        ii. *128 ports of 100 or*
        iii. *up to 144 ports of 10/25/50[*] (via breakout)*

3. **What operating systems will the Z9432F-ON support?**
    a. *The Dell EMC PowerSwitch Z9432F-ON switch supports*
        i. *Dell EMC SmartFabric OS10 networking operating system*
        ii. *Enterprise SONiC Distribution by Dell Technologies[†]*
        iii. *No OS - ONIE bootloader only*

[*] 50G breakout is a future release feature
[†] Available post launch

4. What are the key features and benefits of the Z9432F-ON

Feature	Function	Benefit
• 32 x 400 or • 128 | 144 x 10/25/50/100GbE with breakout	High-density 400GbE fabric leaf nodes or 10/25/40/50‡/100GbE in-rack connections	Offers optimum flexibility and cost-effectiveness for demanding compute and storage traffic environments

Multi-rate 400GbE ports
+ 2 x 10GbE SFP+ ports
	• 4x Breakout – can breakout all 32 ports for
	  • 128 100G
	  • 128 10G
	  • 128 25G
	  • 128 50G (as breakout cables are available)
	• 8x Breakout – can breakout 16 ports for
	  • 128 10G
	  • 128 25G
	  • and ALSO have 16 ports to run at any multi-speed desired (including 16x400G)
	• 144 x 10GbE + 2
		Future-proof port speed options that can be reconfigured as needed to ease migration

25.6Tbps switching fabric (Full Duplex)	Largest switching I/O bandwidth	Delivers non-blocking, line-rate performance under full traffic load
Native Linux-based Dell EMC SmartFabric OS10	Dell EMC Networking Layer 2 and 3 switching and routing protocols with integrated IP services, Quality of Service, manageability and automation features	Enables customers with a Linux-based data center environment to share management orchestration and automation tools between server and network devices
Open Networking - Supports Open Networking Install Environment (ONIE)	Supports choice of NOS, including Dell EMC SmartFabric OS10 and Enterprise SONiC Distribution by Dell Technologies§	Allows customer the choice of switch hardware, NOS and Linux or open source-based applications and tools

‡ 50G breakout is a future release feature
§ Available post launch

5. I heard there's new silicon, the Broadcom Trident 4?

That is correct. Using the latest silicon, the Z9432F-ON provides

- *VXLAN support*
- *Large L2 tables*
- *Reasonable ACL table support*
- *132 MB packet buffer support*
- *Enhanced, better PSU/IO power support, with fewer limitations than predecessor, support for 20W Coherent optics*

6. How should I position the Z9432F-ON as compared to the Z9332F-ON and Z9264F-ON?

Feature	Z9264F-ON	Z9332F-ON	Z9432F-ON
Switching Capacity (Full Duplex)	12.8 Tbps (full duplex)	25.6 Tbps (full duplex)	25.6 Tbps (full duplex)
Forwarding Capacity	Best Case 2.6Bpps	Best Case 5.1Bpps	Best Case 5.2Bpps
Size	2RU	1RU	1RU
Port Configurations	Fixed • 64 QSFP28 / QSFP+ • 2 SFP+	Fixed • 32 QSFP56-DD / QSFP28 / QSFP+ • 2 SFP+	Fixed • 32 QSFP56-DD / QSFP28 / QSFP+ • 2 SFP+
Fans	4 Hot Swappable Fan	7 Hot Swappable Fan	7 Hot Swappable Fan
Power Supplies	1+1	1+1	1+1
Latency	Sub 500ns	Sub 700ns	Sub 850ns
Packet Buffering	42MB	64MB	132MB
NPU	Broadcom Tomahawk 2	Broadcom Tomahawk 3	Broadcom Trident 4
Power and Airflow restrictions	None	No DC support. AC – Must use only Highline 200-240 VAC. PSU to IO has power restrictions per port.	Highline 200-240 VAC for 1+2 redundancy available at RTS. Lowline possible, check with CoC or Product Group. DC is in roadmap. PSU to IO has restrictions per port.

7. How do I order this solution?

a. See the table below for order configurations.

Product	Description
Z9432F-ON	• Z9432F, 32x 400GbE QSFP56-DD, 2x AC PSU, Fan module, I/O Panel to PSU Airflow • Z9432F, 32x 400GbE QSFP56-DD, 2x AC PSU, Fan module, PSU to I/O Panel Airflow** • Z9432F, 32x 400GbE QSFP56-DD, 2x AC PSU, Fan module, I/O Panel to PSU Airflow, TAA Certified • Z9432F, 32x 400GbE QSFP56-DD, 2x AC PSU, Fan module, PSU to I/O Panel Airflow, TAA Certified**
Dell SW Configurations	• Dell EMC SmartFabric OS10 • Enterprise SONiC Distribution by Dell Technologies†† • No OS - ONIE bootloader only
Redundant Power Supplies	• AC Power Supply, IO Panel to PSU Airflow • AC Power Supply, PSU to IO Panel Airflow • DC Power Supply, IO Panel to PSU Airflow‡‡ • DC Power Supply, PSU to IO Panel Airflow§§
Fans	• Fan module, IO Panel to PSU Airflow • Fan module, PSU to IO Panel Airflow

8. Where can I learn more about the Z9332F-ON Series?

a. You can access the following Dell EMC Networking resources on Sales Portal
- *i. Dell EMC Networking Z9432F-ON Spec Sheet*
- *ii. Dell EMC Networking Z9432F-ON NDA Customer Presentation*
- *iii. Dell EMC Networking Z9432F-ON Battle Card*
- *iv. Dell EMC Networking Z9432F-ON Sourcebook*

b. As always you are welcome to reach out to us at ask-networking-plm@dell.com

** Will release post RTS by a Qtr.
†† Available post launch
‡‡ Available post launch
§§ Available post launch