

| 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)                                      | <700   | <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   | Routing and Bridging***                            |   |                                  |  |

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

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

\*\*\* SONiC only.

| S-series  |  |   |  |                        |  |                        | 10/25/40/50/100/200/400GbE  |                        |  |                        |  |   |  |
|---|--|---|--|------------------------|--|------------------------|---|------------------------|--|------------------------|--|---|--|
| Overview  |  |   |  |                        |  |                        | 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-X7   |  | 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  |                                       | 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  |
| NPU   | Broadcom Maverick                     |  |                        |   |                        |           | Trident3-X5  |
| Form factor                                       | 1 U compact                           |  |                        | 1 U   |                        |           |  |
| Performance                                       |                                       |  |                        |   |                        |           |  |
| Switching capacity (full duplex) (Gbps)           | 840                                   |  | 960                    |   | 1,760                  |           | 2,160  |
| Forwarding capacity (Mpps)                        | 625                                   |  | 720                    |   | 1,320                  |           | 1,001  |
| Buffer size (MB)                                  | 12                                    |  |                        |   |                        |           | 32   |
| Latency (ns)                                      | <800                                  |  | <800                   |   | <2.3 μs                |           | <600   |
| Ports   |                                       |  |                        |   |                        |           |  |
| 1/10GBase-T                                       | N/A                                   |  | 12                     |   | N/A                    |           | 28   |
| 1GbE (SFP)  | 12 + 12 (breakout)                    |  | N/A                    |   | 28 + 8 (breakout)      |           | 8 (breakout)                                       |
| 10GbE (SFP+)                                      | 12 + 12 (breakout)                    |  | 12 (breakout)          |   | 28 + 8 (breakout)      |           | 8 (breakout)                                       |
| 25GbE (SFP28)                                     | 12 (breakout)                         |  | 8 (breakout)           |   | 16 (breakout)          |           | 12 (breakout)                                      |
| 40GbE (QSFP28)                                    | 3                                     |  | 2                      |   | 4 + 2 (QSFP+)          |           | 6  |
| 50GbE (QSFP28)                                    | 6 (breakout)                          |  | 4 (breakout)           |   | 8 (breakout)           |           | N/A  |
| 100GbE (QSFP28)                                   | 3                                     |  | 2                      |   | 4                      |           | 6  |
| Power and cooling                                 |                                       |  |                        |   |                        |           |  |
| Power consumption (W)                             | 180 (max)/90 (normal)                 |  | 200 (max)/120 (normal) |   | 260 (max)/160 (normal) |           | 300 (max)/250 (normal)                             |
| Power options                                     | AC                                    |  |                        | AC or DC  |                        |           | 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                           |  |                        |   |                        |           | 9416   |
| 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                  |  |                        |   |                        |           |  |

## 1GbE open networking switches for data center management

| Overview                                | 1GbE top-of-rack open networking switches                                   |   |
|---|---|---|
| Models                                  | S3248T-ON   | 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, 2nd PSU optional. |   |
| Airflow                                 | Normal or Reverse   |   |
| <b>Features</b>                         |   |   |
| Operating system                        | Enterprise SONiC Distribution by Dell Technologies                          | Dell SmartFabric OS10; Enterprise SONiC Distribution by Dell Technologies |
| Industry-standard CLI                   | OpenConfig gNMI   |   |
| 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 SSM, OSPFv2/v3     |   |
| IPv6 routing                            |   |   |
| Multicast routing                       |   |   |
| VXLAN                                   | L2 and L3   |   |

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