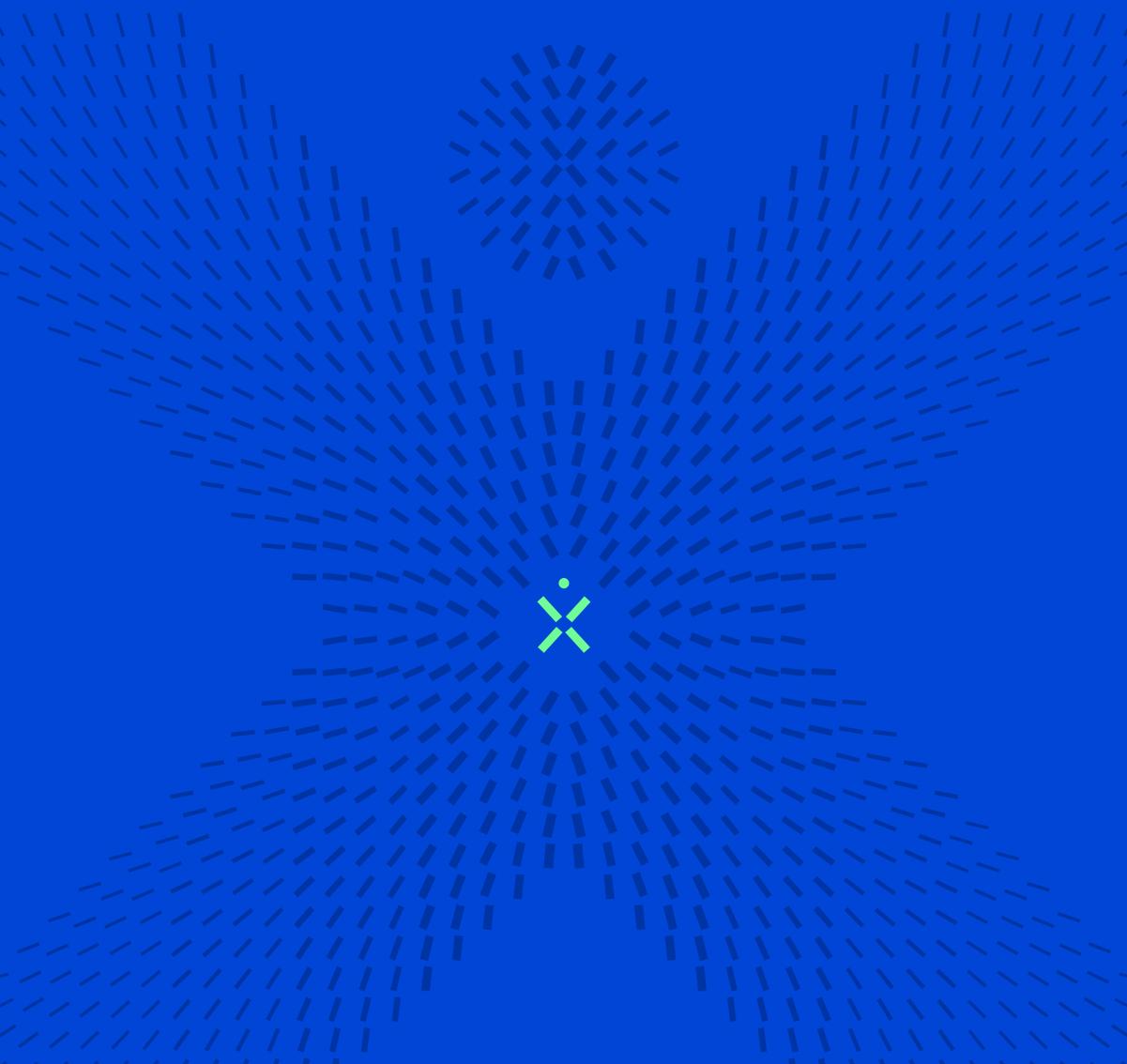# NetScaler Data Sheet

Enabling high-performance
multi-cloud application delivery

# NetScaler

NetScaler is an application security and delivery platform that helps you scale and protect your applications using data and insights to enable peak performance. Whether you're delivering applications to your customers, your workforce, or both, NetScaler helps you do it reliably and securely.

NetScaler is built on a single operating system, so no matter which ADC form factors you choose — hardware of software, or a mix — you'll manage them from one place. The operational consistency and deep observability you get with NetScaler makes it easier to apply consistent security policies and to troubleshoot faster.

With Citrix Universal Hybrid Multi-Cloud License and Citrix Platform License, you can reallocate capacity to wherever you need it, whenever you need it, no matter where you choose to deploy your ADCs — on-premises or public cloud or both — your NetScaler subscription price will remain the same.

## NetScaler form factors

### NetScaler MPX
NetScaler MPX is a physical form factor that provides powerful hardware-based application delivery and load balancing with options for high performance web application security and SSL offload support.

### NetScaler SDX
NetScaler SDX introduces fully isolated multi-tenant support on a single appliance for application workloads and groups. Deploying multiple virtual instances of NetScaler on one hardware appliance allows for the consolidation of multiple load balancers and application rollout.

### NetScaler VPX
NetScaler VPX is a virtual form factor that provides capabilities typically offered only on specialized, highend network devices. Deploy NetScaler VPX on your preferred hypervisor and achieve high SSL performance with no hardware acceleration.

### NetScaler CPX
NetScaler CPX is a containerized form factor that provides load balancing and traffic management for your containerized applications. You can deploy one or more NetScaler CPXs as standalone instances on a Docker host.

### NetScaler BLX
NetScaler BLX for bare metal runs as a Linux process on your hardware of choice. Because NetScaler BLX is a lightweight software package with no hypervisor or container overhead, you get extraordinarily fast performance. And there's no additional cost for hypervisor software.

### NetScaler for public cloud
NetScaler is easy to deploy across on-premises and public cloud environments including AWS, Azure, and Google Cloud Platform. Purchase licenses from the cloud marketplaces or simply bring your own.

### NetScaler FIPS models
NetScaler offers specific physical and virtual form factors with FIPS 140-2 and FIPS 140-3 certification and compliance to meet the stringent compliance mandates and security requirements. See NetScaler FIPS data sheet.

### Key NetScaler links
Compare features by subscription
Engage with the NetScaler Community
Leverage NetScaler Github

# Zero-capacity hardware

| NetScaler models | MPX/SDX 9200Z |
|---|---|
| **Attributes** | |
| Memory | 128 GB |
| Ethernet ports[1] | 8 x 50GbE SFP56 |
| Transceivers support | 50GbE SFP56 SR, AOC, DAC<br>25GbE SFP28 SR & LR, AOC, DAC<br>10GbE SFP+ SR & LR, AOC, DAC |
| **Performance** | |
| System throughput (Gbps) [L4/L7 throughput] | 10–95 |
| L4/l7 HTTP request/second | Up to 6,800,000 |
| SSL transactions/second (2k key certificates)[2] | Up to 112,000 |
| EDCHE transactions/second | Up to 96,000 |
| SSL throughput (Gbps) | Up to 64 |
| Compression throughput (Gbps) | Up to 28 |
| ICA Proxy concurrent users | Up to 17,000 |
| Concurrent TCP sessions | Up to 59M |
| SDX instances | 1–7 |
| **Mechanical, environmental, and regulatory** | |
| Power supplies | 2 |
| Input voltage, frequency range | 100–127/200-240 VAC, 50–60 Hz |
| Optional DC power supply | No |
| Power supply | 800W |
| Typical, max power consumption | 300W, 406W |
| Weight (lb) | 25.2 lbs. |
| Height | 1U |
| Width | EIA 310-D for 19-inch racks |
| Depth | 21.7 in (55 cm) |
| Operating temperature | 0-45°C (32-113°F) |
| Allowed relative humidity | 10%–90%, Non-condensing |
| Safety certifications | IEC/EN/UL/CSA/AS/NZS 62368-1 and 60950-1 |
| Electromagnetic emissions certification & susceptibility standard | US (FCC (Part 15 Class A)), Canada (ICES-003), EU (CE (EN 55032/55035)), Australia/NZ (RCM), Japan (VCCI), Korea (KCC), Taiwan (BSMI), India (BIS), Saudi Arabia (CITC), Brazil (Anatel), South Africa (ICASA), Mexico (NOM), Egypt (NTRA) |
| Regulatory compliance | RoHS, WEEE, REACH |
| NetScaler compliance regulatory model | 1U3P3A |

**Notes:**

1. Published Ethernet interfaces compliant per IEEE802.3-2002/2005/2008/2012.

2. Performance varies depending on ciphers deployed. Contact your NetScaler sales representative for details.

3. All 9200 series have 80plus platinum power supply

# Zero-capacity hardware

| NetScaler models | MPX/SDX 16000Z | MPX/SDX 9100Z |
|---|---|---|
| **Attributes** | | |
| Memory | 128 GB, 256 GB | 64 GB |
| Ethernet ports[1] | 4 x 100G QSFP28<br>8 x 25GbE SFP28 | 8 x 25GbE SFP28 |
| Transceivers support | QSFP28:<br>50/100GbE QSFP28 SR4, AoC, DAC<br>40GbE QSFP+ SR4, LR4, BiDi, AoC, DAC<br>25/10GbE SFP28 SR (Adapter required)<br>10/1GbE SFP+: SR, LR (Adapter required)<br>SFP28:<br>25/10GbE SFP28 SR, DAC<br>10/1GbE SFP+ SR, LR<br>10GbE DAC<br>1GBase-T | SFP28:<br>25/10GbE SFP28 SR, DAC<br>10/1GbE SFP+ SR, LR<br>10GbE DAC<br>1GBase-T |
| **Performance** | | |
| System throughput (Gbps) [L4/L7 throughput] | 30-250 | 10-95 |
| L4/l7 HTTP request/second | Up to 7,500,000 | Up to 3,000,000 |
| SSL transactions/second (2k key certificates)[2] | Up to 280,000 | Up to 90,000 |
| EDCHE transactions/second | Up to 125,000 | Up to 39,000 |
| SSL throughput (Gbps) | Up to 130 | Up to 55 |
| Compression throughput (Gbps) | Up to 43 | Up to 12 |
| ICA Proxy concurrent users | Up to 30,000 | Up to 17,000 |
| Concurrent TCP sessions | Up to 53M / 104M | Up to 30M |
| SDX instances | 1-55 | 1-7 |
| **Mechanical, environmental, and regulatory** | | |
| Power supplies | 2 | 2 |
| Input voltage, frequency range | 100–240 VAC full range, 50–60 Hz 7.0–2.6 A | 100–240 VAC full range, 50–60 Hz |
| Optional DC power supply | No | No |
| Power supply | 850W | 450W |
| Typical, max power consumption | 465W, 584W | 250W, 282W |
| Weight (lb) | 56 | 37 |
| Height | 2U | 1U |
| Width | EIA 310-D for 19-inch racks | |
| Depth | 71.1 cm (28 in) | 61 cm; 24 in |
| Operating temperature | 0–45°C (32-113°F) | |
| Allowed relative humidity | 5%–95%, Non-condensing | |
| Safety certifications | IEC/EN/UL/CSA/AS/NZS 62368-1 and 60950-1 | |
| Electromagnetic emissions certification & susceptibility standard | US (FCC (Part 15 Class A)), Canada (ICES-003), EU (CE (EN 55032/55035)), Australia/NZ (RCM), Japan (VCCI), Korea (KCC), Taiwan (BSMI), China (CCC), India (BIS), EAEU (EAC), Saudi Arabia (CITC), Brazil (Anatel), South Africa (ICASA), Mexico (NOM), Egypt (NTRA) | |
| Regulatory compliance | RoHS, WEEE, REACH | |
| NetScaler compliance regulatory model | 2U2P3A | 1U2P2A |

**Notes:**

1. Published Ethernet interfaces compliant per IEEE802.3-2002/2005/2008/2012.

2. Performance varies depending on ciphers deployed. Contact your NetScaler sales representative for details.

3. All 16000 and 9100 series have 80plus platinum rating for power supply.

# NetScaler software

## NetScaler VPX for on-premises

| Performance range | Minimum memory[1] | vCPUs[2] | ESXi | KVM | XenServer | Hyper-V | Recommended network driver |
|---|---|---|---|---|---|---|---|
| 41 Gbps - 100 Gbps | 2 GB | 2-20 | • | • | | | PCI passthrough |
| 26 Gbps - 40 Gbps | 2 GB | 2-20 | • | • | • | | SRI-IOV |
| 16 Gbps - 25 Gbps | 2 GB | 2-16 | • | • | • | | |
| 11 Gbps - 15 Gbps | 2 GB | 2-12 | • | • | • | | VMXNET3 or SR-IOV4 |
| 9 Gbps - 10 Gbps | 2 GB | 2-10 | • | • | • | | |
| 4 Gbps - 8 Gbps | 2 GB | 2-6 | • | • | • | | VMXNET3 or paravirtualization |
| 10 Mbps - 3 Gbps | 2 GB | 2-4 | • | • | • | • | |

| Performance[4] | | Minimum | Maximum |
|---|---|---|---|
| System throughput | | 10 Mbps | 100 Gbps |
| SSL transactions/sec (2k key certificates) | | 1,100 | 20,000 |
| SSL ECDHE transactions/SEC (2k key certificates) | | 880 | 17,280 |
| SSL throughput | | 10 Mbps | 30 Gbps |

More info: NetScaler VPX production documentation

NetScaler for Public Cloud: AWS, Azure, and Google Cloud Platform

**Note:**

Hypervisor versions: For details on hypervisor support, visit the Support matrix and usage guidelines on the NetScaler documentation site.

1. For the optimal performance, irrespective of the license, we recommend 4 GB memory per vCPU (e.g., for a VPX with 6 vCPUs, we recommend having 24GB memory allocated).
2. Processors supported: Intel VTx and AMD processors on ESXi from 13.1–4.x release.
3. VMXNET3 is supported on ESXi versions only.
4. Performance validated for XenServer using SR-IOV only.
5. For each VPX, one vCPU will be allotted to MGMT and all others are PE(s).

# NetScaler software

## NetScaler CPX for containers

| Model | Minimum memory | vCPUs | Throughput | Recommended network driver |
|-------|----------------|-------|------------|----------------------------|
| CPX | 1 GB | 1-7 | 1-10 Gbps | • Docker version 1.12 and above<br>• Kubernetes<br>• Red Hat OpenShift<br>• Amazon Elastic Kubernetes Service (EKS)<br>• Azure Kubernetes Service (AKS)<br>• Google Kubernetes Engine (GKE)<br>• Rancher<br>• Pivotal Container Service (PKS) |

|  | 1 Core | 1 Core (Sidecar CPX) | 3 Cores | 7 Cores |
|--|--------|----------------------|---------|---------|
| **System resources** | | | | |
| Maximum vCPUs | 1 | 1 | 3 | 7 |
| Maximum memory | 2 | 1 | 6 | 14 |
| **Performance[1]** | | | | |
| HTTP throughput (Gbps)[2] | 4.6 | 4.6 | 6.5 | 11.3 |
| SSL 2k throughput (Gbps) | 1.17 | 1.17 | 2.07 | 5.4 |
| HTTP requests/sec | 193,500 | 193,500 | 303,300 | 577,800 |
| SSL transactions/sec (2k key certificates) | 1,125 | 1,197 | 2,250 | 6,520 |
| SSL transactions/sec (ECDHE- RSA[2k]) | 1,004 | 1,020 | 1,962 | 3,987 |

More info: NetScaler CPX production documentation

**Note:**

1. Network Driver: 2x Xeon CPU E5-2687W v3 20 Physical Cores @ 3.0 GHz, OS: Centos 7.6, CPX version: 13.0-39.4, NIC: 2x40 Gbps XL710 (Dual Port).

2. This is network I/O bound performance. You may achieve higher performance based on packet processing size.

## NetScaler BLX for bare metal

| BLX model | Minimum memory | vCPUs | Throughput | Recommended network driver |
|-----------|----------------|-------|------------|----------------------------|
| Non-DPDK | 4 GB | 1-28 | 1-12 Gbps | CentOS, Oracle Linux, Ubuntu Linux, Red Hat Enterprise Linux (RHEL), Linux, Amazon Linux |
| DPDK | 4 GB | 1-28 | 1-100 Gbps | CentOS, Oracle Linux, Ubuntu Linux, Red Hat Enterprise Linux (RHEL), Linux, Amazon Linux |

More info: NetScaler BLX production documentation

**Note:** All BLX vCPUs are allocated as PEs.

# Fixed Capacity section

| NetScaler models | MPX 9230 Premium edition | MPX 9210 Premium edition |
|---|---|---|
| **Attributes** | | |
| Memory | 128 GB | |
| Ethernet ports[1] | 8 x 50GbE SFP56 | |
| Transceivers support | 50GbE SFP56 SR, AOC, DAC<br>25GbE SFP28 SR & LR, AOC, DAC<br>10GbE SFP+ SR & LR, AOC, DAC | |
| **Performance** | | |
| System throughput (Gbps) [L4/L7 throughput] | 30 | 10 |
| L4/l7 HTTP request/second | 3,731,000 | 2,915,000 |
| SSL transactions/second (2k key certificates)[2] | 62,000 | 45,000 |
| EDCHE transactions/second | 50,000 | 36,000 |
| SSL throughput (Gbps) | 30 | 10 |
| Compression throughput (Gbps) | 14 | 9 |
| ICA Proxy concurrent users | Up to 14,000 | Up to 12,000 |
| Concurrent TCP sessions | Up to 55.5M | Up o 55M |
| **Mechanical, environmental, and regulatory** | | |
| Power supplies | 2 | |
| Input voltage, frequency range | 100–127/200-240 VAC, 50–60 Hz | |
| Optional DC power supply | No | |
| Power supply | 800W | |
| Typical, max power consumption | 300W, 406W | |
| Weight (lb) | 25.2 lbs. | |
| Height | 1U | |
| Width | EIA 310-D for 19-inch racks | |
| Depth | 21.7 in (55 cm) | |
| Operating temperature | 0-45°C (32-113°F) | |
| Allowed relative humidity | 10%–90%, Non-condensing | |
| Safety certifications | IEC/EN/UL/CSA/AS/NZS 62368-1 and 60950-1 | |
| Electromagnetic emissions certification & susceptibility standard | US (FCC (Part 15 Class A)), Canada (ICES-003), EU (CE (EN 55032/55035)), Australia/NZ (RCM), Japan (VCCI), Korea (KCC), Taiwan (BSMI)), India (BIS), Saudi Arabia (CITC), Brazil (Anatel), South Africa (ICASA), Mexico (NOM), Egypt (NTRA) | |
| Regulatory compliance | RoHS, WEEE, REACH | |
| NetScaler compliance regulatory model | 1U3P3A | |

**Notes:**

1. Published Ethernet interfaces compliant per IEEE802.3-2002/2005/2008/2012.

2. Performance varies depending on ciphers deployed. Contact your NetScaler sales representative for details.

3. All 9200 series have 80plus platinum power supply

# Fixed Capacity section

| NetScaler models | MPX 9120 Premium edition | MPX 9110 Advanced edition | MPX 9105 Premium edition |
|---|---|---|---|
| **Attributes** | | | |
| Memory | 64 GB | 64 GB | 64 GB |
| Ethernet ports[1] | 8 x 25GbE SFP28 | | |
| Transceivers support | SFP28: 25/10GbE SFP28 SR, DAC 10/1GbE SFP+ SR, LR 10GbE DAC 1GBase | | |
| RAID support | No | No | No |
| **Performance** | | | |
| System throughput (Gbps) [L4/L7 throughput] | 20 | 10 | 5 |
| L4/l7 HTTP request/second | 1,600,000 | 1,400,000 | 1,200,000 |
| SSL transactions/second (2k key certificates)[2] | 25,000 | 15,000 | 10,000 |
| EDCHE transactions/second | 11,000 | 6,900 | 5,000 |
| SSL throughput (Gbps) | 20 | 10 | 5 |
| Compression throughput (Gbps) | 6 | 5 | 4 |
| ICA Proxy concurrent users | Up to 14,000 | Up to 12,000 | Up to 10,000 |
| Concurrent TCP sessions | Up to 27.5M | Up to 27M | Up to 26.5M |
| **Mechanical, environmental, and regulatory** | | | |
| Power supplies | 2 | | |
| Input voltage, frequency range | 100–240 VAC full range, 50–60 Hz | | |
| Optional DC power supply | No | | |
| Power supply | 450W | | |
| Typical, max power consumption | 250W, 282W | | |
| Weight (lb) | 37 | | |
| Height | 1U | | |
| Width | EIA 310-D for 19-inch racks | | |
| Depth | 61 cm; 24 in | | |
| Operating temperature | 0–45°C (32–113°F) | | |
| Allowed relative humidity | 5%–95%, Non-condensing | | |
| Safety certifications | IEC/EN/UL/CSA/AS/NZS 62368-1 and 60950-1 | | |
| Electromagnetic emissions certification & susceptibility standard | US (FCC (Part 15 Class A)), Canada (ICES-003), EU (CE (EN 55032/55035)), Australia/NZ (RCM), Japan (VCCI), Korea (KCC), Taiwan (BSMI), China (CCC), India (BIS), EAEU (EAC), Saudi Arabia (CITC), Brazil (Anatel), South Africa (ICASA), Mexico (NOM), Egypt (NTRA) | | |
| Regulatory compliance | RoHS, WEEE, REACH | | |
| NetScaler compliance regulatory model | 1U2P2A | | |

**Notes:**

1.  Published ethernet interfaces compliant per IEEE802.3-2002/2005/2008/2012.

2.  Performance varies depending on ciphers deployed. Contact your NetScaler sales representative for details.

3.  All 9100 series have 80plus platinum rating for power supply.

# Fixed Capacity section

| NetScaler models | SDX 16060 Premium edition | SDX 16030 Premium edition |
|---|---|---|
| **Attributes** | | |
| Memory | 256 GB | 256 GB |
| Ethernet ports[1] | 4 x 100G QSFP28 8 x 25GbE SFP28 | |
| Transceivers support | QSFP28: 50/100GbE QSFP28 SR4, AoC, DAC 40GbE QSFP+ SR4, LR4, BiDi, AoC, DAC 25/10GbE SFP28 SR (Adapter required) 10/1GbE SFP+: SR, LR (Adapter required) SFP28: 25/10GbE SFP28 SR, DAC 10/1GbE SFP+ SR, LR 10GbE DAC 1GBase-T | |
| RAID support | Yes | Yes |
| **Performance** | | |
| System throughput (Gbps) [L4/L7 throughput] | 60 | 30 |
| L4/l7 HTTP request/second | 5,000,000 | 4,600,000 |
| SSL transactions/second (2k key certificates)[2] | 125,000 | 52,000 |
| EDCHE transactions/second | 54,000 | 22,000 |
| SSL throughput (Gbps) | 60 | 30 |
| Compression throughput (Gbps) | 26 | 22 |
| ICA Proxy concurrent users | 20,000 | 15,000 |
| Concurrent TCP sessions | Up to 51M / 101M | Up to 50M / 100M |
| Included instances (on SDX models) | 40 | 20 |
| **Mechanical, environmental, and regulatory** | | |
| Power supplies | 2 | |
| Input voltage, frequency range | 100–240 VAC full range 50–60 Hz 7.0–2.6A | |
| Optional DC power supply | Yes | |
| Power supply | 850W | |
| Typical, max power consumption | 465 W, 584 W | |
| Weight (lb) | 56 | |
| Height | 2U | |
| Width | EIA 310-D for 19-inch racks | |
| Depth | 71.1 cm (28 in) | |
| Operating temperature | 0–45°C (32–113°F) | |
| Allowed relative humidity | 5%–95%, Non-condensing | |
| Safety certifications | IEC/EN/UL/CSA/AS/NZS 62368-1 and 60950-1 | |
| Electromagnetic emissions certification & susceptibility standard | US (FCC (Part 15 Class A)), Canada (ICES-003), EU (CE (EN 55032/55035)), Australia/NZ (RCM), Japan (VCCI), Korea (KCC), Taiwan (BSMI), China (CCC), India (BIS), EAEU (EAC), Saudi Arabia (CITC), Brazil (Anatel), South Africa (ICASA), Mexico (NOM), Egypt (NTRA) | |
| Regulatory compliance | RoHS, WEEE, REACH | |
| NetScaler compliance regulatory model | 2U2P3A | |

**Notes:** It is not possible to convert a MPX 16000 to SDX 16000 once deployed.

1. Published ethernet interfaces compliant per IEEE802.3-2002/2005/2008/2012.

2. Performance varies depending on ciphers deployed. Contact your NetScaler sales representative for details.

3. All 16000 series have 80plus platinum rating for power supply.

# Fixed Capacity section

| NetScaler models | MPX 9130 FIPS Premium edition |
|---|---|
| **Attributes** | |
| Memory | 64 GB |
| Ethernet ports[1] | 8 x 25GbE SFP28 |
| Transceivers support | SFP28: 25/10GbE SFP28 SR, DAC 10/1GbE SFP+ SR, LR 10GbE DAC 1GBase |
| RAID support | No |
| **Performance** | |
| System throughput (Gbps) [L4/L7 throughput] | 30 |
| L4/l7 HTTP request/second | 1,800,000 |
| SSL transactions/second (2k key certificates)[2] | 35,000 |
| EDCHE transactions/second | 15,000 |
| SSL throughput (Gbps) | 30 |
| Compression throughput (Gbps) | 70 |
| ICA Proxy concurrent users | Up to 15,000 |
| Concurrent TCP sessions | Up to 28M |
| Included instances (on SDX models) | NA |
| **Mechanical, environmental, and regulatory** | |
| Power supplies | 2 |
| Input voltage, frequency range | 100–240 VAC full range, 50–60 Hz |
| Optional DC power supply | No |
| Power supply | 450W |
| Typical, max power consumption | 250W, 282W |
| Weight (lb) | 37 |
| Height | 1U |
| Width | EIA 310-D for 19 inch racks |
| Depth | 61 cm (24 in) |
| Operating temperature | 0–45°C (32-113°F) |
| Allowed relative humidity | 5%–95%, Non-condensing |
| Safety certifications | IEC/EN/UL/CSA/AS/NZS 62368-1 and 60950-1 |
| Electromagnetic emissions certification & susceptibility standard | US (FCC (Part 15 Class A)), Canada (ICES-003), EU (CE (EN 55032/55035)), Australia/NZ (RCM), Japan (VCCI), Korea (KCC), Taiwan (BSMI), China (CCC), India (BIS), EAEU (EAC), Saudi Arabia (CITC), Brazil (Anatel), South Africa (ICASA), Mexico (NOM), Egypt (NTRA) |
| Regulatory compliance | RoHS, WEEE, REACH |
| NetScaler compliance regulatory model | 1U2P2A |

**Notes:**

1. Published ethernet interfaces compliant per IEEE802.3-2002/2005/2008/2012.

2. Performance varies depending on ciphers deployed. Contact your NetScaler sales representative for details.

3. All 9100 series have 80plus platinum rating for power supply.

## Fixed Capacity section

| NetScaler models | VPX 1 Advanced | VPX 5 Premium | VPX 5 FIPS Premium |
|---|---|---|---|
| Attributes | | See page 5 | |

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