



# XenaScale

## Vulcan L4-7 Gigabit Stateful TCP Test Chassis



XenaScale is a scalable Gigabit TCP test chassis that offers extreme performance for stateful traffic load testing, analysis and characterizing of Ethernet equipment and network infrastructure. It supports 1/2.5/5/10/25/40GE L4-7 interfaces and can be used for simulating millions of real-world end-user environments to test and validate infrastructure, a single device, or an entire system.

XenaScale offers stateful end-to-end testing of network appliances such as switches, firewalls, routers, NAT routers, proxies, bandwidth shapers, and more. The platform is also suitable to characterize entire network infrastructure performance.

Developers of Ethernet-based network appliances can characterize their performance by measuring connection establishment and teardown rates, packet forwarding rate at large numbers of connections and identify performance bottlenecks. The platform is also ideal for rapid validation of performance or regression testing.

Developers of stateful network security devices such as next-generation firewalls (NGFW) can measure TLS handshake rate, TLS throughput, TCP CC/CPS, and HTTP CPS/TPS. Users can also replay their own PCAP files to the DUT for performance verification.

XenaConnect is included for ad-hoc test execution and remote management of test equipment located in multiple locations. XenaAppMix helps to test with real-world applications and protocols for highly scalable application emulation.

### Flexible Upgrade Path

XenaScale can be easily upgraded for greater performance thanks to Xena's flexible licensing model which lets you easily upgrade XenaScale by simply updating your license. This helps you protect your investment by spreading out capital expenditure across multiple quarters, and optimize your budget by purchasing additional performance when required.

### Features and Benefits

- Stateful TCP traffic load generation with extreme performance – 24 million TCP connections \*
- High throughput of TLS encrypted traffic
- Scalable performance via license upgrade
- Supports 1/2.5/5/10/25/40GE optical or copper Ethernet interfaces for L4-7
- Configuration and tuning of Ethernet, IP and TCP header fields for advanced traffic scenarios
- Extensive live stats and test reports
- Wire-speed traffic capture with up to 4 million packets capacity
- Switched and routed network topologies, TCP proxy and NAT support
- Free traffic generation and analysis software included (XenaConnect)
- Scalable application emulation for performance testing with real-world protocols, applications, and traffic mixes from XenaAppMix

### Extreme Performance:

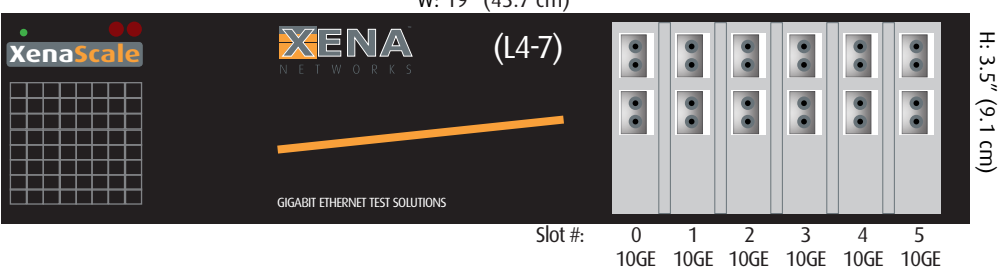
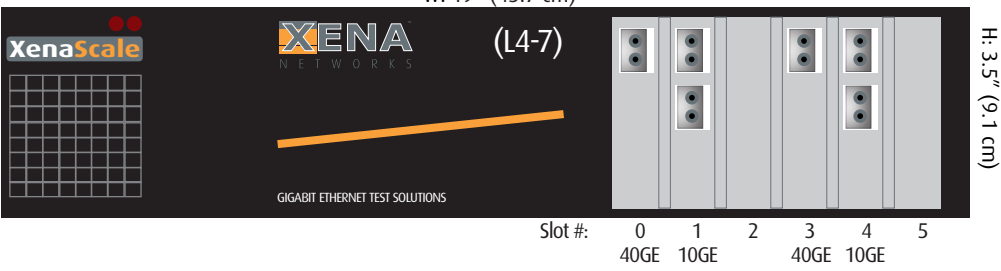
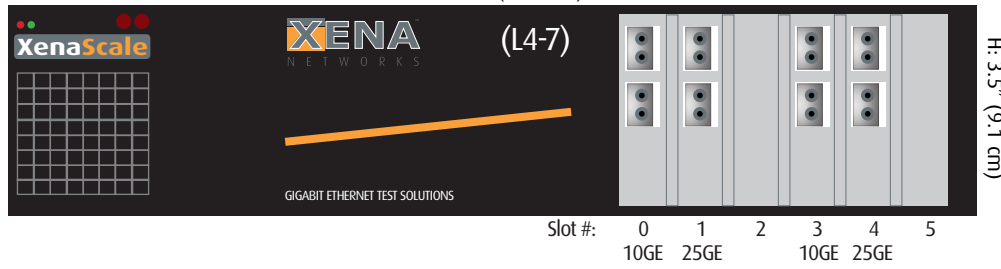
- 24 million Concurrent Connections (CC)\*
- 6 million Connections Per Second (CPS)\*\*
- 1.2 million Concurrent TLS Sessions, 14,000 TLS Sessions Per Second
- 6 million HTTP Connections Per Second, 7 million HTTP Transactions Per Second (TPS)\*\*\*
- Capture capacity: 40 million x 128 bytes buffers / 4 million full-size buffers

\* 24M TCP Clients and 24M TCP Servers on one XenaScale

\*\* Measured at 1M CC per 10G port

\*\*\* Measured at 10 transactions per connection



PRODUCT NUMBER	DESCRIPTION
<p>XS-24PE-10G-1S-12P</p>	<p style="text-align: center;">W: 19" (43.7 cm)</p>  <p style="text-align: center;">Slot #: 0 1 2 3 4 5 10GE 10GE 10GE 10GE 10GE 10GE</p> <p><b>XenaScale 6-slot chassis (non-modular), unit controller, AC power, excl. tvcrs</b></p> <ul style="list-style-type: none"> <li>• Slot 0: L4-7 Test Ports 2 x SFP+, 2 x 2-speed 10GBASE-SR/LR/DAC or 2 x RJ45 10GBASE-T* (requires 2 x XS-10G-2S license)</li> <li>• Slot 1: L4-7 Test Ports 2 x SFP+, 2 x 2-speed 10GBASE-SR/LR/DAC or 2 x RJ45 10GBASE-T* (requires 2 x XS-10G-2S license)</li> <li>• Slot 2: L4-7 Test Ports 2 x SFP+, 2 x 2-speed 10GBASE-SR/LR/DAC or 2 x RJ45 10GBASE-T* (requires 2 x XS-10G-2S license)</li> <li>• Slot 3: L4-7 Test Ports 2 x SFP+, 2 x 2-speed 10GBASE-SR/LR/DAC or 2 x RJ45 10GBASE-T* (requires 2 x XS-10G-2S license)</li> <li>• Slot 4: L4-7 Test Ports 2 x SFP+, 2 x 2-speed 10GBASE-SR/LR/DAC or 2 x RJ45 10GBASE-T* (requires 2 x XS-10G-2S license)</li> <li>• Slot 5: L4-7 Test Ports 2 x SFP+, 2 x 2-speed 10GBASE-SR/LR/DAC or 2 x RJ45 10GBASE-T* (requires 2 x XS-10G-2S license)</li> </ul>
<p>XS-24PE-40G-2S-6P</p>	<p style="text-align: center;">W: 19" (43.7 cm)</p>  <p style="text-align: center;">Slot #: 0 1 2 3 4 5 40GE 10GE 40GE 10GE 10GE 10GE</p> <p><b>XenaScale 6-slot chassis (non-modular), unit controller, AC power, excl. tvcrs</b></p> <ul style="list-style-type: none"> <li>• XenaScale 6-slot chassis (non-modular), unit controller, AC power, excl. tvcrs</li> <li>• Slot 0: L4-7 Test Port 1 x QSFP+, 1 x 1-speed 40GBASE-SR4/LR4/DAC (requires 1 x XS-40G-1S license)</li> <li>• Slot 1: L4-7 Test Ports 2 x SFP+, 2 x 2-speed 10GBASE-SR/LR/DAC or 2 x RJ45 10GBASE-T* (requires 2 x XS-10G-2S license)</li> <li>• Slot 2: N/A</li> <li>• Slot 3: L4-7 Test Port 1 x QSFP+, 1 x 1-speed 40GBASE-SR4/LR4/DAC (requires 1 x XS-40G-1S license)</li> <li>• Slot 4: L4-7 Test Ports 2 x SFP+, 2 x 2-speed 10GBASE-SR/LR/DAC or 2 x RJ45 10GBASE-T* (requires 2 x XS-10G-2S license)</li> <li>• Slot 5: N/A</li> </ul>
<p>XS-28PE-25G-2S-8P</p>	<p style="text-align: center;">W: 19" (43.7 cm)</p>  <p style="text-align: center;">Slot #: 0 1 2 3 4 5 10GE 25GE 10GE 25GE 25GE 25GE</p> <p><b>XenaScale 6-slot chassis (non-modular), unit controller, AC power, excl. tvcrs</b></p> <ul style="list-style-type: none"> <li>• Slot 0: L4-7 Test Ports 2 x SFP+, 2 x 2-speed 10GBASE-SR/LR/DAC or 2 x 4-speed RJ45 10GBASE-T* (requires 2 x XS-10G-2S or XS-10G-4S license)</li> <li>• Slot 1: L4-7 Test Ports 2 x SFP28, 2 x 3-speed 25GBASE-SR/LR/DAC (requires 2 x XS-25G-3S license)</li> <li>• Slot 2: N/A</li> <li>• Slot 3: L4-7 Test Ports 2 x SFP+, 2 x 2-speed 10GBASE-SR/LR/DAC or 2 x 4-speed RJ45 10GBASE-T* (requires 2 x XS-10G-2S or XS-10G-4S license)</li> <li>• Slot 4: L4-7 Test Ports 2 x SFP28, 2 x 3-speed 25GBASE-SR/LR/DAC (requires 2 x XS-25G-3S license)</li> <li>• Slot 5: N/A</li> </ul>

**PORT LICENSES** (Required to enable port)

XS-10G-2S	License to enable 1 x 2-speed L4-7 Test Port, 1GE/10GE
XS-10G-4S	License to enable 1 x 4-speed L4-7 Test Port, 1GE/2.5GE/5GE/10GE
XS-40G-1S	License to enable 1 x 1-speed L4-7 Test Port, 40GE
XS-25G-3S	License to enable 1 x 3-speed L4-7 Test Port, 1GE/10GE/25GE

**PACKET ENGINE LICENSE** (Required to enable packet engine performance)

XS-PE	License to enable 1 Packet Engine on XenaScale chassis. Offers 1M cc, and 0.3M cps@1M cc (**)
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**SUPPORTED TRANSCEIVERS**

<ul style="list-style-type: none"> <li>• E10GSFPSR</li> <li>• E10GSFPLR</li> <li>• E40GQSFP28</li> <li>• E25GSFP28SR</li> </ul>	<ul style="list-style-type: none"> <li>• Intel® Ethernet SFP+ SR Optic (1000BASE-SX 1G Ethernet &amp; 10GBASE-SR 10G Ethernet)</li> <li>• Intel® Ethernet SFP+ LR Optic (1000BASE-LX 1G Ethernet &amp; 10GBASE-LR 10G Ethernet)</li> <li>• Intel® Ethernet QSFP+ (40GBASE-SR4 - 4x10GbE and 1x40GbE)</li> <li>• Intel® Ethernet SFP28 SR Optic (10G/25GBASE-SR)</li> </ul>
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