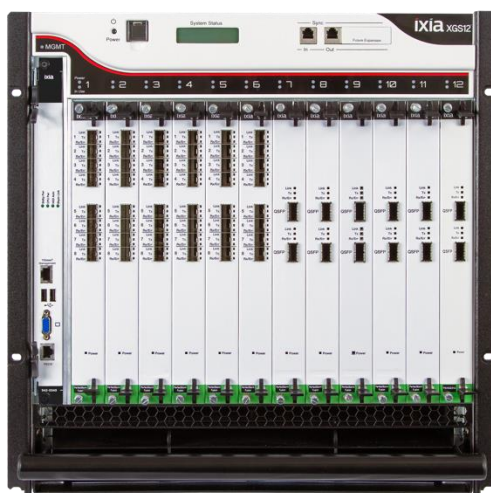


# XGS12 Chassis Platform

## Flexible, High-Density 12-Slot Chassis

Keysight's XGS12 12-slot modular chassis platform delivers the most comprehensive solution for performance, functional, security, and conformance testing of network equipment and network applications at scale. Operating in conjunction with Keysight's industry-leading IxNetwork, IxLoad, and BreakingPoint<sup>®</sup> test applications and automation APIs, this platform provides the power and performance necessary for massive-scale Layer 2-7 testing.



XGS12-HSL 12-Slot, 11RU Rackmount Chassis

All XGS12 chassis platform models—XGS12-SD, XGS12-SDL, and XGS12-HSL—have a front-to-back airflow system to ensure that Keysight's highest-density load modules operate efficiently. A true modular design maximizes serviceability as each major system component is self-contained and field-replaceable with the fan, power supply, and processor components designed to be readily installed and removed. Keysight load modules are hot-swappable, allowing for a highly-flexible testing environment. This chassis family supports XM, PerfectStorm, and CloudStorm load modules, providing a seamless integration with existing Keysight test systems.

## Highlights

- Reduces space requirements and simplifies management with high port densities—400/100/50/40/25/10/1GE/ 100M—in 11RU vertical rack space
- Enables resource aggregation across load modules by using high-speed backplane
- Offers multi-user environment that leverages a per-port user ownership model for all test module ports
- Reduces management overhead and simplified upgrades with integrated IxOS™ operating system for chassis and load modules
- Enables simple and quick field service with field-replaceable Modular Controller, Fan, and Power Supply Modules
- Remote chassis management via browser (on XGS12-HSL and XGS12-SDL models)
- Supports the K400 load module
- Supports the complete line of Novus load modules
- Supports Window 10 and IxOS Native modes

## Key Features

- **Windows 10 Support:** The new XGS2-SD 940-0017 and XGS12-SD 940-0018 both support Windows 10, enabling software and security updates from Microsoft
- **Unified platform for L2-7 testing:** a unified solution for executing a wide array of data, routing, and bridging protocol emulation; and signaling, voice, video, and application testing from layers 2-7
- **Extensive interface support:** higher speed Ethernet 400GE, 100GE, 50GE, 40GE, 25GE, 10GE, and 10/100/1000 Mbps copper Ethernet
- **Hot-swap capability:** load modules can be actively swapped in and out of the test bed without disrupting ongoing test that is using the installed modules
- **High performance:** high-speed backplane supports high bandwidth requirements of large-scale application tests
- **Highly serviceable with modular components:**
  - Processor Module is a self-contained, field replaceable unit for management and control of load modules, port configurations, and statistics.
  - Fan Module is a self-contained, field replaceable unit for temperature control
  - Power Supply Module is a self-contained, field replaceable unit with three power supplies
- **Highly-expandable:** STAR and Metronome Chassis Synchronization available for the XGS12 with these other Keysight chassis: XGS2-SD, XGS2-SDL, XGS2-HSL, XGS12-SD, XGS12-SDL, XGS12-HSL, AresONE and Novus ONE PLUS
- **Precision timing:** Reference time synchronization with Metronome Timing System and GPS antenna

# Specifications

Features	Details
<b>Slots</b>	12 slots compatible with Keysight XM Form Factor (XMFF) load modules <sup>ii</sup>
<b>Size</b>	<ul style="list-style-type: none"> <li>• 19.0 in. Width x 19.21 in. Height x 27.2 in. Depth</li> <li>• 48.26 cm. Width x 48.79 cm. Height x 69.09 cm. Depth</li> <li>• 11 rackmount units (11RU)</li> </ul>
<b>Chassis Modules and Weights</b>	<p><b>Chassis Frame:</b> 97 lbs. (44.1 kg) average shipping weight (with filler panels)</p> <p><b>Chassis Fan Module:</b> 17.3 lbs. (7.86 kg) average shipping weight</p> <p><b>Chassis Power Supply Module:</b> 35.1 lbs. (15.95 kg) average shipping weight</p> <p><b>XGS12-HSL Chassis Processor Module:</b> 15.8 lbs. (7.17 kg) average shipping weight</p> <p><b>XGS12-SD/SDL Chassis Processor Module:</b> 6.4 lbs. (2.9 kg) average shipping weight</p>
<b>Chassis Power Requirements<sup>iii</sup></b>	<p>Three, single-phase, 200-240VAC 50/60Hz power sources rated at 20 Amperes each, are required to supply the chassis.</p> <p>Maximum power consumption per line cord and power supply:</p> <ul style="list-style-type: none"> <li>• 12 Amperes at 200VAC operation</li> <li>• 10 Amperes at 240VAC operation</li> </ul>
<b>Power Cords</b>	<p>Three power cords are required to operate the XGS12 chassis power supplies for normal operating conditions.</p> <p>Power Cord shipments: Keysight provides three power cords that are configured and rated to meet the specifications of the target country where the chassis will be installed</p>
<b>Power Supply Module</b>	<ul style="list-style-type: none"> <li>• Field-replaceable power supply module that is easily installed and removed</li> <li>• There are three 2825W power supplies in the Power Supply Module</li> <li>• Each power supply may be removed or replaced separately</li> </ul>
<b>Operating System</b>	<ul style="list-style-type: none"> <li>• XGS12-SD 940-0018 Windows 10 Professional, 64-bit version</li> <li>• XGS12-SDL 940-0015 Native IxOS</li> <li>• XGS12-HSL940-0016 Native IxOS</li> </ul>
<b>Chassis Controller Module</b>	<ul style="list-style-type: none"> <li>• Field-replaceable</li> <li>• USB ports for connecting accessories</li> </ul>
<b>Timing Sources</b>	<ul style="list-style-type: none"> <li>• Internal chassis clock for STAR Synchronization or external Metronome synchronization</li> </ul>
<b>Chassis Timing Connections</b>	<ul style="list-style-type: none"> <li>• Sync In: single Sync In jack with a 4-pin RJ11</li> <li>• Sync Out: four Sync Out jacks, each with a 4-pin RJ11</li> </ul>
<b>Connectors per Processor Module</b>	<ul style="list-style-type: none"> <li>• Monitor HD-DB15 Super VGA</li> <li>• One RJ-45 1000Base-T management port</li> <li>• One RJ-45 RS232 serial port</li> <li>• Two USB dual type A, 4-pin jack connectors</li> <li>• Four SFP+ sockets for future use (for XGS12-HSL only)</li> </ul>

Features	Details
<b>Switches, LEDs, and LCD Display</b>	<ul style="list-style-type: none"> <li>• Front panel switches, On/Off momentary power push button</li> <li>• 2x16 character LCD on front panel indicating chassis status information</li> <li>• 2 paired LEDs above each slot position indicating power, and respective ownership and activity status</li> <li>• LEDs on Processor Module indicating power, HDD activity, and Ethernet activity on each port</li> </ul>
<b>Safety</b>	UL 60950-1, 2nd Edition, 2014-10-14 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements) EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011 + A2:2013 IEC 60950-1:2005 (Second Edition); Am1:2009 + Am2:2013
<b>EMC Emissions</b>	EN 55032:2012/AC:2013, Class A, CFR 47, FCC Part 15B, Canada: ICES-003: Issue 6:2016, AS/NZ CISPR 32:2015 Class A
<b>EMC Immunity</b>	EN 55024:2010, EN 61000-3-2:201, EN 61000-3-3:2013, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-11.
<b>Environmental</b>	The RoHS Directive 2011/65/EU, 2006/1907/EC (REACH)
<b>Temperature (Ambient Air)<sup>iv</sup></b>	Operating: 41° F to 104° F (5° C to 40° C) Storage: 41° F to 122° F (5° C to 50° C)
<b>Humidity (Ambient Air)</b>	Operating: 0 % to 85 %, non-condensing Storage: 0 % to 85 %, non-condensing
<b>Fan Module</b>	Field-replaceable chassis fan assembly that is easily installed and removed
<b>Noise</b>	<p>The chassis running at maximum fan speed capacity may produce noise levels up to 87 dB(A). This is measured per the GR-63-CORE, Issue 1, and paragraph 5.6.3 specification. The use of appropriate ear protection is recommended to protect against hearing impairment. Consult local health and safety regulations for recommended maximum exposure levels for noise and ear protection devices.</p> <p>Note: Fan speed is variable and adjusted based on present load and temperatures within the chassis.</p>

# Targeted Users

- Engineering and quality assurance (QA) groups developing and testing Higher Speed Ethernet 400GE/100GE/50GE/40GE/25GE, and high-density 10GE/5GE/2.5GE/1GE/100M products
- Engineering and QA groups developing and testing high-performance Layer 2-7 devices
- Manufacturing groups executing production-quality and repetitive testing
- Customer support departments troubleshooting customer issues
- Internet service providers (ISPs), carriers, and enterprises executing product qualification/acceptance testing or pre-deployment hot-staging of network equipment
- Certification and interoperability labs providing third-party equipment test and validation

# Application Support

The XGS12 chassis models support the following Keysight test applications:

- **IxLoad:** for performance testing of content-aware devices (for example, load balancers, web servers, video servers) running protocols such as HTTP, FTP, SMTP, SIP, and MPEG2 video
- **IxExplorer:** for granular, highly-flexible data-plane testing and analysis (Note: CloudStorm and PerfectStorm Load Modules do not support IxExplorer)
- **IxNetwork:** for scalability and performance testing of routing, switching, security, and broadband access infrastructure solutions
- **BreakingPoint:** (On XGS12-HSL chassis with CloudStorm and PerfectStorm Fusion load modules) for global visibility into emerging threats and applications, along with advance insight into the resiliency of an organization's IT infrastructure under operationally-relevant conditions and malicious attacks

# Product Ordering Information

## 940-0018

**IXIA XGS12-SD**, 12-SLOT STANDARD PERFORMANCE CHASSIS BUNDLE: This chassis bundle includes: Chassis frame assembly, Standard performance controller module with Windows 10, Fan assembly module, power supply modules, and Standard Star Topology Sync module. Includes installation of the latest production released version of the IxOS software

## 940-0015

**IXIA XGS12-SDL**, 12-Slot Standard Performance Chassis BUNDLE. This chassis bundle includes: Rack mountable chassis frame assembly with Standard Star Topology Sync, Standard Performance Controller Module running Native IxOS operating system, Fan assembly module, 6000W power supply module. Includes installation of the latest production released version of the IxOS software

## 940-0016

**IXIA XGS12-HSL**, 12-SLOT High Performance Chassis BUNDLE. The chassis bundle includes: Rack mountable chassis frame assembly with Standard Star Topology Sync, High Performance Controller Module running Native IxOS operating system, Fan assembly module, 6000W power supply module. Includes installation of the latest production released version of the IxOS software

## TAA Product Ordering Information

### 940-0018-T

**IXIA TAA Compliant, XGS12-SD**, 12-SLOT STANDARD PERFORMANCE CHASSIS BUNDLE: This chassis bundle includes: Chassis frame assembly, Standard performance controller module with Windows 10, Fan assembly module, 3 power supply modules, and Standard Star Topology Sync module. Includes installation of the latest production released version of the IxOS software

### 940-0015-T

**IXIA TAA Compliant, XGS12-SDL**, 12-Slot Standard Performance Chassis BUNDLE. This chassis bundle includes: Rack mountable chassis frame assembly with Standard Star Topology Sync, Standard Performance Controller Module running Native IxOS operating system, Fan assembly module, 6000W power supply module. Includes installation of the latest production released version of the IxOS software

### 940-0016-T

**IXIA TAA Compliant, XGS12-HSL**, 12-SLOT High Performance Chassis BUNDLE. The chassis bundle includes: Rack mountable chassis frame assembly with Standard Star Topology Sync, High Performance Controller Module running Native IxOS operating system, Fan assembly module, 6000W power supply module. Includes installation of the latest production released version of the IxOS software

## Upgrade Ordering Information

### 943-0014

**IXIA IXOS AND WINDOWS 10 FIELD UPGRADE** for XGS products XGS2-SD 940-0010, XGS12-SD 940-0011 and XGS2-SD 940-0110. Includes Windows Certificate of Authenticity sticker and USB drive containing IxOS software and Windows 10 software. The XGS Chassis to be upgraded must have valid support contract and REQUIRES internet access to perform the upgrade

<sup>i</sup>BreakingPoint is supported on the XGS12-HSL chassis only with CloudStorm and PerfectStorm Fusion load modules.

<sup>ii</sup>For a complete list of all Keysight load modules supported by the XGS12 chassis models, refer to the [Product Compatibility Matrix](#) (product support login required).

<sup>iii</sup>All three power cords must be plugged into their single phase 200-240VAC, 50Hz/60Hz power sources at the same time for correct operation of the chassis. The North American power cord has a NEMA L6-20P plug that goes to the power source and an IEC-60320-C19 receptacle that plugs into the XGS12 chassis. The power cord is rated to 16 Amperes. The plug and receptacle are rated for 20 Amperes. The XGS12 chassis are UL certified when using the 200-240VAC power cords supplied with the chassis. For international shipments power cords are provided for the target country and are included with the purchase of the chassis.

<sup>iv</sup>Some high-density/high-performance load modules may require a lower ambient air operating temperature. If this is the case, the operating temperature will be lowered for the chassis to what is specified in the load module datasheet.

Keysight enables innovators to push the boundaries of engineering by quickly solving design, emulation, and test challenges to create the best product experiences. Start your innovation journey at [www.keysight.com](http://www.keysight.com).



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