XGS12 Chassis Platform

Release 9.39

Assembly Guide

Safety Information

Do not proceed beyond a hazard notice until the indicated conditions are fully understood and met.

A **CAUTION** notice denotes a hazardous situation that, if not avoided, could result in minor or moderate injury.

A **WARNING** notice denotes a hazardous situation that, if not avoided, could result in death or serious injury.

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Documentation conventions

The following documentation conventions are used in this guide:

Describing interactions with the UI

You can interact with products by using different input methods: keyboard, mouse, touch, and more. So in most parts of the user documentation, generic verbs have been used that work with any input method. In cases where input-neutral verbs do not work, mouse-specific verbs are used as the first choice, followed by touch-specific verbs as the second choice.

See the following table for examples on how you can interpret the different input methods.

Input-neutral	Mouse	Touch
Select **Modify**.	Click **Modify**.	Tap **Modify**.
Select **Accounts** > **Other accounts** > **Add an account**.	Click **Accounts** > **Other accounts** > **Add an account**.	Tap **Accounts** > **Other accounts** > **Add an account**.
To open the document in Outline view, select **View** > **Outline**.	To open the document in Outline view, click **View** > **Outline**.	To open the document in Outline view, tap **View** > **Outline**.
Select **Protocols**.	Click the **Protocols** tab.	Tap **Protocols**.
-NA-	Double-click the **Client** wizard.	Double-tap the **Client** wizard.
Open the **Packages** context menu.	Right-click **Packages** to open the shortcut menu.	Long tap **Packages** to open the shortcut menu.

Deprecated words

The following words have been replaced with new words, considering the audience profile, our modern approach to voice and style, and our emphasis to use input-neutral terms that support all input methods.

Old usage...	New usage...
shortcut menu, right-click menu	context menu
click, right-click	select
drag and drop	drag

Table of Contents

About this guide

This section explains the notational and typographical conventions used in this documentation, and provides a list of related documentation.

Section contents:

Note icons and messages

The following table describes the note icons and messages used in this document.

Name	Icon	Description
Note		Indicates information that emphasizes or supplements important points in the main text.
Important		Indicates information that is essential to the completion of a task.
Tip		Provides supplemental suggestions for applying techniques and procedures to accomplish a task.

Typographical conventions

The following table describes the typographical conventions used in this document.

Convention	Description
bold text	Bold text indicates: • Graphical user interface element names (such as dialog boxes, buttons, menu selections, and so forth). • Command line interface commands and options. • The name of a field, option, or parameter when used as part of an instruction. For example: "Select the desired **Inner Priority** value."
Italic text	Italic text indicates: • A text reference to the name of a field, option, or parameter.

Convention	Description
	• Document and book titles. • The first reference to a new term. • Special identification or emphasis in a statement.
`monospace text`	Text shown in a monospace font is used to indicate: • Text that you input. For example: Enter `cd project1` • Code samples, including keywords and variables within text and as separate paragraphs, and user-defined program elements within text. • Text file content or examples, such as lines of text from an .ini file.

Textual conventions

The following table describes the typographical conventions used in this document.

Convention	Description
Boolean text	Words that represent Boolean notation are written in all uppercase text. For example: 1010 OR 1100.
Keystrokes	Simultaneous keystrokes are shown by joining the key names with a plus sign (+). For example, CTRL+Q.
> (right angle bracket)	Separates levels in a hierarchy of menu selections. For example: "Select **Administration** > **Users**."

Introduction

This document describes how to install the XGS12 chassis and its various modules.

The XGS12 Chassis is the next generation high performance platform capable of supporting all XM form factor load modules, including full chassis configurations of the Xcellon load modules. It is a 12-slot chassis with high speed backplane (160 Gbps between each adjacent two cards) designed for aggregation across load modules.

XGS12 supports both IxLoad and BreakingPoint software applications. The chassis architecture supports easy setup and management of high scale, multi user system. It has a pluggable system controller for chassis management. Additional applications and load modules will be supported in future software releases.

CHAPTER 2
XGS12 Chassis Modules

The modules that make up the chassis are as follows:

- Chassis Frame Module
- Chassis Fan Module
- Chassis Power Supply Module
- Chassis Processor Module

The Processor Module is plugged into the front of the chassis, in slot 0. The power supplies and fans are accessible from the rear of the chassis. Each of the modular components is capable of being removed in the field and replaced with minimum downtime.

XGS12 Chassis Back View

FAN MODULE
Install Fan Module by pushing rubber grommets over the metal standoffs on the Chassis. Secure using the 4 screws provided.

REAR COVER
Install after installing Power Supply Module. Ensure its thumbscrews have been tightened using a screwdriver. Cover MUST be in place to apply power to the Chassis.

Pull Power Clamp handles all the way out (towards the rear) before installing Power Supply Module. Push handles back in, locking the busbars in place, after installing Power Supply Module.

Secure thumbscrew after inserting Power Supply Module.

POWER SUPPLY MODULE

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Install XGS12 Chassis

The following sections describe the installation procedure:

XGS12 Chassis Installation Precautions

The following precautions should be followed while installing the XGS12 chassis:

- A two person lift is recommended when installing the chassis into the rack.
- Ensure that each person is properly grounded during installation of either the chassis (onto the rack) or load modules (into the chassis) to prevent an ESD event.
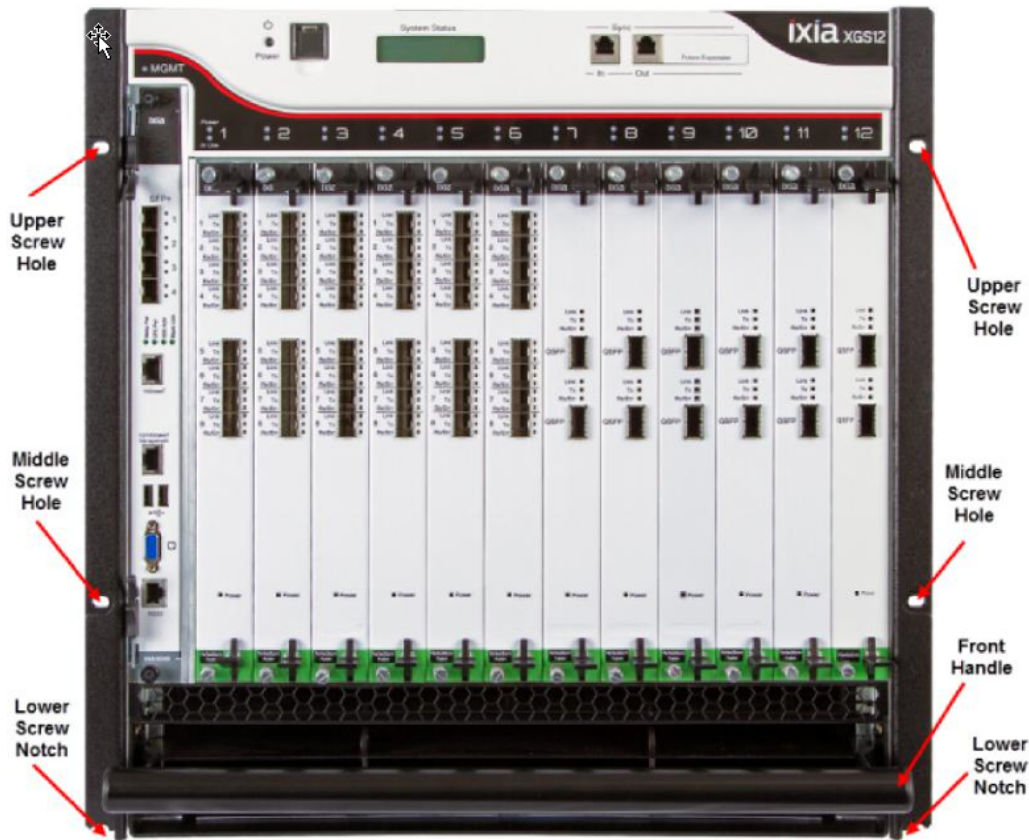- Install the chassis in the rack before installing the power supply module, fan module and load modules, thereby reducing the weight of the chassis.
- Use the two lower bolts meant for securing the chassis to a rack, to hold the chassis frame in place while securing all of the other bolts.
- Secure the chassis to rack face with all six bolts. Fully depress power supply clamps when installing power supply module.
- Secure the power supply module thumb bolt when installing power supply module.
- Install the rear power supply cover before applying AC power. After removing or installing this cover, ensure that the thumbscrews are tightened down with a 'Flat Blade' screwdriver. Exercise caution when tightening to prevent cross threading of the screws to the chassis.
- Ensure that the rack where the XG(S)12 Chassis is installed provides 200-240 VAC.
- Do not use AC power other than 200-240 VAC. The chassis is designed to be operated using all three 200-240 VAC power supplies.
- Do not use the chassis without installing the Fan module.
- Do not use the chassis without installing the Processor module.
- Do not leave unused slots open. Use the filler panels to cover the un-used slots.
- Do not block the front air intake.
- A minimum air flow clearance of 12 inches is required. 24 inches of air flow clearance is preferred at the rear of the chassis.
- Remove all external plastic protective film prior to chassis operation.

- Operator intervention may be required to power cycle the XGS12 chassis or restart a software program in the event the XGS12 chassis operation is upset or stopped by electrostatic discharge.

XGS12 Rack Screw Mount Locations

Unpack and Mount the Chassis

1. Cut tape and open the carton.
2. Remove accessories box, top foam inserts, and side packing inserts.
3. Lift chassis out of the carton.
4. Remove power supply cover and keep it aside.
5. Remove the plastic wrapping.
6. Insert the lowermost screws on the rack.
7. Slide the chassis into the rack so that the lower screw notches of the chassis rests on the screws on the rack.
8. Insert the other screws and secure the chassis to the rack by tightening the screws.
9. Remove any and all plastic protective film from the chassis external surfaces.

XGS12 Mounted on Rack

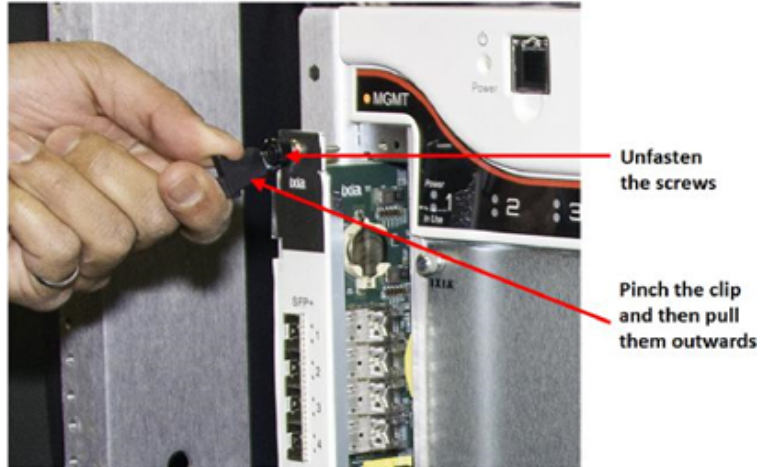| ⚠	**WARNING**:The weight of the chassis components are as follows: • Empty chassis with air baffles = 70 lbs • Empty chassis without air baffles = 48 lbs • 3 power cords = 6 lbs • Power supply assembly = 29 lbs • Fan Assembly = 10 lbs • CPU card = 10 lbs Do not attempt to lift the fully assembled chassis.

Note:
- The chassis windows wallpaper is not displayed. So the credentials are required to log on.
- The chassis is CE marked and ULTM certified when using the 200-240 VAC power cords supplied with the chassis. However, these certifications for the chassis safety approvals are only valid when the unit is operating from all three 200-240 VAC main power supplies.
- Refer to the Ixia Platform Reference Guide at: https://support.ixiacom.com/user-guide/ixos for more details.

Remove and Insert Processor Module

To remove the processor module:

1. Unfasten the screws.
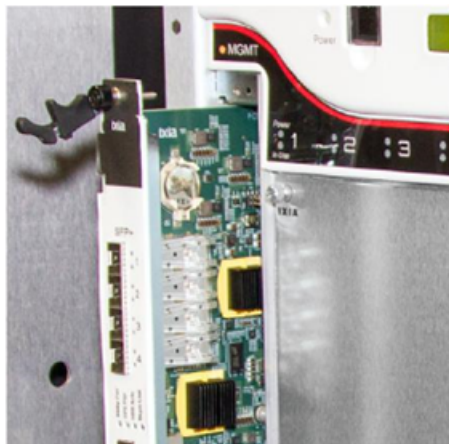2. Pinch the clips and then pull outwards.

Removing processor module

To insert the processor module:

1. Slide the module into the slot.
2. Pinch on the clips and push them in.
3. Fasten the screws.

Inserting processor module

Remove and Insert Power Supply Module

The power supply module is accessible after removing the rear cover. For details see the XGS12 Chassis Back View image.

To remove the rear cover, unfasten the four screws around the cover and pull out the cover.
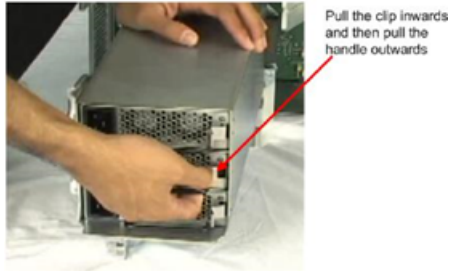
To remove the power supply module:

1. Loosen the thumbscrew in the upper left corner of the power supply module.

2. Pull the power clamp handles.

3. Hold the two handles provided on the power supply module and pull them.

To remove the individual power supplies:

1. Hold the handle on the power supply

2. Pull the clip inwards and then pull the handle out.

Individual Power Supply Removal

To insert the individual power supplies, slide the power supply in until you hear the clicking sound of the clip.
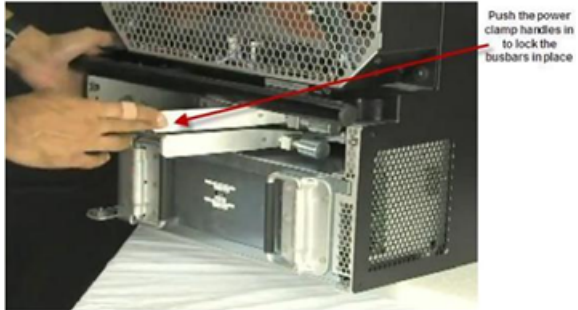
To insert the power supply module:

1. Place the power supply module on the bottom chassis rails as shown in the image below.

2. Push the power supply module inwards.

3. Push the power clamp handles in to lock the busbars in place.

4. Tighten the thumbscrew at the upper left corner of the power supply module.

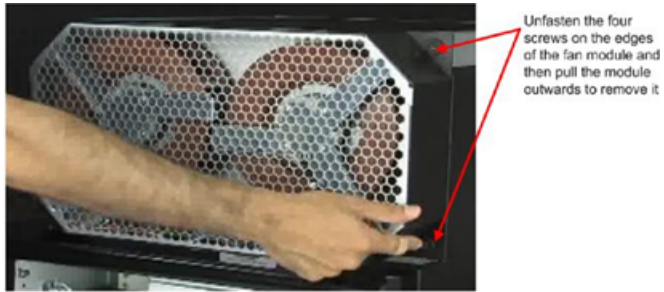5. Replace the rear cover and fasten it with the screws.

Remove and Insert Fan Module

The fan module is located on the rear side of the chassis. For details see the XGS12 Chassis Back View image.

To remove the fan module:

1. Unfasten the four screws that are present on the edges of the fan module.

2. Pull the module outwards.

Unfasten the four screws on the edges of the fan module and then pull the module outwards to remove it

To install the fan module:

1. Push the rubber grommets over the metal standoff on the chassis.
2. Fasten the four screws tightly.

CHAPTER 4

Log on to XGS12 Chassis

The Username for an XGS12 (Windows 7 and Windows 10) remote desktop session is ixia and the password is the CPU module serial number found on the sticker located in front of the CPU module.

| NOTE | The chassis windows wallpaper is not displayed. So the credentials are required to log on. |

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CHAPTER 5

XGS12-SD Configuration

This section describes the tasks needed to configure the XGS12-SD chassis.

In this section:

Connecting the XGS12-SD Processor module

This section describes the process of connecting the XGS12-SD Processor module. To connect the module you need to do the following:

1. Insert and remove the Processor Module.
2. Connect the RJ45 management port (4) as the designated management port to your lab management switch.
3. Connect the VGA (2) and USB (3) ports to the KVM infrastructure (or to a local monitor, mouse, and keyboard).

Initial Configuration XGS12-SD

To perform initial system configuration for the XGS12-SD chassis, do the following:

1. Connect the monitor, USB mouse and keyboard, and then start the chassis.

2. When the chassis boots up, log on to the chassis.
   The user name is **ixia** and the password is the CPU module serial number found on the sticker located at the back of the chassis.
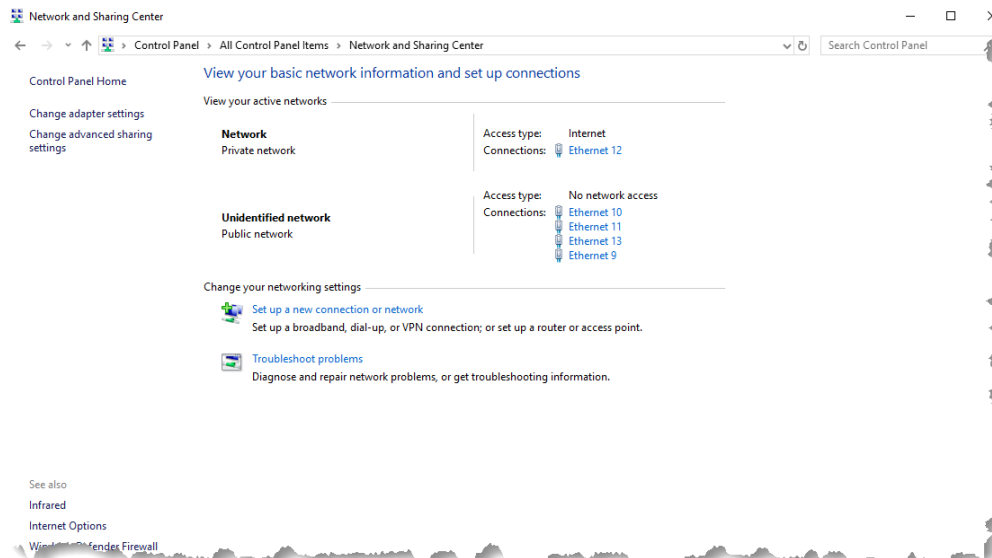
3. Once you log on to the chassis, change the IP address.

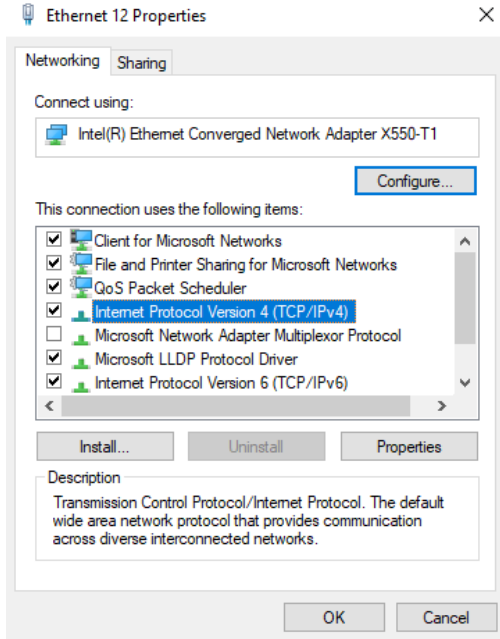 | NOTE | 10.0.x.x/16 is the default internal port address. This can be changed from IxExplorer Chassis Properties. |
   |------|------|

Change IP Address

To change the IP address, do the following:

1. On the Start menu, select **Control Panel**.

2. Select **Network and Internet** and then select **Network and Sharing Center**. The **View your basic network information and set up connections** window appears.
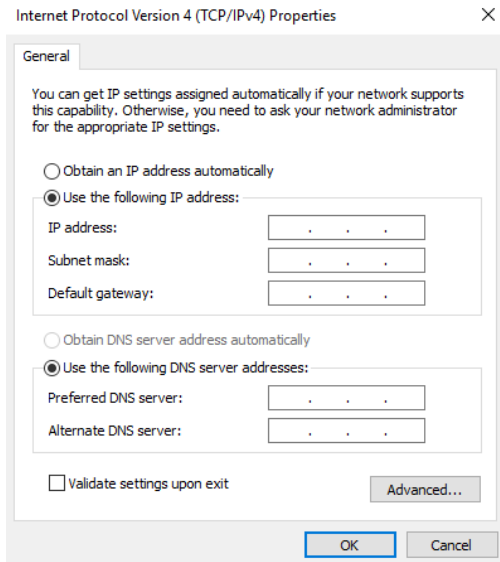

3. Under **View your active networks**, select the local area connection under **Access type: Internet**. The **Status** window appears.

4. Select **Properties**. Select **Internet Protocol Version 4 (TCP/IPv4)**.

5. Select **Properties** and then select the **Use the following IP address** option.

6. Enter the IP address, subnet mask and default gateway.

CHAPTER 6
Ixia Test Applications Support

This section provides the details of the Ixia Test Applications supported by XGS12 chassis platform.
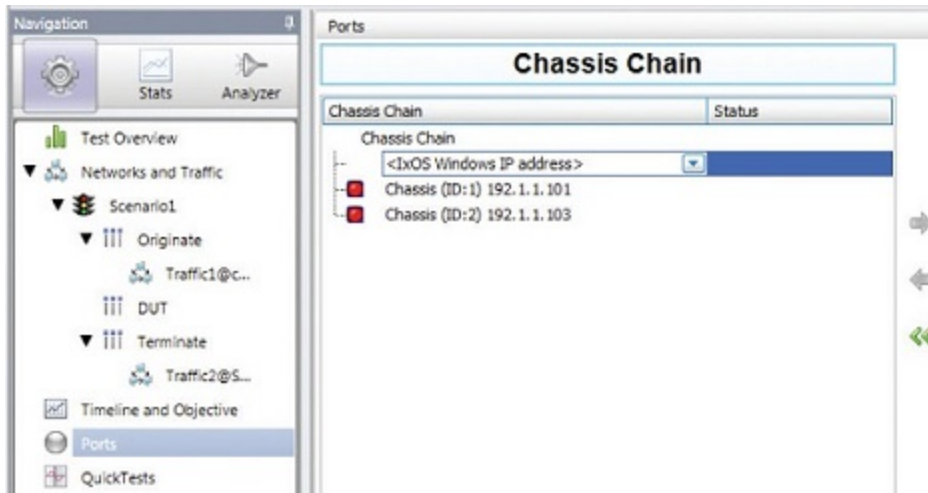
In this section:

Ixia Applications support for XGS12-SD

This section provides the details of the Ixia Test Applications supported by XGS12-SD chassis.

IxLoad

When running the IxLoad client application to add your new XGS12-SD chassis in the Chassis Chain pane, the IxOS Windows machine IP address should be used:

IxNetwork

To start IxNetwork and assign ports from an :XGS12-SD chassis, do the following:

1. Log on to an application server or workstation that has the IxNetwork application installed.

2. Start IxNetwork.

3. Select XGS12 ports for configuration in the IxNetwork test:
   - Select Ports in the navigation pane.
   - Select the Add Chassis icon (in the Port Tools ribbon). Enter the XGS12 host name or IP address.

4. Assign ports from the XGS12 system to the current IxNetwork test scenario.

| | NOTE | It is recommended that you periodically check the Ixia compatibility matrix (https://support.ixiacom.com/support-overview/product-support/product-compatibility-matrix) to determine the correct Ixia software application versions that are validated for interoperability. |

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Common Administrative Tasks

This topic describes, for reference, some of the common tasks that system administrators will perform on the XGS12 system.

In this section:

Start a Windows Remote Desktop Connection

To start a Remote Desktop Connection session to the XGS12 system:

1. If you do not know the IxOS IP address, ping the unit's host name.

   The host name appears on the label on the back of the unit.

   The ping command will return the IxOS IP address.

2. From the management workstation, start a **Remote Desktop Connection** session with the chassis, using the IP address that was returned by the ping command.

   In the Windows Security window, provide the following credentials:

   - User name: ixia

   - Password: the last part of the host name. For example, if the host name is xxxx-X1234567, the password will be X1234567.

   After you select OK, Remote Desktop Connection establishes the connection and displays the chassis desktop.

CHAPTER 8
Troubleshooting

This section provides guidance for interpreting the operational status of your XGS12 unit, and troubleshooting issues that may arise.

If you need assistance, contact Ixia Technical Support using the contact information provided in Contact Us.

In this section:

LED Indicators

The XGS12 chassis provides LED indicators that provide a visual presentation of the operational status of the device and its individual ports.

LED/LCD Display

The XGS12-SD chassis has front panel LEDs for each load module slot. The following table describes the purpose and meaning of each indicator:

Label	Color	Description
Power	Green	When the Power LED is flashing, the board is being detected or initialized. The Power LED is illuminated when the board is powered.
In Use	Amber	The Active LED is illuminated when you have taken ownership of the load module. If you run traffic from IxExplorer, without taking port ownership, the In Use light is not illuminated.

CPU Slot LED Definitions

The specifications of LEDs for the Processor module and the LEDs above the Processor module slot are shown in the following table:

	LED	Color	Description
On the chassis front face	CPU card Slot LED	Yellow	The backplane is initializing
		Green	The backplane has initialized
Processor module - front panel	Stdby Pwr LED	Green	5V Stand-by power is available
	CPU Pwr LED	Green	CPU Card power is available
	HDD Act LED		
	Bkpln Link LED	Green	PCIe link to backplane is up
Processor module - Ethernet LEDs for each port	Link LED	Green	Port has link.

	LED	Color	Description
			NOTE Link and Activity LEDs are included for all Ethernet ports.
	Act LED		Flashes when port has activity.

IP Addressing Issues

The XGS12-SD chassis model requires the following management IP addresses:

- the IxOS address

If your network implements a DHCP service, the XGS12 IP addresses will automatically be assigned by that service, unless you choose to assign static IP addresses instead. When assigning static IP addresses, you must observe the following requirements:

- The two management IP addresses must be in the same subnet.
- The two IP addresses needed for management cannot be on the following subnets:
    - 10.1.1.x/24 - internal virtual network
    - 10.1.2.x/24 - internal virtual network
    - 10.0.x.x/16 - default internal port address. This can be changed from IxExplorer Chassis Properties.

Failure to observe these requirements will result in connectivity failures.

Troubleshooting Licensing Issues

Following is a list of licensing issues that can result in operational problems:

- Licensing: An IxOS license is required to run both BreakingPoint and IxLoad.
- License invalidation: Time discrepancies between the network and theXGS12 system will invalidate the installed licenses. To avoid this, configure the XGS12 to use NTP (or manage the time setting manually, if NTP is not an available to you).

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