Ixia iBypass 100GB

Problem: Inline Tools are a Single Point of Failure in the Network

Today's organizations are facing a triad of network concerns: the increasing volume of multiprotocol traffic at higher data rates, mounting security threats, and a strict regulatory environment. Deploying inline tools to inspect and control network traffic can help block incoming threats, but inline tools also complicate network operations—the more tools you deploy, the more potential points of failure. And in the event an inline tool becomes unavailable, it can completely bring down the network link, significantly compromising network uptime and disrupting business continuity.

Solution: Increase Network Uptime with a High-Density Bypass Platform

Get fail-safe inline protection for all network monitoring tools with Ixia's iBypass 100G. You'll improve overall network reliability, increase application availability, and add the convenience and cost savings of remote monitoring and control—all important requirements for any enterprise deployment.

iBypass 100G provides built-in tap and bypass functions and the following capabilities:

- **Smart Management** – The iBypass 100G is a fully managed device and allows the user to view and change settings through a CLI, user- friendly Web UI, and SNMP browsers.

- **Security** – CLI/SSH, HTTPS and SNMP V3 and V2/V1.

- **Customizable and Pre-programmed Heartbeats** – Each bypass switch enables users to create and customize heartbeats in the Web Interface.

Highlights

- **Modular design** – supports both SR4 and LR4 fibers.

- **QSFP28 Tool Ports** – for maximum flexibility

- **Reduce setup times** with configurable Heartbeats in the Web UI

- **Increase reliability** by adding fail-safe inline protection to critical network links

- **Remote management** through SSH, Web Interface (HTTPS) and SNMP Browsers

- **Field upgradable software** and firmware

- **View size and time** of the peak traffic

- **View status** for power, link, activity, and activity status

- **High availability configurations possible** – through Active-Standby support across two modules.

- **Bi-directional** Heartbeats

- **Minimize traffic interruption** with Link Fault Detect (LFD)

- **Real time traffic graphs (20 min interval)**

- **Error Switching** – Bypass can switch if CRC errors detected in traffic flows.

- **Save on maintenance costs** with field replaceable power supplies

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- **Modular Construction** – iBypass 100G consists of a Chassis and two bays. Each bay can be filled with a bypass module. Bypass modules protect a single security tool. Modules are available for either Single Mode (LR4) or Multi Mode (SR4) fibers and have QSFP28 receptacles.
- **Active-Standby Support** – IBypass 100Gs configured with two bypass modules can be configured to operate in Active-Standby mode. In this mode one security tool is Active, and the other is Standby. Failure of the Active tool casues the traffic to be switched to the secondary Standby tool. This gives the ability to construct High Availability security architectures.

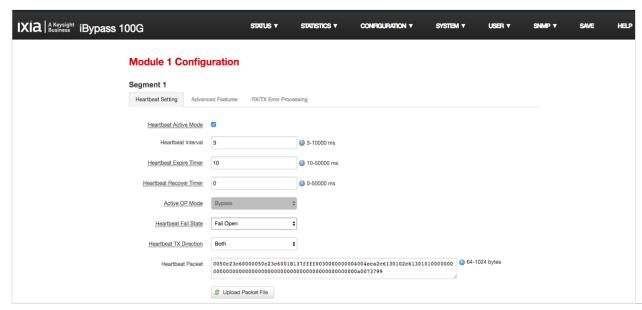## Automatic Protection and Recovery

The iBypass 100G switch continuously checks the responsiveness of the inline tool by sending it "heartbeat" packets, expecting to receive those packets back. If the iBypass 100G detects that the tool is not responding, it will bypass the inline tool, allowing network traffic to flow without interruption. Should that happen, the iBypass 100G will also issue an alert to indicate that the tool became unavailable, allowing network or security personnel to take appropriate actions.

The iBypass 100G will continue to send heartbeat packets to the inline tool even after the tool stops responding. As soon as the tool becomes operational again, the iBypass 100G will re-route traffic back through the tool to ensure that the tool is continuing to monitor and/or protect the network.

Smart Management

The iBypass 100G is a fully managed device and allows the user to view and change settings through a Command Line Interface, a user- friendly Web UI, and SNMP browsers. Remote management security is provided through Role Based User Access, 1024-bit SSL encryption, HTTPS, SNMP, SSH, and an IP Access List to prevent unwanted access to management interfaces. In the event there are system, link, power, or threshold changes the iBypass 100G issues SNMP traps, that are directed to the desired management devices, set in any of the interfaces.

The iBypass 100G comes with different LED indicators for power, link, bypass status, and activity status. The LCD provides peak and real time network utilization information for both of the network ports enhancing local, on-site, device monitoring options.

Flexible Deployments

Having an iBypass 100G deployed in front of inline tools provides greater deployment flexibility. When the inline tool needs to be taken out for maintenance the iBypass100G can be configured to bypass the inline tool and let network traffic flow uninterrupted. Once maintenance is complete, the iBypass100G can route traffic back through the upgraded tool.

Specifications

Specifications	
Operating	Operating: • Operating Temperature: 0°C to 40°C (32°F to 104°F) • Relative Humidity: 0% min, 90% max, non-condensing Non-Operating: • Non-Operating Storage Temperature: -20°C to 65°C (-4°F to 149°F) • Relative Humidity: 0% min, 90% max, non-condensing
Mechanical	Chassis Dimensions: • 1.732" high x 23.07" deep x 17.12" wide • 44mm high x 586mm deep x 435mm wide • Weight: 22.1 lbs (10 kg) plus 2.64 lbs (1.2kg) per module
Connectors	• Monitoring Ports: 2 per module (1 tool segment) QSFP28 • Network Ports: 2 per module (1 network segment) – either SR4 MTP or LR4 LC

Specifications	

Power Supply	• AC Power Input: 90-240VAC
	• DC Power Input: -48V nominal (-75 to -36)V
	• Two redundant power supplies
	• Power Dissipation:
	   ◦ Chassis Only – 240W
	   ◦ Chassis plus one module – 405W
	   ◦ Chassis plus two modules – 552W

Certifications	• Safety: UL • Emissions and Immunity: FCC, EN, ICES-003 Class B • Environmental: RoHS
Reliability	• MTBF = 184,000 Hrs Chassis • MTBF = 499,000 Hrs per Module
Management	• Web GUI – TLS1.2 only • CLI/SSH • SNMP – V1, V2 or V3 • AAA TACACS or RADIUS+ • NTP and time zone definition • Remote Syslog

Ordering Information

IBP100G-CH-AC IXIA iBypass 100G Switch 1U Chassis with AC Power (956-0094)

IBP100G-CH-DC IXIA iBypass 100G Switch 1U Chassis with 48V DC Power (956-0095)

MIBP100G-LR4 IXIA Intelligent QSFP28 (LR4) Module for iBypass 100G (992-1005)

MIBP100G-SR4 IXIA Intelligent QSFP28 (SR4) Module for iBypass 100G (992-1004)

Accessories

IBP100G-FAN-ASSY IXIA Spare fan assembly for iBypass 100G (956-2002)

IBP100G-ACPS IXIA Spare AC power module for use with iBypass 100G (956-2000)

IBP100G-DCPS IXIA Spare DC power module for use with iBypass 100G (956-2001)

Compatible Transceivers

Part Number	Description
QSFP28-SR4-XCVR	IXIA QSFP28 100GBASE-SR4 optical transceiver. MMF 850nm
QSFP28-LR4-XCVR	IXIA QSFP28 100GBASE-LR4 optical transceiver, SMF 1310nm

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