iBypass Duo

Ultimate Inline Security Infrastructure

Problem: Inline Security 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 security and monitoring 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. This significantly compromises the network, reduces network uptime and disrupts business continuity.

Solution: Increase Network Uptime With a High-Density, Flexible Bypass Switch

Get fail-safe inline protection for all network security and monitoring tools with Ixia's latest Bypass switch: iBypass DUO. 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 DUO, is unique as it is the first bypass switch on the market with two management interfaces (two ports). This is critical to being able to rapidly add and remove security tools from inline deployments, without disrupting the network. This greatly reduces the risk that a single failure on your network will prevent activation of the bypass switch when you really need it; you can use the 2nd interface to access the switch if there is a freeze or critical issue

Highlights

- Only bypass switch on the market with two management interfaces – allows connectivity to the device when you really need it.

- Active – Standby modes allow you to configure the bypass switch to rapidly switch security infrastructure in the event of hardware failure

- Unique technology allows the end user to choose whether the device fails to wire (fail open) or blocks all traffic (fail closed) in the event of a power outage.

- Independent external bypass switch that can be deployed with a wide range of security devices and packet brokers – maximizes your ROI.

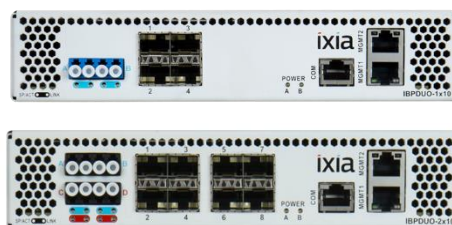- Does not have the architectural weaknesses of inbuilt bypass switches

Figure 1: iBypass DUO Front

Figure 2: iBypass DUO Back

Like Ixia's iBypass line of switches, iBypass DUO provides the built-in ability to tap data from a network, as well as replicate the data. This combined with the ability to operate both inline and out-of-band gives users the ultimate flexibility in ensuring the most network uptime. Security tools can be tested out-of-band from the same bypass, with mirrored data and validated before being brought inline.

Moreover, this capability makes Ixia's iBypass switches ideal to leverage in combination with the Vision Portfolio of network packet brokers. An external bypass, like the iBypass line, allows flexibility with regards to both inline and out-of-band deployments on a network. It guarantees the ability to optimize data to security and monitoring tools, ensuring that the packet broker or the bypass do not become bottlenecks or points of failure.

Lastly, the iBypass can fail open (allow all traffic through) or fail close (stop all traffic) in the case of tool failure, power outage and other scenarios. Allowing network operators to determine what is best in each situation. This again ensure better network uptime and greater security resilience. The iBypass DUO also comes with other market leading features that Ixia is known for.

Key Features

- **Preconfigured Heartbeats** — Preconfigured to work with security tools through a single click, reducing setup times and eliminating potential errors during deployment. Ixia is the only bypass switch vendor with preset, integrated security tool heartbeats built into the user interface.

- **High Density** — iBypass DUO is a high-density bypass switch supporting up to 2 network links and 4 security tools in a single device. Two iBypass DUO's can be mounted side by side to provide protection to 4 network links and up to 8 security devices. This maximizes valuable data center real estate, reducing rack cost for large-scale deployments.

- **Redundant or Serial Active Tool Support** — Manage multiple active or redundant security tools in a single device, which is critical for more resilient architectures and required by many organizations. Ixia is the only vendor supporting active-standby and active-active network/security architectures.

- **Easy-to-Use Web Interface** — The most powerful and simple user interface of any bypass switch. Drag-and-drop functionality coupled with intuitive presets, significantly reduces setup time and lowers ongoing support costs.

Centralized Management

The iBypass is integrated into the Ixia Fabric Controller Centralized Manager (IFCCM) [Ex. Indigo Pro] which is a highly versatile tool for managing and monitoring the multitude of Ixia devices from a single screen. The easy-to- use graphical user interface makes configuring and upgrading multiple iBypass switches simple.
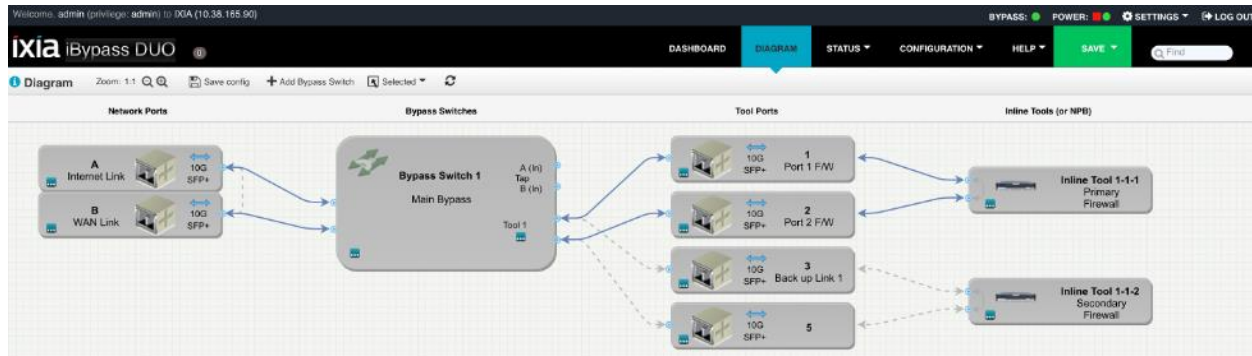

Figure 3 iBypass DUO Active-Standby Deployment with easy to use web-interface

Specifications

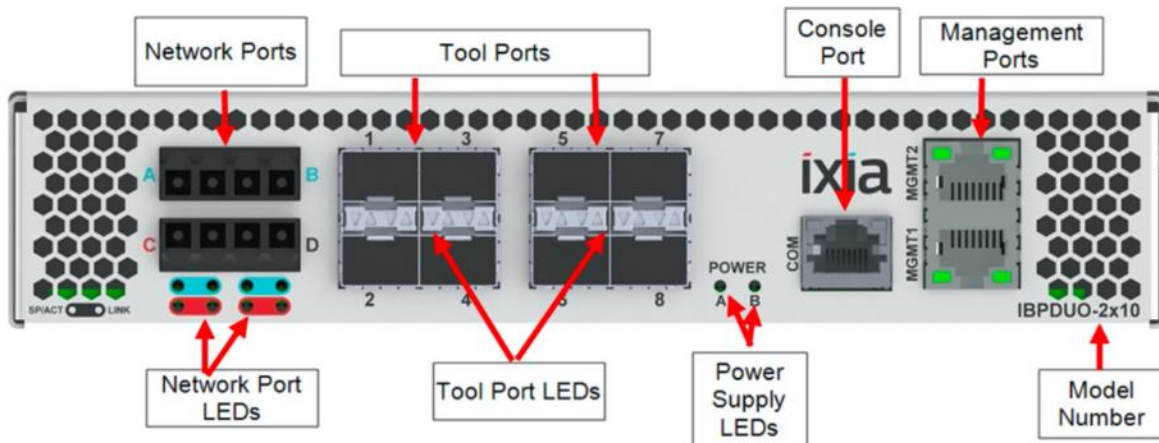| Highlights	Management
• 1U inline Bypass Appliance – 1G or 10G • Inline or out-of-band deployment • Full line-rate across all ports • Fail-safe bypass or tap deployments • Multiple options – Both Single Mode and Multi Mode units are available. Also comes in two options – either 1 network link/2 Security devices or 2 network links/4 security devices • Redundant Power – In-built hot-swappable power supplies are field replaceable and redundant	• Two Remote management Ethernet interfaces x 2 – for ultimate redundancy • LED indicators on each unity for Link Activity, and Power Status • Software upgradeable via FTP, SFTP or SCP • SNMP – V2c and V3 • CLI – Full CLI support with SSH • Remote Syslog support • Extensive Drag and Drop GUI – TLS 1.2 Supported • Compatible with Ixia Fabric Controller Cebtralized Manager

Operating Specifications

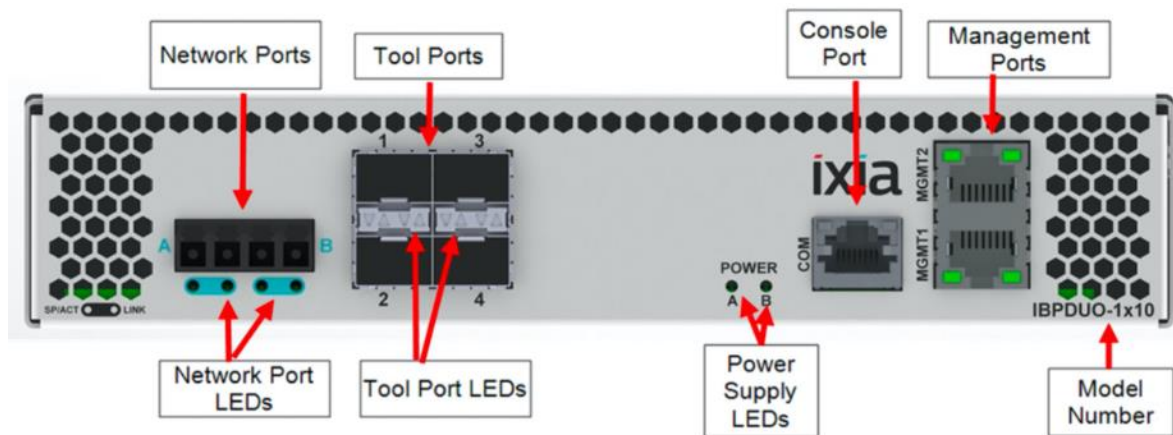| iBypass duo	
Operating Environment Temperature - Operating: 0°C to 40°C (32°F to 104°F) - Storage: -10°C to 70°C (14°F to 104°F) Humidity - Operating: 10% to 95%, (non-condensing) - MTBF: >99,000 Hrs	**Physical Size, Weight and Environmental** - 1U high x Approx 0.5U wide - Dimensions ex. ear brackets: 8.38" (22.3cm) W x 1.72" (4.4cm) H x 17.27"(43.9cm) D - Dimensions inc. ear brackets: 18.92" (48.1cm) W x 1.72" (4.4cm) H x 17.27"(43.9cm) D - Size of shipping box: 25" (64cm) W x 9.5" (24cm) H x 17"(44cm) D Unit Weight: - 1 network link models – 8.8 lbs (4.0 kg) - 2 network link models – 9.0 lbs (4.1 kg) - Each unit comes complete with mounting brackets. Can be used either independently or two units across a 19 inch unit using supplied mounting brackets.
Power - Dual AC power supplies - Operating input voltage: 100 to 200 VAC - AC Input: Nominal 100-240VAC, 1.0 A max @ 120V, 0.5A max @240V, 50/60Hz - AC input: Min 90V and Max 264 VAC, 47-63Hz. - Power dissipation for fully populated unit at 100% traffic load: maximum 50 W / 171 BTU/hour	**Bypass Switching** @ 10GE: - Power Off – Fail mode Open/Bypass state OFF < 15mSec - Power Off – Fail mode Open/Bypass state OFF < 3mSec - Power On – Fail mode Open/Bypass state ON < 15mSec - Power On – Fail mode Open/Bypass state ON < 3mSec

Certifications

Type	Countries/Specifications
Safety	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
Emissions	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, BSMI - Taiwan, KCC - Korea,
Immunity	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.
Environmental	The RoHS Directive 2011/65/EU, 2006/1907/EC (REACH)

Front Panel Layout

Two Network/Four Tool Segment Models:

One Network/Two Tool Segment Models:

Port Information

iBypass Duo Ports

Hardware Part Number	Number/Type of Network Ports	Number/Type of Tool Ports
IBPDUO-1X10-SR	2 x 50 micron LC Multi-Mode fiber/UPC	4 x SFP+/SFP cages
IBPDUO-2X10-SR	4 x 50 micron LC Multi-Mode fiber/UPC	8 x SFP+/SFP cages
IBPDUO-1X10-LR	2 x 8.5 micron LC Single Mode fiber/UPC	4 x SFP+/SFP cages
IBPDUO-2X10-LR	4 x 8.5 micron LC Single Mode fiber/UPC	8 x SFP+/SFP cages

Ordering Information

iBypass Duo

Hardware Part Number	Description
IBPDUO-1X10-SR	Ixia iBypass Duo, 1x10G, SR, 50um (956-0185)
IBPDUO-2X10-SR	Ixia iBypass Duo, 2x10G, SR, 50um (956-0186)
IBPDUO-1X10-LR	Ixia iBypass Duo, 1x10G, LR, 8.5um (956-0187)
IBPDUO-2X10-LR	Ixia iBypass Duo, 2x10G, LR, 8.5um (956-0188)
DUO-PWRAC	Ixia (1) Spare AC P/S for iBypass Duo
DUO-10G-VHD-FAN ASSY	Ixia (1) Spare Fan Module for iBypass Duo and VHD Chassis (991-1010)

Supported Ixia Transceivers

Ixia Transceiver	Speed	Medium	Fiber Type
SFPKT-GCU	1G	Copper	N/A
SFPKT-LX	1G	Fiber	Single Mode
SFPKT-SX	1G	Fiber	Multi-Mode – 62.5 micron
SFPKT-50SX	1G	Fiber	Multi-Mode – 50 micron
SFP-PLUS-KT-LR	10G	Fiber	Single Mode
SFP-PLUS-KT-SR	10G	Fiber	Multi-Mode – 62.5 micron
SFP-PLUS-KT-50SR	10G	Fiber	Multi-Mode – 50 micron

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