DATA SHEET

Ixia Net Optics iTap Copper Port or SPAN Port Aggregator

Intelligent Tap Solution for Port or SPAN Port Aggregation

The Ixia Net Optics iTap™ Copper Port Aggregator makes network monitoring substantially simpler with its combination of a permanent, passive access point and remote monitoring of key traffic indicators. This tap increases your management options and speeds response to troubled links. When an iTap Port Aggregator indicates high utilization or CRC errors are occurring on a critical network link, you are given timely warning without relying on other time-consuming tools.

The iTap Port Aggregator displays the link utilization level in both directions in real time, with the size and time of the last peak easily visible on the front panel. The iTap Port Aggregator is accessible from remote interfaces, which provide information and control from anywhere in the network.

When you need to respond quickly to network events, the passive iTap Port Aggregator gives you information from the fail-open access point. For greater flexibility and response speed,iTap Port Aggregators integrate smoothly with Ixia's Net Optics SpyderSwitches™ to control the deployment of your analyzers from a single point without disturbing any network connection.

Key Benefits and Features

- Real-time traffic use levels
- Size and time of the greatest traffic peaks
- Counters for total packets, total bytes, CRC errors, collisions, and more
- Status for system, link, and power
- Browser-based Web Manager
- Management Information Base (MIB) for third-party SNMP tools
- SNMP tool, System Manager
- SNMP traps indicate status changes for system, link, power, and threshold
- Wireless option (IEEE 802.11b,11Kbps)
- Turn off Management and Monitor Ports
- Set utilization alarm threshold
- Reset statistics counters and peak data
- Turn off LCD information
- Operate in Half-duplex (Tap) mode
- Enforce accurate packet ordering
- Timestamp packet arrival times
- Uses only one monitoring device NIC
- At-a-glance monitoring from front panel
- Completely passive and device neutral
- Cables included
- Application diagram shows all connections

Best in Aggregation

The iTap Port Aggregator combines and regenerates both directions of a full-duplex stream, sending all aggregated traffic out one or two separate passive monitoring ports. Typically, full-duplex monitoring with a network tap requires two NICs (or a dual-channel NIC) – one interface for each side of the full-duplex link. Unlike any other port aggregator tap, the iTap Port Aggregator monitors utilization levels of both sides of the full-duplex link so this information is not lost. 512MB traffic buffers help ensure that your monitoring device does not miss traffic during bursts. The iTap Port Aggregator enables one or two devices to simultaneously monitor a full-duplex link using only one NIC per device.

After the traffic has been aggregated to a single flow, it is no longer possible to distinguish the utilization levels of each side of the bi-directional link. The iTap Port Aggregator tracks the utilization levels before aggregation, keeping this vital information easily accessible from its remote and command line interfaces.

With its visual display, remote interfaces, and well-buffered aggregation, iTap Port Aggregator creates an entirely new category of passive access devices.

iTap 10/100/1000 Span Port Aggregator

Monitoring individual Span Ports is made easy with the iTap 10/100/1000 (Triple- speed) Span Port Aggregator. By consolidating Span Ports into the aggregator, IT professionals gain valuable information and control from a centralized device.

The iTap Copper Port Aggregator combines and regenerates traffic from up to two Span Ports, sending all traffic to either one or two separate monitor ports.

iTap intelligence tracks individual Span Port statistics before it's aggregated, keeping this information easily accessible from either the remote or built-in interfaces. Threshold values can also be set for each port to trigger alarms. For example, IT can be alerted to utilization bursts that exceed 35% on the link for either port.

When the threshold value is exceeded, a record is viewable via the management interfaces and the front panel LED. The management interface tracks the level of the highest peak, date and time.

Benefits include improved information visibility, responsiveness and management efficiency. Network analysis devices connected to the monitor ports will also track layer 1 and 2 errors that Span Ports may drop due to overhead.

Buffers Absorb Bursts

When the traffic levels exceed the capacity of the receiving NIC, the iTap Port Aggregator stores the overflow traffic in buffer memory. For high-load links, the iTap Port Aggregator is available with 1GB of memory. The buffers clear automatically when the traffic volume falls below the receiving capacity of the NIC. These buffers allow the iTap Port Aggregator to absorb traffic bursts without dropping packets.

Up to 1GB Total Memory

Traffic Monitoring

The iTap Port Aggregator monitors the utilization levels of both sides of the full-duplex link. Knowing the utilization levels is critical in determining if packets could be dropped during high-load periods. This information is displayed on the front panel and is available from the remote interfaces. The iTap Port Aggregator allows you to set a threshold for each side of the full-duplex link at which an alarm is triggered. For example, the iTap Port Aggregator can warn you when the utilization in either direction passes the 30% level.

When a threshold level is exceeded, the alarm LED illuminates and the remote interfaces record the event. The iTap Port Aggregator records the level of the highest peak along with the date and time. Since the iTap Port Aggregator is monitoring the utilization levels, this information is always available regardless of the aggregation process. For precise timing analysis, replace the CRC bytes of each packet with an 8 nanosecond resolution timestamp.

Seeing is Believing

The display and alarm LEDs provide a quick visual check that the utilization levels are not exceeding the capacity of the monitoring device or a pre-determined threshold. From the display, you can view the current bandwidth utilization of each side of a full-duplex link with the size and time of the highest peak. A quick check of the display lets you know if there was an event that requires further investigation. After taking action on a utilization or peak event, you can reset the data from a recessed reset button on the front panel or from a remote interface. The iTap Port Aggregator is ready to detect and display the next critical event.

Current utilization is available at a glance

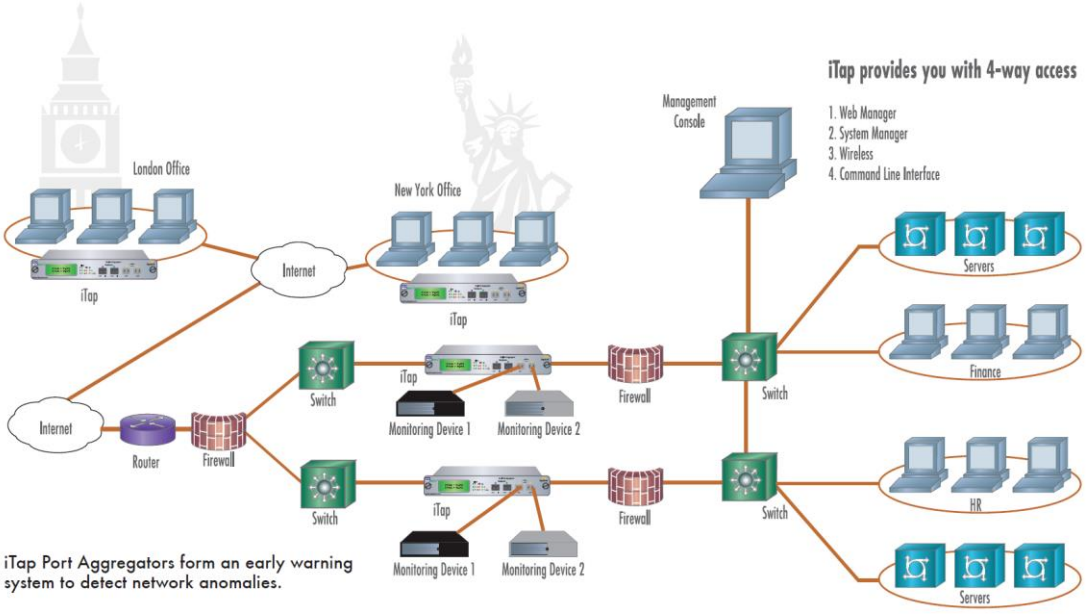
The greatest peaks are also displayed

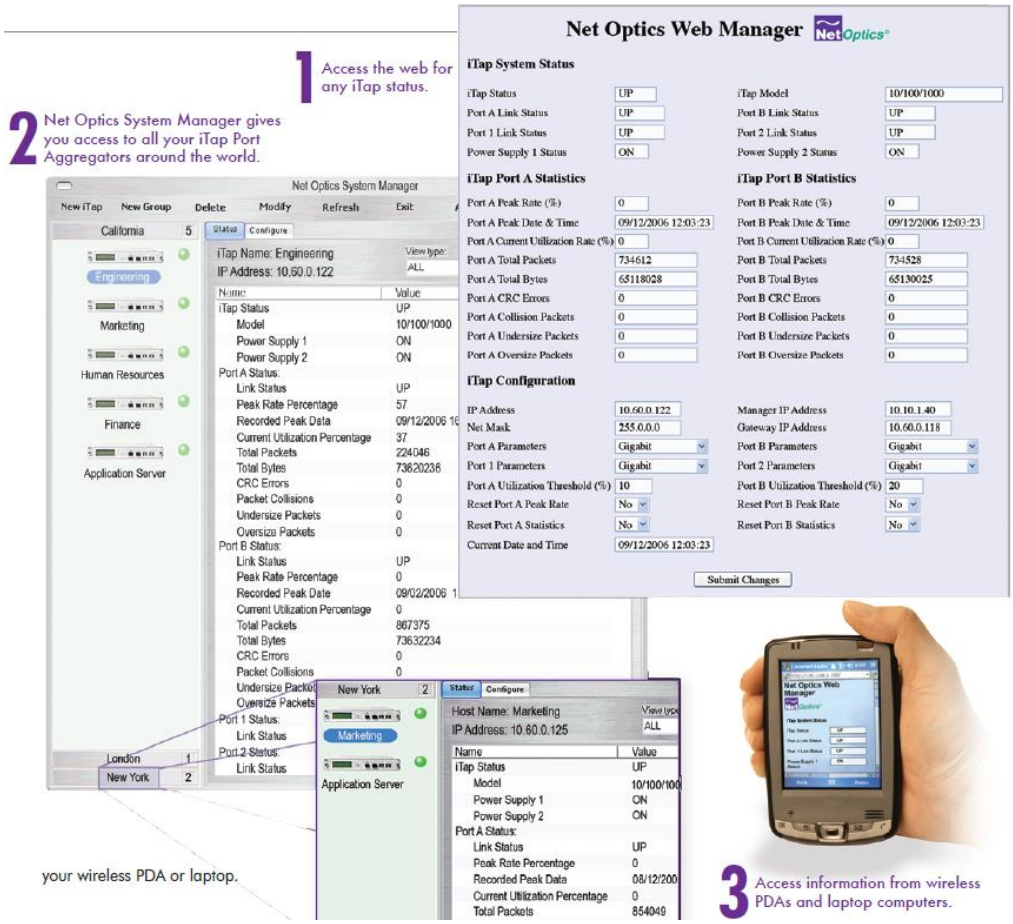
Flexible Display Options

You have the option of setting the iTap Port Aggregator so that it will not display data on the LCD and the Management Port will be disabled, thus preventing it from being accessed via the network. The Monitor Ports can also be turned off to prevent unauthorized access to the network link. The password-protected command line interface gives you complete access to all of iTap Port Aggregator's functionality via an RS232 port. Most importantly, you can use the CLI to disable the Management Port and prevent the front panel display from showing traffic information. The monitoring device connected to the iTap Port Aggregator sees all full-duplex traffic including Layer 1 and Layer 2 errors. Redundant power connections provide uptime protection.

Access Information Anywhere

The Web Manager and System Manager allow you to remotely set parameters, view status information, and monitor traffic statistical data. These interfaces provide security and performance information such as the number of over- and under-sized packets, packet collisions, and CRC errors. You can remotely set the alarm thresholds, clear the traffic data counters, and turn on or off a Monitor Port. This access is also available via an optional less link from iTap Port Aggregators form an early warning system to detect network anomalies.


iTap provides you with 4-way access
1. Web Manager
2. System Manager
3. Wireless
4. Command Line Interface
London Office
New York Office
Management Console
Internet
iTap
Servers
Finance
HR
Switch
Firewall
Router
Monitoring Device 1
Monitoring Device 2
iTap Port Aggregators form an early warning system to detect network anomalies.


1 Access the web for any iTap status.
2 Net Optics System Manager gives you access to all your iTap Port Aggregators around the world.
Net Optics Web Manager
iTap System Status
iTap Port A Statistics
iTap Port B Statistics
iTap Configuration
Submit Changes
Net Optics System Manager
your wireless PDA or laptop.
3 Access information from wireless PDAs and laptop computers.

Web Manager

The iTap Port Aggregator has built-in support for remote control and monitoring from any computer with an Internet browser. When you access an iTap Port Aggregator with Web Manager, all configurations, status, and traffic data are displayed on a single page. Changes to the configuration can be made with a few clicks of the mouse. Ensure that packets appear on the monitor ports in the same time sequence they arrived at the network ports by enabling the Port Ordering feature.

System Manager

The iTap Port Aggregator's System Manager is an SNMP tool that offers central management of all Ixia Net Optics iTap devices in the network. Distributed on strategic links, iTap Port Aggregator provides baseline information and early warning alarms to help you deploy your security and monitoring devices more effectively over more linksYou can organize iTaps into groups according to workgroup, location, or any other criteria. As with Web Manager, you can view all status, configuration, and traffic information and make changes quickly to any iTap in the system. The iTap Port Aggregator generates SNMP traps for system status, threshold alarm, link status, and power status. If you are already using an SNMP management tool, iTap Port Aggregators can be fully accessed after loading Net Optics Management Information Base (MIB) file. MIB and SNMP traps are completely compatible with popular SNMP tools such as OpenView and Tivoli®.

Remote Management

Both the Ixia Net Optics Web Manager and System Manager software interfaces allow IT managers to remotely view status information, set threshold values, and monitor traffic statistics from Ixia products. These software interfaces can display the number of over- and under-sized packets, packet collisions and peak rates. Alarms can be set and counters reset remotely. To eliminate the possibility of unauthorized personnel using the Span Port Aggregator to gain access to the network, the monitor ports can also be turned on and off. Wireless access is an optional capability for improved on- site access and provides the same level of manageability using laptops, or PDA devices.

Specifications

Specification	Port Aggregator	Span Port Aggregator
Copper		
Input:	100-240 VAC, 0.5A, 47-63Hz	
Output	12V, 3A	12V, 5A
Cable Type	22-24 AWG Unshielded, CAT5E	
Connectors	RJ45, 8-pin Connectors	
Electrical		
Power Supply	• Input: 100-240VAC, 0.5A, 47-63Hz • Output: 12V, 3A	• Input: 100-240VAC, 0.5A, 47-63Hz • Output: 12V, 5A
Memory		
1GB buffer		
Environmental		
Operating Temperature	0˚C to 40˚C	
Storage Temperature	-10˚C to 70˚C	
Relative Humidity	10% min, 95% max, non-condensing	
Mechanical		
Dimensions	1.125” high x 11” deep x 8.5” wide	
Indicators		
• (1) 2x16 LCD • (3) Link Status LEDs • (2) Threshold Alarm LEDs • (2) Power Status LEDS		

Specification	Port Aggregator	Span Port Aggregator
Software		
Command Line Interface (CLI)	Any terminal emulation software	
Ixia Net Optics Web Manager	Any browser	
Ixia Net Optics System Manager	Windows 98, Windows 2000, Windows XP	
Wireless Option		
Standard	Conforms to IEEE 802.11b, 11 Mbps	
Indoor Range (typical)	50 feet	
Outdoor Range	100 feet	
Available Base Models		
10/100/1000BaseT Copper		
Certifications		
Fully RoHS compliant		

Ordering Information

iTap™ Copper Port Aggregator

IPA- CU3

IPA- CU3-AR

iTap 10/100/1000 Span Port Aggregator

IPA-SCU3