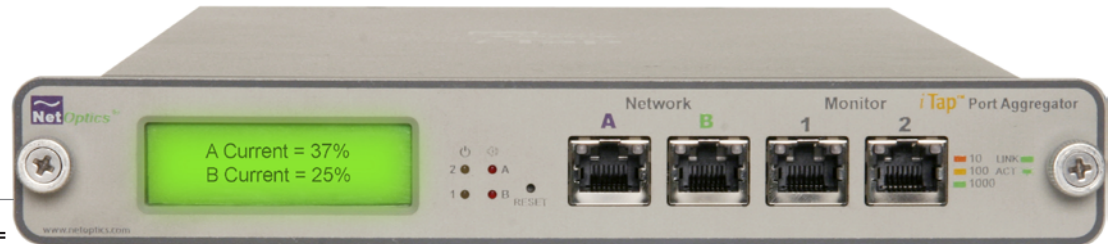


# The World's Only Intelligent Tap

## iTap 10/100/1000BaseT Port Aggregator



Aggregation + information =  
network monitoring flexibility

intelligent tap

### Access

- Real time traffic utilization 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

### Remote

- 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)

### Control

- 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

### Easy to Use

- 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

### Intelligent Tap™

The iTap Port Aggregator makes network monitoring easier. The powerful combination of a permanent, passive access point and remote monitoring of key traffic indicators 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, right on the front panel. The iTap Port Aggregator is accessible from remote interfaces that provide information and control from anywhere in the network. The iTap Port Aggregator gives you the information the passive and fail-open access point you need to respond quickly to network events.

For greater flexibility and response speed, use iTap Port Aggregators with Net Optics' SpyderSwitches and control the deployment of your analyzers from one point without disturbing a single network connection.

### 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. Net Optics' 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, Net Optics' iTap Port Aggregator creates an entirely new category of passive access devices.

## 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.



## 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.

## 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

A Current = 37%  
B Current = 25%

Current utilization is available at a glance

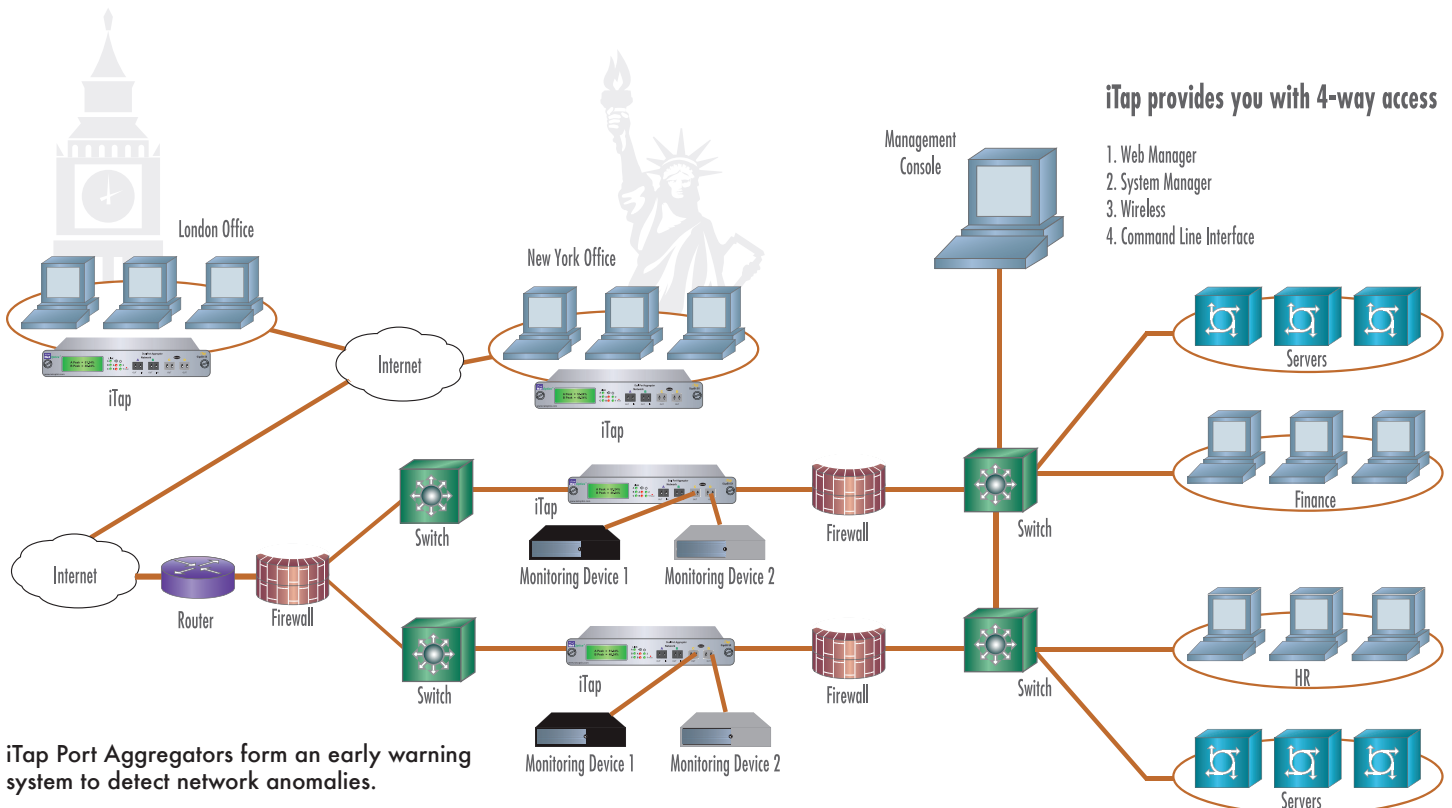
A Peak = 51%  
B Peak = 42%

The greatest peaks are also displayed

the next critical event.

## 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 wireless link from



## 2 Net Optics System Manager gives you access to all your iTap Port Aggregators around the world.

1 Access the web for any iTap status.

The screenshot shows the Net Optics System Manager interface. On the left, a sidebar lists groups: California (5), New York (2), London (1), and New York (2). The main area shows the configuration for the 'Marketing' iTap in New York. The configuration includes:

- Host Name: Marketing
- IP Address: 10.60.0.125
- Name: Marketing
- iTap Status: UP
- Model: 10/100/1000
- Power Supply 1: ON
- Power Supply 2: ON
- Port A Status:
  - Link Status: UP
  - Peak Rate Percentage: 0
  - Recorded Peak Data: 08/12/200
  - Current Utilization Percentage: 0
  - Total Packets: 854049
  - Total Bytes: 48936846

your wireless PDA or laptop.

### Web Manager

The iTap Port Aggregator has built-in support for remote control and monitoring from any computer with an Internet browser. Net Optics Web Manager is the browser-based interface that allows you to change settings, view status, and retrieve data remotely with simple-to-use controls. 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.

### System Manager

iTap Port Aggregators can be used as a

system managed via Simple Network Management Protocol (SNMP) from a single interface. Net Optics System Manager is an SNMP management tool that offers central management of all Net Optics iTap devices in the network. You 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

## Net Optics Web Manager

### iTap System Status

iTap Status	UP	iTap Model	10/100/1000
Port A Link Status	UP	Port B Link Status	UP
Port 1 Link Status	UP	Port 2 Link Status	UP
Power Supply 1 Status	ON	Power Supply 2 Status	ON

### iTap Port A Statistics

Port A Peak Rate (%)	0
Port A Peak Date & Time	09/12/2006 12:03:23
Port A Current Utilization Rate (%)	0
Port A Total Packets	734612
Port A Total Bytes	65118028
Port A CRC Errors	0
Port A Collision Packets	0
Port A Undersize Packets	0
Port A Oversize Packets	0

### iTap Port B Statistics

Port B Peak Rate (%)	0
Port B Peak Date & Time	09/12/2006 12:03:23
Port B Current Utilization Rate (%)	0
Port B Total Packets	734528
Port B Total Bytes	65130025
Port B CRC Errors	0
Port B Collision Packets	0
Port B Undersize Packets	0
Port B Oversize Packets	0

### iTap Configuration

IP Address	10.60.0.122	Manager IP Address	10.10.1.40
Net Mask	255.0.0.0	Gateway IP Address	10.60.0.118
Port A Parameters	Gigabit	Port B Parameters	Gigabit
Port 1 Parameters	Gigabit	Port 2 Parameters	Gigabit
Port A Utilization Threshold (%)	10	Port B Utilization Threshold (%)	20
Reset Port A Peak Rate	No	Reset Port B Peak Rate	No
Reset Port A Statistics	No	Reset Port B Statistics	No
Current Date and Time	09/12/2006 12:03:23		

Submit Changes



3 Access information from wireless PDAs and laptop computers.

tool, iTap Port Aggregators can be fully accessed after loading Net Optics Management Information Base (MIB) file.

### Security, Visibility, and Reliability

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 from the network. The Monitor Ports can also be turned off to prevent unauthorized access to the network link. 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.

## Features and Benefits

Front Panel Display and LEDs	Real-time utilization and peak traffic information displayed on the front panel saves you time and money spent using other tools to get basic information. Alarm LEDs indicate if traffic levels have exceeded a set threshold, allowing you to respond quickly to changing traffic conditions.
Net Optics Web Manager	Without any specialized software, you can access the traffic information monitored by any iTap Port Aggregator. All you need is a computer with a browser and access to the IP address of the iTap Port Aggregator. No matter where you are, you can control your iTap Port Aggregator and monitor traffic information.
Net Optics System Manager	Net Optics' SNMP management tool, System Manager, gives you single-point control and visibility into any link in the network with an iTap Port Aggregator anywhere in the world. Distributed on strategic links, iTap Port Aggregators provide baseline information and early warning alarms to help you deploy your security and monitoring devices more effectively over more links.
Command Line Interface	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.
Net Optics Management Information Base (MIB)	Use the iTap Port Aggregator with your current SNMP management tool. Net Optics' MIB and SNMP traps are completely compatible with popular SNMP tools such as OpenView and Tivoli®.
Aggregation	Net Optics' proven port aggregation technology allows you to monitor traffic using a single NIC on your monitoring device. 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.
Half-duplex (Tap) Mode	Use the iTap Port Aggregator as a conventional half-duplex network Tap to capture all traffic when aggregated utilization exceeds 100 percent of a monitor port's bandwidth.
Port Ordering	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.
Timestamping	For precise timing analysis, replace the CRC bytes of each packet with an 8 nanosecond resolution timestamp.
Cables Included	All cables required for installation are included. Follow the connection diagram on top of the iTap Port Aggregator and you are halfway done with the installation of your iTap Port Aggregator.

## Specifications

### Copper

**Input:** 100-240 VAC, 0.5A, 47-63Hz

**Output:** 12V, 3A

**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

### 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 LEDs

(2) Threshold Alarm LEDs

(2) Power LEDs

### Software

**Command Line Interface (CLI):** Any terminal emulation software

**Net Optics Web Manager:** Any browser

**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

### Part Number

IPA- CU3

IPA- CU3-AR

### Certifications

Fully RoHS compliant



*Customer First!*

5303 Betsy Ross Drive • Santa Clara, CA 95054  
+1 (408) 737-7777 • www.netoptics.com

Net Optics®, Intelligent Tap™, iTap™, and iTap into your Network® are trademarks of Net Optics, Inc.  
Copyright 2010 Net Optics, Inc. All rights reserved. Revised 03/09

OpenView is a registered trademark of the Hewlett-Packard Company. Tivoli is a registered trademark of the IBM Corporation.