

## OptiCop 10G Converger<sup>®</sup>: P-Series

### BENEFITS

- Load balancing to overcome tool limitations
- Interface conversions to leverage existing tools
- Multi-layer filtering to access only data of interest
- Remote monitoring and tool sharing to reduce CAPEX

### OVERVIEW

NetQuest's P-Series OptiCop 10G Converger products provide test and monitoring access for today's high-speed Packet Over SONET/SDH (POS) networks and OTN networks carrying PoS in Carrier, Government, and Enterprise applications. The non-intrusive access optimizes tool port usage and enables network operators to implement management and assurance strategies related to the overall performance of the services being delivered, without degrading the service or distorting the results.

As transport networks continue to break speed barriers and convergence of traffic migrates from circuit to packet, network operators face new challenges in monitoring the services being provided. While Packet Over SONET/SDH enables operators and users to more flexibly and efficiently utilize network bandwidth by converging services, each service needs to be measured independently relative to the expectations of the customer. OptiCop 10G Converger and its advanced Hybrid Inspection Technology (HIT) provide a means to extract the traffic of interest and leverage existing investments in test and monitoring tools.

### APPLICATIONS AND FEATURES

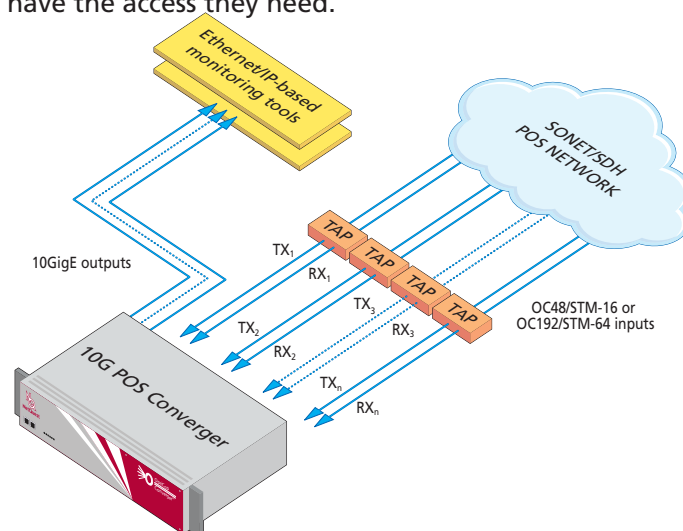
With the OptiCop 10G Converger deployed in a POS or OTN network, engineers can traffic manage circuits or flows of interest by sending them to the appropriate test and monitor tools. Everyday, network engineers are challenged with tool constraints like port and processing limitations, interface incompatibilities, protocol-specific testing, remote monitoring, and budget. Features like traffic aggregation, multicasting,

load balancing, filtering, and routing of IP and non-IP traffic make OptiCop 10G Converger a powerful tool in the engineering of today's advanced networks.

By providing network interface conversions to GigE or 10GigE monitoring tools such as Sniffers, Performance Management Probes, Lawful Intercept Systems, Security/NAC Devices, Traffic Analyzers, and Bulk Data Recorders, OptiCop 10G Converger provides real-time access to POS network traffic. The POS traffic can be translated into standard or proprietary Gigabit Ethernet traffic at full line rate without loss of data. OptiCop 10G Converger's flexible interfaces, unique traffic handling capabilities, high port density, and powerful parallel processing functions set a new standard for monitoring access to converged IP networks.

### MONITORING ACCESS

The P-Series OptiCop 10G Converger systems can be configured to meet the most demanding applications, with the ability to monitor OC48/STM-16 and OC192/STM-64 POS circuits and or OTN networks transporting PoS. The OptiCop 10G Converger can monitor multiple circuits in either half or full duplex scenarios and will operate in conjunction with Automatic Protection Switching, ensuring monitoring applications always have the access they need.



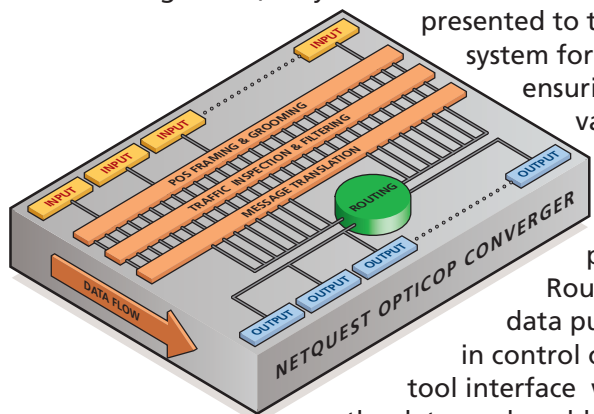
The P-4400 OptiCop 10G Converger in a SONET/SDH POS network

## HYBRID INSPECTION TECHNOLOGY (HIT)

NetQuest has developed a powerful method to inspect traffic at line rate using its unique Hybrid Inspection Technology (HIT). HIT logic is based on a highly parallel, pipelined hardware architecture with protocol-specific inspection algorithms defined by software and executed in specialized hardware. HIT is equally effective in processing high-speed concatenated Packet Over SONET/SDH traffic streams as it is in handling embedded low order SONET/SDH streams.

## FILTERING AND ROUTING

The OptiCop 10G Converger leverages HIT technology by enabling the inspected data to be filtered and/or routed based on user definable parameters. By filtering traffic, only the data of interest will be



presented to the monitor system for processing, ensuring its valuable processing resources are preserved. Routing of the data puts the user in control of which tool interface will receive the data, and enables network, protocol, and application partitioning

to match monitoring system requirements and limitations.

## CONFIGURATIONS

The P-Series OptiCop 10G Converger is available in three models: the P-4400, the P-6400, and the P-8800. The XFP interfaces support OTN OTU-2, or native OC192/STM-64 inputs or 10GigE outputs while the SFP interfaces support OC48/STM-16 inputs.

The P-Series 10G Converger is available with either a

fixed relationship between network inputs and tool outputs or with optional traffic routing, where the input to output relationship becomes a user defined logical path. The OptiCop 10G Converger packaging is a 2RU chassis that is rack mountable and may be ordered with single or redundant power supplies with independent inputs for AC or DC sources. The table below illustrates example port configurations available.

	MODELS		
	P-4400	P-6408/24	P-8800
Total # XFPs (inputs or outputs)	4	4/4	8
Total # SFPs (inputs or outputs)	4	24/24	8
Max # OC3/12/48/STM-1/4/16 input ports*	4	8/24	8
Max # OTU-2 OC192/STM64 inputs*	2	-	4
Max # 10GigE output ports	2	2/2	4

\*Support for both OC48/STM-16 and OC192/STM-64 is not available on the same 10G Converger. P-6424 only supports OC3/12 or STM1/4 input ports.

## MANAGEMENT

The OptiCop 10G Converger can be managed locally or remotely using menu-driven screens via Telnet or a serial crafts person port. Both interfaces provide secure access through a multi-level password protection system. OptiCop 10G Converger has an integral SNMP V1-V3 agent that supports GET, SET, and TRAP functionality. NetQuest's proprietary UDP-based control protocol, GSCP, provides for integration of the OptiCop 10G Converger interface into existing management systems.

For more detailed technical specifications, please email

TECHNICAL SPECIFICATIONS	
Size	2U rack mount or table top chassis: 3.5"H x 19"W x 17.25"D (8.9cm H x 48.3cm W x 43.8cm D)
Weight	16 pounds (7.27kg)
Power	140 W (110/220 VAC or 48 VDC)
Operating Temp	32° - 122° F ( 0° - 50° C)
Humidity	10-90% non-condensing
Compliance	FCC, UL, CE, RoHS
Management	Telnet, SSH, EIA232 Craft, SNMP V1-V3

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NetQuest Corporation designs, manufactures and markets innovative monitoring access products for applications in telecommunications service provider, government, and enterprise networks. Founded in 1987 and based in Mount Laurel, New Jersey, NetQuest is privately held and operates under the original management team. With more than a 20 year track record of providing cutting edge monitoring access solutions, NetQuest has developed a global customer base, marketing directly and through a network of value added resellers and representatives.