High-Performance Optical Switch Enables New Levels of Agility for Data Center Infrastructure

Polatis has announced its new Series 6000 Optical Matrix Switch - a fully non-blocking, all-optical singlemode fiber cross-connect for up to 192x192 fiber ports with less than 1dB typical optical loss. The Series 6000 doubles the maximum matrix size previously available from Polatis and is based on Polatis' patented DirectLight® optical switch technology, featuring leading-edge optical performance with enhanced energy efficiency and port density. The new product line will be demonstrated at the OFC/NFOEC show in Los Angeles next week. Production shipments commence in the second quarter of 2012.

The Series 6000 will be deployed across a wide number of applications ranging from secure government communications to data center virtualization, broadcast video distribution, satellite RF/optical link management, network testing and more. To satisfy these demanding applications, the Series 6000 extends the proven performance of Polatis' DirectLight® technology, including very low insertion loss, compact size, low power draw and fast switching speeds, to a larger matrix size at competitive pricing. The modular design of the Series 6000 allows both symmetric (NxN) and asymmetric (MxN) matrix configurations as well as a versatile customer-configurable option allowing any-to-any fiber connections.

"The capabilities Polatis brings to optical switching are unique and critical for defense, intelligence and secure communications applications," said Dave Eisemann, VP of Engineering at Transformational Security, LLC, a firm providing security and engineering solutions to US government agencies along with Fortune 1000 companies. "Extremely high optical performance with the lowest possible signal loss, no crosstalk, and transparent optical transmission is needed to preserve signal characteristics and link margins in government and defense applications," Eisemann said. "Polatis’ beam-steering technology is unmatched in this regard, an ideal solution which is now available in even higher fiber counts, with very low power consumption."

DirectLight® Optical Switch Technology

Like the Polatis Series 1000 and Series 2000 product lines, offering up to 96x96 ports, the Series 6000 is based on Polatis’ patented DirectLight® beam-steering technology which uses piezoelectric actuators to connect light directly between

switch ports to achieve the best possible optical performance independent of the color, direction or power level of light on the fiber path. "DirectLight® is the industry benchmark for low-loss optical switching,® said Gerald Wesel, President and CEO of Polatis, Inc. "It has been proven in the most challenging defense, data center and telecom environments and by virtually all major network equipment manufacturers in automated testing of optical subsystems. Polatis offers the highest performance optical switching technology, with port counts now ranging from 4x4 to 192x192, at competitive price points."

Efficient Protection Switching

The Series 6000 switch enhances network availability by enabling fast automatic recovery from network equipment or fiber failures. Unlike other matrix switch technologies, DirectLight® allows optical connections to be established with or without light on the fiber, enabling pre-provisioning of dark fiber paths for disaster recovery, M:N protection switching, and intelligent network monitoring and test. DirectLight® supports truly transparent, protocol-agnostic connections and can switch bi-directional and transient signals used in FTTx access networks and other transmission systems.

Carrier Class Reliability

The Series 6000 optical switch features a resilient control architecture designed to maximize availability through use of distributed processing together with dual redundant control interfaces and power systems. Network interfaces provide support for SNMP, TL1 and SCPI protocols to allow seamless integration with higher-level management systems. An intuitive secure web browser GUI enables simple setup, provisioning, monitoring and control. Software can be easily upgraded in the field without affecting in-service switch operations.

Optical Power Meters and Signal Monitoring

Enhanced functionality options for the Series 6000 include optical power meters and optical signal monitors on every connection. These integrated features are ideal for network monitoring, cyber security, data mirroring and intrusion detection, as well as automated system test applications. Additional components can also be incorporated in the Series 6000 chassis to enable selective signal multicast and other functions to meet individual customer needs.

Visitors to the OFC/NFOEC 2012 exposition in Los Angeles, March 6-8, can see the Series 6000 optical switch demonstrated in the Polatis booth #915.

Also at OFC/NFOEC in the technical conference, Rich Jensen, Director of Architecture at Polatis, will present paper NW3F.7, co-authored with BT, on "Highly Scalable OXC-based Contentionless ROADM Architecture with Reduced Network Implementation Costs", on Wednesday, March 7th, at 2:45 p.m. in room 409A&B.

For more information, please visit www.polatis.com [1].

Posted by Ron M. Seidel, Editorial Intern

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[1] http://www.polatis.com