



SN 3000 Intelligent Optical Edge Switch

High-Performance Aggregation at the Network Edge

Interoperable from Edge to Core

Transforming core network infrastructure is the first step toward net-centric operations. In order to fully utilize the dynamic communications enabled by intelligent optical switching at the network core, government and military networks will require seamless connectivity to and from the network edge. Aggregating and grooming diverse services (TDM, ATM, IP, Ethernet) with maximum efficiency, the SN 3000 Intelligent Optical Switch eliminates bandwidth chokepoints and interoperability issues in local switching centers – empowering an unimpeded flow of information to and from multiple, remote branch locations.

Sycamore's edge-to-core switching platforms share common control plane and management software, and interoperate in all network topologies, with a range of network restoration options. This allows the SN 3000 to tie in seamlessly to the SN 9000 and SN 16000 advanced networking features and support new applications at their crucial endpoints, including Optical Virtual Private Networks (OVPN), Gigabit Ethernet, and scheduled bandwidth.

Efficient, Reliable Bandwidth Distribution

The SN 3000 multiplexes and aggregates TDM, PDH, ATM, IP, and Ethernet private line services and transmits them over any standard SONET/SDH or DWDM infrastructure at speeds up to OC-192/STM-64. Combining different service speeds and types on the same wavelength permits optimal utilization of existing capacity. A variety of interface cards can be deployed in a single 14-slot chassis to meet specific application requirements. The SN 3000's modular systems architecture supports per-port software configuration, grooms to STS-1/AU-3 granularity, and serves as an effective gateway between SONET and SDH environments.

Consolidating switching, grooming, and integrated DWDM transport optics into one element eliminates redundant equipment at edge sites, reduces space and power consumption, and simplifies provisioning, management, and scalability. The SN 3000's high-performance bandwidth distribution reliably delivers maximum operational efficiencies and cost reductions.

Maximum Flexibility and Interoperability

Distributed intelligence and mesh-based restoration options provide unprecedented service flexibility and ensure network survivability. Advanced networking software and resource partitioning features enable secure, net-centric OVPN solutions for quickly and cost-effectively connecting multiple enterprise, base, or branch locations. The SN 3000 also supports sub-rate and full-rate Ethernet services over SONET/SDH infrastructure. Sycamore's unique implementation of Virtual Concatenation routes individual constituent circuits over separate and diverse paths, to enhance network resiliency. Network operators can throttle bandwidth up or down based on a predefined schedule, or on demand to meet real-time traffic conditions.

Features and Benefits

- Efficient Multiservice Aggregation and Grooming
- Integrated DWDM Transport Optics Extend Network Reach
- Reduced Equipment and Operational Costs as Network Scales
- Ethernet Transport Solutions with Value-Added VCAT
- Field-Proven Reliability and Robust Connectivity
- Scalable Foundation for Next-Generation Communications



Sub 50ms SONET/SDH protection switching and performance monitoring features, and adherence to traditional network standards, promote seamless integration with existing network equipment, operations, and management systems. At the same time, IP-based networking software supports new provisioning speed and flexibility, and multi-layer, multi-vendor interoperability.

The SN 3000 brings the full resources and capabilities of a Sycamore Networks' core optical infrastructure to the network edge.

For more information about our intelligent networking products and solutions, please contact your Sycamore Sales Representative.

SPECIFICATIONS HIGHLIGHTS

System

- 14 slot mid-plane chassis design
- Fully non-blocking SONET/SDH cross-connect fabric
- Fully redundant common logic
- Grooming to STS-1/AU-3 granularity
- Total capacity: 672 STS-1 equivalents
- Ethernet Private Line Services
- Intelligent Ethernet policing and packet-to-circuit mapping

Service Interfaces

- 24 x DS-3
- 21 x E1
- 8 x OC-3/STM-1
- 4 x OC-12/STM-4
- 4 x OC-48/STM-16
- 1 x OC-192/STM-64
- 4 x Gigabit Ethernet, rate control
- DWDM multiplexers
- Integrated transport optics (1310nm SR to 15xxnm LR-2+)

Network Architecture and Protection Switching

- Linear, Ring, Mesh, and Hybrid
- Per port software configurable
- 1+1 Linear APS/MSP
- UPSR/SNCP
- 2- and 4-fiber BLSR/MS-SPRing
- 1+1 Path Protected
- 1:n PDH Protection
- Dynamic Mesh Restoration
- Gateway between SONET and SDH
- IP-based and OSI-based DCC interoperability

BroadLeaf® Networking Software

- ASON/GMPLS-compliant control plane software
- Standard OSPF-based routing and MPLS-based signaling
- Automatic topology discovery
- In-band/out-of-band control plane
- Manually defined or automated path/circuit route selection and provisioning
- Multi-vendor, multi-layer internetworking

Fault & Performance Management/Monitoring

- Local network element alarm indication
- Autonomous alarm forwarding
- Automatic laser shutdown
- SONET/SDH performance monitoring
- Intermediate path performance monitoring
- Threshold crossing alerts
- Full suite of diagnostics: loopbacks, test access, on-demand

SILVX® Management Software

- Node management: SilvxSource®
- Network management: SilvxManager®
- Network design & planning tools: SILVX InSight®
- Northbound interfaces: TL1, TMF CORBA, XML, SNMP (alarms) SilvxOSS®
- Full TMN FCAPS functionality
- Network and capacity planning applications
- Layered services provisioning and management
- Real-time network and service views

Regulatory & Standards Compliance

- Telcordia Technologies™ OSMINE processes (TIRKS, NMA)
- NEBS Level 3 (GR-63-CORE)
- Bellcore GR-1089-CORE
- ETSI 300-019
- EN 300 386
- CSA listed to UL/CSA 60950
- EMC-FCC Part 15, Class A
- IEC 60825/FDA
- Bellcore, ITU-T
- IEEE
- Worldwide Homologation

Sycamore Networks, Inc. • 220 Mill Road • Chelmsford, MA 01824-4144, USA • Phone: 978-250-2900 • Fax: 978-256-3434 • www.sycamorenet.com

Sycamore Networks, Inc. (NASDAQ: SCMR) is a leading provider of intelligent bandwidth management solutions for fixed line and mobile network operators worldwide. From multiservice access networks to the optical core, Sycamore products enable network operators to lower overall network costs, increase operational efficiencies, and rapidly deploy new revenue-generating services.

Sycamore assumes no responsibility for the accuracy of the information presented, which is subject to change without notice. BroadLeaf, SILVX, SilvxSource, SilvxManager, Sycamore, and Sycamore Networks are trademarks or registered trademarks of Sycamore Networks, Inc. in the United States and/or other countries. Copyright © 2009 Sycamore Networks, Inc. All Rights Reserved.

