



SN 3000 Intelligent Optical Edge Switch

Multiservice Aggregation for Metro Edge Network

Taking Intelligence to the Edge

The SN 3000 Intelligent Optical Switch aggregates and grooms diverse traffic types (TDM, ATM, IP, Ethernet) and service speeds with maximum efficiency, to eradicate bandwidth chokepoints and interoperability issues at the evolving network edge. Consolidating multiple network functions in one compact element offers the most complete solution to metro density, scalability, and inter-office facility (IOF) challenges. The SN 3000 proves its value and reliability daily in some of the largest and most innovative optically switched networks.

Sycamore's edge-to-core portfolio of intelligent optical switching platforms integrates seamlessly with existing network technologies, shares common control plane and management software, and interoperates in all topologies with a range of restoration options. This allows the SN 3000 to tie in seamlessly to SN 9000 and SN 16000 advanced networking features and support new services at crucial edge points, including Optical Virtual Private Networks (OVPN), carrier-class Ethernet, and scheduled bandwidth.

High-Density, Multiservice Aggregation

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 from DS-3 and E1 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. A 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 network 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.

Standards-Based Interoperability

SONET/SDH protection switching and performance monitoring features, and adherence to traditional network standards, ensure the SN 3000 integrates seamlessly with existing network equipment, operations, and management systems. Advanced networking software improves provisioning speed and flexibility, and enhances multi-layer, multi-vendor interoperability.

Features and Benefits

- ADM, BB-DCS, Ethernet and Optical Transport in One Switch
- Efficient Multiservice Aggregation and Grooming
- Solves Metro Density, Scalability, and IOF Challenges
- Supports Diverse Services (TDM, PDH, ATM, IP, Ethernet)
- Topology Independence (Linear, Ring, Mesh, Hybrid)
- Edge-to-Core Interoperability (SN 16000, SN 9000, SN 3000)



The SN 3000 supports sub-rate and full-rate Ethernet services over SONET/SDH networks, with an implementation of the Virtual Concatenation standard that routes individual constituent circuits over separate and diverse paths to enhance network resiliency. Service providers can throttle bandwidth up or down based on a predefined schedule, or on demand to meet real-time traffic conditions.

Intelligent bandwidth management and sophisticated resource partitioning also enable secure optical VPNs (OVPN) and customer-managed sub-networks and services. 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

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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.

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