



### KEY FEATURES

#### FC Extension Gateway

##### Cost Reduction Plus High Availability

The S-8100B implements a trunking mechanism, which allows using a single WAN connection for extending up to seven parallel FC fabrics. Two FC fabrics separated by thousands of kilometers can be merged over low cost OC-3/STM-1 or OC-12c/STM-4c lines to operate as a single fabric. When multiple SONET/SDH interfaces are installed, each FC input can be directed through a separate WAN interface, providing optimal data traffic distribution. If one WAN connection fails, traffic is automatically redistributed through the remaining healthy connections, providing complete recovery on the gateway rather than on the FC fabric level.

##### Interoperability

The S-8100B is fully compliant with FC standards and provides basic services for native modes of FC switches of major vendors. A single pair of S-8100B gateways can support interconnection of parallel FC fabrics containing switches from multiple vendors in different configurations.

##### Multi-Service Connectivity

Because the S-8100B provides tunneling of L2 Ethernet traffic as well as Fibre Channel through the same WAN infrastructure, the gateway can easily be customized to meet particular application needs. Multiple configurations of Fibre Channel, GbE L2 and SONET/SDH ports are possible in a single box.

##### Engineered for Long Distance

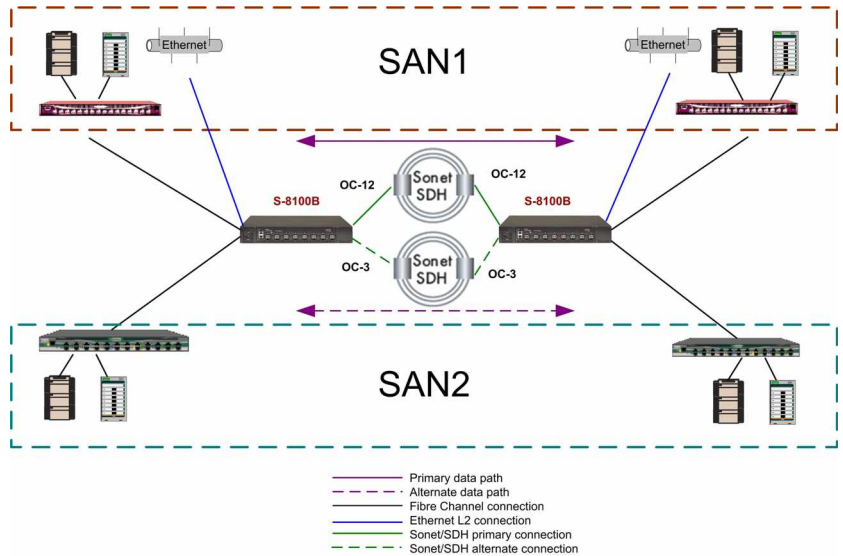
The S-8100B is connected to the WAN over industry standard SONET/SDH interfaces with software configurable speed ranging from 155Mb/s to 622Mb/s.

On the FC side, the S-8100B terminates buffer-to-buffer protocol providing 16 credits (up to 32km attachment without rate degradation). On the SONET/SDH side, the S-8100B implements a connection-oriented, frame-based protocol that moves FC and L2 Ethernet over PoS for distances of thousands of kilometers without performance degradation, and with data and order delivery guaranteed. Any frame loss or corruption is completely recovered by the S-8100B rather than by FC devices.

### OVERVIEW

With the ever-increasing need to safeguard data, many companies are looking for a reliable method of connecting their storage area networks (SANs) across the WAN. For applications that are well suited to DWDM or SONET/SDH interconnection, LightSand's S-8100B transports Fibre Channel and Layer 2 Ethernet metadata across a wide area ranging from campus to continental level.

The S-8100B is especially suited for use in a data center infrastructure. Combining unique support for a multi-site environment with the ability to tunnel data from multiple FC fabrics and Ethernet LANs over the same WAN, the S-8100B is an indispensable part of a flexible data center solution. By using industry standard networking protocols, the S-8100B is easily integrated into existing SONET/SDH environments, or interconnected over dark fiber and metropolitan CWDM or DWDM. The S-8100B's multiple SONET/SDH extension links increase throughput while maintaining redundancy protection for remote applications.



#### Data Protection

- Synchronous and asynchronous mirroring
- Remote tape vaulting

#### Storage Consolidation

- Centralized tape backup
- Data migration

### APPLICATIONS

The S-8100B provides transparent bridging services for SANs over SONET/SDH networks for a variety of applications including data replication and migration, disaster recovery, remote access, business continuity and asset management.

#### IT Cost Reduction

- Extended use of remote equipment
- Reduction of storage through consolidation

#### High Availability Access to Data

- Distributed clustering applications

## SPECIFICATIONS

### SYSTEM ARCHITECTURE

Gateway Architecture.....	8 ports, wire-speed, unblocked, aggregate bandwidth - 16 Gbit/sec
SAN Ports.....	4 to 7 ports
SAN Port Media.....	Fibre Channel, 1.0625 Gb/s, SFP, multi-mode (850nm), as a standard
FC Standards.....	FC-PH-2, FC-MI, FC-PH, FC-FS, FC-BB, FC-BB-2, FC-SW-2
FC Port Type.....	B_port
FC CoS.....	Class 2, Class 3, Class F
B2B Credits.....	Up to 16
L2 Tunneling Ports.....	1 to 3 ports (pre-configured)
L2 Port Media.....	Gigabit Ethernet, 1.25 Gb/s, SFP, multi-mode (850nm), as a standard
WAN Ports.....	1 - 4 ports (pre-configured)
WAN Port Media.....	STS-3/12c, STM-1/4c (configurable), SFP, IR-2, as a standard
SONET/SDH Standards.....	Bellcore GR-253; ITU-T G.707, ANSI T1.105 –1995, RFC 1619,1661,2615
Encapsulation.....	FC over PoS, Ethernet over PoS
Extension Distance.....	STS-12/STM-4: 10,000km (Up to 20,000km with additional memory card) STS-3 /STM-1 : 40,000km (Up to 80,000km with additional memory card) Dark Fiber: 80km

### SPECIAL FEATURES SET

Redundancy.....	WAN port fail-over, box level redundancy
Compression.....	Over SONET/SDH, maximum ratio 1:21

### MANAGEMENT

Supported Software.....	SANman™ (GUI); Telnet, SNMP; MIB-II, Fiber Alliance MIB, RMON MIB, RFC 2837, configurable traps
Management Access.....	10/100BaseT Ethernet (RJ-45); Serial port; In-band (DCC)
Diagnostics.....	BIST (built-in self test); Local Spin Test; Remote Spin Test

### MECHANICAL SPECIFICATIONS

Dimensions.....	Width: 17.4" x Depth: 17.9" x Height: 2.6" - 1.5u
Weight.....	22.9 pounds (10.4 kg)
Rack Mounting.....	19" rack
Cooling.....	Front to back (fans FRU, hot swap)

### POWER SPECIFICATIONS

Dual Power Supply.....	(optional) FRU (hot swap)
Supported Power.....	Nominal: 320mA at 220-240V; Nominal: 640mA at 110-115V (auto-select)
Frequency.....	50/60 Hz
Power Consumption.....	75 Watts (maximum)

### ENVIRONMENT AND REGULATIONS

Temperature.....	0°C to 40°C (32°F to 104°F)
Humidity.....	5% to 85% non-condensing
Regulatory.....	UL Listed, FCC Class A product, complies with Canadian ICES-003



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