



KEY FEATURES

FICON Extension Gateway

Low Cost FICON without Traditional Limits

LightSand's S-8100F overcomes standard FICON distance limitations. FICON devices separated by thousands of kilometers can now communicate via low cost OC-3/STM-1 or OC-12c/STM-4c lines. The S-8100F gateway is designed to interface directly with FICON mainframe and storage devices. No expensive FICON directors are necessary to provide FICON extension across the WAN.

Multi-Service Connectivity

The S-8100F, which can easily be customized to meet the needs of particular applications, provides tunneling of L2 Ethernet and FICON traffic through the same WAN infrastructure. Multiple configurations of FICON, GbE L2 and SONET/SDH ports are possible in a single box. Cost Reduction Plus High Availability The S-8100F implements a trunking mechanism which allows the use of a single WAN connection for maintaining up to seven FICON channels. When multiple SONET/SDH interfaces are installed, each FICON 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, keeping all FICON channels available.

Engineered for Long Distance

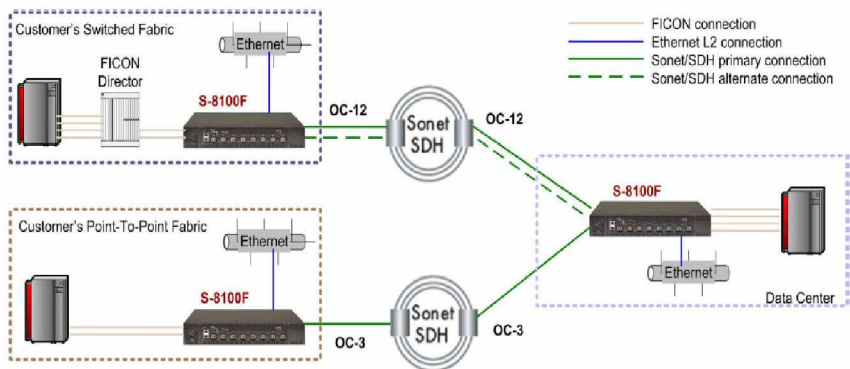
The S-8100F is connected to the WAN over industry standard SONET/SDH interfaces with software configurable speed ranging from 155Mb/s to 622Mb/s.

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

OVERVIEW

FICON is rapidly replacing ESCON as the connection choice for mainframe computers with storage devices, especially for their long distance connections. FICON (Fibre COntection) is a high-speed input/output channel based on the Fibre Channel protocol used in mainframe environments. FICON offers higher performance and higher connection flexibility than ESCON, and supports increased distance between end devices. However, the maximum distance of a native FICON connection traditionally has been limited to 20km. LightSand's S-8100F renders that limit obsolete for applications that are well suited for use of DWDM or SONET/SDH interconnection in a mainframe environment. The S-8100F can transport FICON and Layer 2 Ethernet mainframe metadata across a wide area ranging from campus to continental level.

The S-8100F is especially suited for use in a data center infrastructure. Combining high availability with unique support for a multi-site environment, the S-8100F provides WAN fail-over protection without need for expensive FICON directors. By using industry standard networking protocols, the S-8100F is easily integrated into existing SONET/SDH environments, or interconnected over dark fiber and metropolitan CWDM or DWDM. The S-8100F's multiple SONET/SDH extension links increase throughput while maintaining redundancy protection for remote applications.



APPLICATIONS

FICON extension with the LightSand S-8100F gateway over metro and wide area networks can support a wide variety of applications including data migration, consolidation of storage, business continuity, and disaster recovery.

Data Protection

- Extended remote mirroring
- Remote tape vaulting

Storage Consolidation

- Centralized tape backup
- Data migration

IT Cost Reduction

- Extended use of remote equipment
- Elimination of need for FICON directors

High Availability Access to Data

- Redundant FICON channels with trunking

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 Port Type.....	FICON port
FC CoS.....	Class 2, Class 3
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
Gigabit Ethernet Standards.....	IEEE 802.3z
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.....	FICON 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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