FUJITSU

SDH Transport

FLASHWAVE 4560

Multiservice Provisioning Platform

The Challenge We Face

Telecom carriers and network operators today are constantly looking for ways to expand their network and customer services in order to increase revenue with minimum cost and time. This is the challenge most vendors face, too. Flexibility, reliability, scalability, and cost-effectiveness — these are just a few of the capabilities that telecom carriers expect of next-generation network systems.

The Solution We Provide

FLASHWAVE 4560 provides all the many qualities to meet every telecom carrier's needs. Its universal interface slot structure and flexible VC-4/VC-12 cross-connect capability allow you to tailor its shelf as your network demands, from a traditional STM-16 or STM-64 ADM to an extensive hub with a number of optical subtending rings. With the flexibility of "any card in any slot" shelf architecture, and various network application capabilities (ring, linear, and hub) in both the metro and the backbone network, spare inventory and training costs can be significantly reduced.

In addition, the hub application with numerous subtending rings reduces the cabling work that would otherwise be required between each ring node, thereby slashing installation time and costs. It also leads to less miswiring and unintentional disconnection, for a more reliable network.

Future-Proof Your Network Now

With the increasing growth in data traffic, the Internet and enterprise Intranets, the capability to support these user demands with a shorter lead-time and minimum investment is one of the most critical issues for every service provider to survive in today's highly competitive market. Here too, FLASHWAVE 4560 is the solution for you. Simply fit the Ethernet units into FLASHWAVE 4560 shelf and you can turn your traditional voice network into an advanced, data and voice converged network. With two different operational modes of Gigabit Ethernet transport, point-to-point and bandwidth sharing, operators can support end-user demands either way — with full wire-speed transport, or with cost-effective best-effort type of service over the selected number of VC-4 pipes. Furthermore, its virtual concatenation capability enables operators to use their limited network bandwidth without any loss.

The FLASHWAVE 4560 gives you everything you need to build next generation networks today.

Features and Specifications

FLASHWAVE™

Advanced Features

Twenty universal service interface module slots
Direct E1 drop from STM-64 aggregate
Wire-speed or bandwidth-shared Ethernet transport
288×288 VC-4 and 2016×2016 VC-12 cross-connect

Architectures

Terminal
Linear add/drop
2F-MS-SPRing
SNCP ring
Optical hub (STM-1, STM-4, and STM-16)

Time-Slot Interchange

288×288 VC-4 switch fabric
2,016×2,016 VC-12 switch fabric
Any-port-to-any-port TSI
Virtual concatenation (VC-4-nV, n=1 to 8)

Ring Interfaces

Maximum number of rings per shelf:	
STM-64	1 MS-SPRing/SNCP ring
STM-16	Up to 4 MS-SPRings or 8 SNCP rings
STM-4	Up to 32 SNCP rings
STM-1	Up to 40 SNCP rings

Service Interface Modules

Maximum number of interfaces per shelf:	
E1 (42 per card)	504
STM-1e (2 per card)	32
STM-1o (2 or 4 per card)	80
STM-4 (4 per card)	64
STM-16 (1 per card)	16
STM-64 (1 per card)	2
10/100-Base T (8 per card)	80
Gigabit Ethernet P-P type (2 per card)	32
Gigabit Ethernet Bandwidth Shared type (2 per card)	8

Power Consumption

Single shelf:	600W (maximum)

Protection

Switch matrix, synchronization	1:1
E1/STM-1e	1:1
STM-1o/STM-4:	1+1 MSP, SNCP
STM-16/STM-64:	2F-MS-SPRing,1+1 MSP, SNCP
Ethernet	unprotected

Optics

STM-1	1,310nm with SC or LC connectors
STM-4	1,310nm with LC connectors
STM-16	1,310nm / 1,550nm with SC connectors
STM-64	1,550nm with SC connectors
Gigabit Ethernet	SC connector

Operations Support

TL1 protocol over OSI/LCN, or IP/LCN
TCP/IP gateway functionality
FLEXR craft interface and FLEXR-EM/NM network management support

Synchronization

Internal Stratum-3 timing source
Synchronization status message (ITU-T standard)
2Mbps/2MHz primary and secondary clock output/input
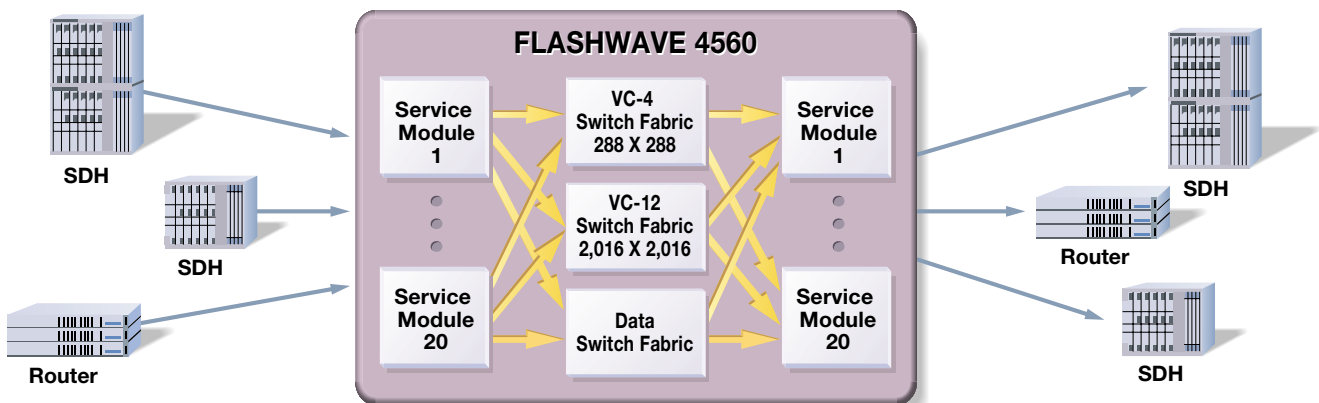Line timing

Operating Environment

Temperature:	0°C to 45°C (–5°C to 50°C: short-term)
Humidity:	5% to 85% (Non-condensing)

Physical Characteristics

Shelf:	575(H)×500(W)×503(D)mm
Rack:	2,200(H)×600(W)×600(D)mm w/cable management spaces

Acquire Extensive Port-to-Port Connectivity

FLASHWAVE 4560 — Service Module 1 … Service Module 20, VC-4 Switch Fabric 288 X 288, VC-12 Switch Fabric 2,016 X 2,016, Data Switch Fabric

Specifications are subject to change without notice. For the latest detailed information, contact your local representative.
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