Fujitsu’s FLASHWAVE 4x70 Multi-Service Provisioning Platform (MSPP) series provides telecommunication carriers and service providers with a powerful solution to survive their fiercely competitive industry.

Integrating reliable and intelligent SDH functionality and efficient Ethernet aggregation and switching into a compact body, the FLASHWAVE 4x70 MSPP enables both traditional voice-based services and increasingly diverse data services to be delivered over a unified optical network.

Enriched with next-generation SDH functionality, the FLASHWAVE 4x70 MSPP allows carriers to not only simplify their network, but also to efficiently, flexibly, and dynamically use network bandwidth with a simple management procedure. In this way, the FLASHWAVE 4x70 MSPP helps to satisfy the growing end-user’s demand in an increasing variety of broadband services at a substantially reduced cost.

The FLASHWAVE 4070 is an STM-1/STM-4 MSPP optimized for Metro Access and CPE applications.

Typical node configurations are:

- Single STM-1 ring with 63 x E1
- Single STM-4 ring with 63 x E1
- Single STM-4 ring with 21 x E1, 8 x FE (transparent) and 6 x FE (L2 switching)

Key Benefits

- Compact, low-cost body featuring three universal slots that enable all client interface plug-in cards to be hot-swappable
- All-in-one-box solution to satisfy network and service demands from STM-4, STM-1, STM-1E, E3, DS3, and E1, to Fast Ethernet
- Reliable optical network supported by traffic protection schemes such as 1+1 MSP, SNCP, and 2-fiber MS-SPRing for SDH layer, as well as Rapid Spanning Tree Protocol (RSTP) for Ethernet layer
- Next-generation SDH functionality such as General Framing Protocol (GFP), Virtual Concatenations (VCAT), and Link Capacity Adjustment Scheme (LCAS) functions for dynamic bandwidth allocation, adjustments, and protection
- Non-blocking switching matrix with a capacity optimal for metro access network; 2.5G for an STM-4 network interface and 1.5G for an STM-1
- Small Form-factor Pluggable (SFP) interfaces to deliver optical rate and parameter flexibility on a per-port basis
- AC power subrack option enabling CPE application

Ethernet Transport Features

- Data service applications including EPL (Ethernet Private Line), EVPL (Ethernet Virtual Private Line), and EPLAN (Ethernet Private LAN)
- Layer 2 processing to reduce bandwidth requirements, and therefore enable cost-effective data transport over the SDH infrastructure
- VLANs or double-tagged VLANs to enable 802.1p QoS/CoS, as well as segregation of traffic flows, and thereby increase security without sacrificing bandwidth efficiency or network flexibility

Management Features

- Speedy operation and maintenance through local craft terminal FLEXR L
- Network element and sub-network-based management system FLEXR C, supporting all FLASHWAVE 4x70 products, to enable seamless management of all SDH, PDH, and Ethernet layers

Compact & Flexible Multi-Service Access Solution

shaping tomorrow with you
Technical Specifications

Applications
✓ Terminal multiplexer
✓ Linear add-drop multiplexer
✓ Ring add-drop multiplexer
✓ Mini cross-connect

Network Interfaces
✓ STM-1 (V-1.2, L-1.2, L-1.1, S-1.1)
✓ STM-4 (V-4.2, L-4.2, L-4.1, S-4.1)

Client Interfaces
✓ SDH: STM-1 (V-1.2, L-1.2, L-1.1, S-1.1), STM-1E
✓ PDH: E1, E3/DS3
✓ IP/Ethernet: 10/100Base-TX (transparent or L2 switching), 100Base-FX (1310 nm or 850 nm, L2 switching), 1000Base-T (GE-ZX, GE-E, GE-LX, GE-SX, transparent)
✓ Optical amplifier: Post-amp (13 dBm, 15 dBm, 18 dBm output), pre-amp (20 dB gain)

Cross-Connect
✓ STM-4 aggregate: 16x16 VC-4 and 1008 x 1008 VC-12
✓ STM-1 aggregate: 8x8 VC-4 and 504 x 504 VC-12
✓ Connection: Unidirectional, bidirectional, broadcast, drop and continue, loopback

Mapping
✓ G.7041/Y.1303 GFP-F
✓ G.7042 LCAS:VC-12
✓ G.707 VCAT: VC-12

Synchronization
✓ Timing Source: SDH line, E1
✓ Operation: Hold-over, locked-mode
✓ Priority and quality (SSM) synchronization algorithms

Power
✓ Input voltage: -48V DC or 100/240V AC
✓ Power consumption: approx. 60 W

Mechanical Specifications
✓ Sub-rack size: 439W x 78H x 265D mm
✓ Installation: Standard ETSI rack

Environment
✓ Operating temperature: -5 to 45 ºC
✓ Start-up temperature: 0 to 45 ºC

Management
✓ Local provisioning and maintenance by FLEXR L local craft terminal
✓ Remote centralized management at both element and network level by FLEXR C Sub-Network Management (SNM)
✓ SNMPv2 standard MIB

Ethernet Features
✓ Layer 2 forwarding at wire-speed
✓ Layer 2 switching and aggregation
✓ 802.1Q VLAN and stackable VLAN
✓ 802.3x flow control
✓ MAC Address self-learning
✓ Layer 2 multicast (static provisioned or IGMP snooping)
✓ Rate-limiting per port and/or VLAN
✓ 802.1p QoS/CoS per port and/or VLAN
✓ 802.1w Rapid Spanning Tree Protocol (RSTP)

Compact & Flexible Multi-Service Access Solution

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

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