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SpectralWave
MN2100
Multi-Service Platform

STM4/1 STM-16 UPGRADEBLE MULTI-SERVICE OPTICAL TRANSPORT PLATFORM

COMPACT NEXT GENERATION MSTP SYSTEM DELIVERS INTEGRATED SERVICES AND FUNCTIONALITY WITH MINIMAL COST OF ENTRY

- **SMALL FOOTPRINT**

- **FLEXIBLE CONFIGURATION**

- **DISTRIBUTED DESIGN**

- **MULTI-SERVICES**

- **FULL PROTECTION**

The SpectralWave MN2100 is a multi-service optical transport system designed to simplify service provider networks, dramatically reducing both operational and capital expenditures. The system enables the delivery of SDH services and advanced data services-including FE and GE rapidly, efficiently and cost-effectively. The highly integrated MN2100 platform unifies the functions of next-generation SDH Add-drop Multiplexer (ADM), Digital Cross-Connect System (DCS) and Ethernet aggregation switch in a single carrier-class shelf.

SMALL FOOTPRINT

Only 3U high, the compact MN2100 supports line rates as high as STM-16. It provides versatile service access capabilities and an unprecedented price/performance ratio. The MN2100 chassis is based on the 19-inch standard and can be installed in any ETSI compliant, 19-inch rack.

FLEXIBLE CONFIGURATION

The MN2100 can be flexibly configured to support STM-1,STM-4,or STM-16. It supports multiple network elements (NE), including TM, ADM and MADM. It is able to add/drop various low-rate SDH/PDH signals directly into/from STM-1/4/16 signals. The MN2100 provides cross-connect functionality for VC-4/VC3/VC12 level services between lines, between line and tributary, as well as between tributary and tributary.

DISTRIBUTED CROSS-CONNECT DESIGN

The MN2100 utilizes a distributed cross-connect architecture, which significantly reduces the cost of entry. The distributed cross-connect architecture enables a pay-as-you-grow strategy based on the required number of optical interfaces and transmission rate.

MULTI-SERVICE PROVISIONING

The MN2100 supports continuous and virtual concatenation at VC-12/3/4. It also supports Generic Framing Procedure (GFP) – used to map FE/GE services into N~VC-12/3/4 for transmission, Link Capacity Adjustment Scheme (LCAS), and has built-in Ethernet service functions. In addition, the platform support Layer 2 switching and flow control.

FULL SUITE OF PROTECTION SCHEMES

The MN2100 provides a full suite of network-level protection schemes including: SDH 1+1 MSP; 1:N MSP; 2FMS-SPRING. The platform supports 1+1 hot redundant control and timing (clock) modules. MN2100 also provides electrical protections for E1 and DS3/E3

Technical Summary

HARDWARE
SYSTEM CHASSIS

Dimension :	133 X 430X 280 (H*W*D)
Weight :	13kg fully loaded
Temperature :	5 ℃ to 40℃
	(Normal operating range)
Humidity :	5 ~ 95% non-condensing

POWER
Power Supply :	-48VDC
Power Consumption :	100W fully loaded

INTERFACE
NETWORK
STM-16	1 port per module, max 4 ports per shelf
STM-4 :	1/2/4 port per module, max. 20 ports per shelf
STM-1 :	1/2/4 port per module max. 20 ports per shelf

CROSS-CONNECTION
SDH Capacity :	80X80 VC-4 & 2016X2016 VC-12
Type :	Unidirectional, Bi-directional, Broadcast, Drop and Continue

DATA SERVICE
Framing and Concatenation :	GFP, Continuous Concatenation and Virtual Concatenation at VC-12/ VC-3/VC-4
10M/100M	802. 1d/p/q/s, 802.3x/ad, VLAN Tagging, VLAN Trunking, Rate limiting from 64kb/s, 64kbps incremental, LCAS
GBE :	802.3z

COMPLIANCE
FCC Part 15 Class A, UL 1950, VCCI, Latest ITU-T standards IEEE802.3; 802.3u/z/ad; 802.1/q/p/d/s/w
EN 55022(class A), EN55024, EN60950, EN60825

TRIBUTARY
10/100M Ethernet :	8 ports per module, max. 32 ports per shelf
Gigabit Ethernet	4 ports per module, max. 16 ports per shelf
STM-1 Electrical	4 ports per module, max 16 ports without protection per shelf
E1:	32 ports per module, max. 126 ports without protection per shelf Maximum 63 ports with protection per shelf
E3/D3	3 ports per module, max. 12 ports without protection per shelf Maximum 3 ports with protection per shelf

PROTECTION SCHEMES

1+1 MSP; 1:N MSP; 2F MS-SPRING
SNCP for VC-12/VC-3/VC-4
Tributary : 1:1 E1 CFP, 1:1 E3/D3 CFP

TIMING/SYNCHRONIZATION

SSM, External Bits Clock of Stratum 3 or better Primary and secondary E1 external timing reference, STM-n line timing reference, Holder over, free runs.

NETWORK MANAGEMENT

TL1, LCT (Local Craft Terminal)
SpectralWave MN9100

⚠ Safety Precautions	★Before installing, connection or using this product, be sure to carefully read and observe the cautionary and prohibited matters provided in the instruction manual.

For inquiries, contact :