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SpectralWave
MN3100
STM-64/16 Multi-Service Platform

THIRD GENERATION MSP DELIVERS COST-EFFECTIVE SERVICES AND INTEGRATED FUNCTIONALITY

The SpectralWave MN3100 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 ATM, Fast Ethernet (FE) and Gigabit Ethernet (GE) rapidly, efficiently and cost-effectively.

The highly integrated MN3100 platform unifies the functions of a next-generation SDH Add-drop Multiplexer (ADM), Digital Cross-Connect System (DCS), ATM and Ethernet aggregation switch plus Resilient Packet Ring (RPR) in a single carrier-class shelf.

- **FULL SDH SUPPORT**
- **MULTI-SERVICE PROVISIONING**
- **MULTIPLE TOPOLOGY SUPPORT**
- **FULL PROTECTION SCHEME**
- **RPR OVER SDH**

MULTI-SERVICE PROVISIONING

The SpectralWave MN3100 supports continuous and virtual concatenation at VC-12/3/4 in SDH. It also supports Generic Framing Procedure (GFP), Link Capacity Adjustment Scheme (LCAS) and provides built-in Ethernet service functions. GFP protocol is used to map FE/GE services into NxVC-12/3/4 for transmission. In addition, the platform supports Layer 2 switching and flow control. The MN3100 also supports ATM services, providing STM-1 and Inverse Multiplexing for ATM (IMA) Interfaces.

FLEXIBLE CONFIGURATION

According to network requirements, the MN3100 can be flexibly configured to support STM-1, STM-4, STM-16 and STM-64. It supports multiple Network Element (NE) types, including TM, ADM, REG and MADM and is able to add/drop various low-rate SDH/PDH signals directly into/from 10Gbit/s (STM-64) SDH signals. The MN3100 provides cross-connect functionality for VC-12/3/4 services between lines, between line and tributary, as well as between tributary and tributary.

FULL SUITE OF PROTECTION SCHEMES

SpectralWave MN3100 supports Multiplex Section Protection (MSP), Subnetwork Connection Protection (SNCP), Dual Node Interconnection (DNI), 2F/4F MS-SPRING, E1 1:2 and 1:3 Card Failure Protection (CFP), E3/DS3 E4/STM-1e 1:1 CFP, STP and 802.1w RSTP. The MN3100 supports M:N hot standby for power unit, clock 1+1 hot backup, crossconnect 1+1 hot backup, and 1+1 system controller protection.

Technical Summary

HARDWARE

SYSTEM CHASSIS

DIMENSIONS	709mm x 436mm x 453mm (HxWxD)
WEIGHT	43kg
TEMPERATURE	5 °C to 40 °C (Normal operating range)
POWER SUPPLY	-48V DC, -40V to -69V
POWER CONSUMPTION	535W fully loaded
COMPLIANCE	FCC Part 15 Class A, UL 1950, CE, VCCI, Latest ITU Standards, Telcordia GR-253-CORE, IEEE802.3u/ad, 802.1D/Q/p/s/w EN 55022(Class A), EN50024, EN60950, EN60825
OPERATING HUMIDITY	5 to 95% without condensation

NETWORK INTERFACE

STM-64	1 port, max. 4 ports /shelf
	I-64.1, S-64.2b, L-64.2ae (65km), L-64.2cl (80km), L-64.2cl +FEC (120km)
STM-16	1/2 port, max.17 ports /shelf I-16, S-16.1, S-16.2, L-16.1, L-16.2
STM-4	4/8 ports, max.68 ports /shelf I-4, S-4.1, L-4.1, L-4.2
STM-1	4/8/16 ports, max.176 ports /shelf
	I-1, S-1.1, L-1.1, L-1.2

TRIBUTARY INTERFACE

10/100Base-T/FX	16 ports, max.144 ports /shelf
GbE, SX or LX	2/4 ports, max.18/36 ports /shelf
GbE +10/100 Base-T/FX	4GE+12FE ports, max.36GE+108FE /shelf
STM-1 Electrical	16 ports, max.176 ports /shelf
E1	63 ports, max.567 ports /shelf
E3/DS3	12 ports, max.84 ports /shelf
T1	56 ports, max.504 ports /shelf

CROSS-CONNECTION

SDH CAPACITY	HO 512x512 VC-4 & LO 4032x4032 VC-12
TYPE	Unidirectional, Bi-directional, Broadcast, Multicast, Drop and Continue

TIMING/SYNCHRONIZATION

SSM, External Bits Clock of Stratum 3 or better
Primary and secondary E1 external timing reference
STM-n line timing reference
Holdover, Free-run

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.

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