

SpectralWave

MN4100

Multi-Service Platform

**NEXT GENERATION DCS PLATFORM
BRINGS BENEFIT IN LOWER CAPEX AND OPEX**

The highly integrated MN4100 platform unifies the functions of next-generation Digital Cross-connect System(DCS), SDH Add-Drop Multiplexer(ADM), Ethernet switch Resilient Packet Ring (RPR) in a single carrier-class shelf. It is designed to simply service provider networks and dramatically reduce both operational and capital expenditures. The system enables the delivery of SDH and TDM services as well as next-generation data services-including Ethernet (from FE,GE to 10GE) and Fiber Channel-rapidly, efficiently and cost-effectively. MN4100 supports ASON/GMPLS which enables quick service provisioning over flexible network topologies.

MULTI-SERVICE PROVISIONING

MN4100 supports continuous and virtual concatenation at VC-12/3/4 in SDH. It also supports Generic Framing Procedure (GFP), Link Capacity Adjustment Scheme (LCAS), RPR and provides built-in Ethernet service functions. GFP protocol is used to map FE/GE/10GE services into NxVC-12/3/4 for transmission. In addition, the platform supports Layer 2 switching.

FLEXIBLE CONFIGURATION

According to network requirements, the MN4100 can be flexibly configured to support STM-1, STM-4, STM-16 ,STM-64 and STM-256. It supports multiple Network Element (NE) types, including DCS, TM, ADM, and MADM and is able to add/drop various low-rate SDH/PDH signals directly into/from 10Gbit/s (STM-64) or even 40Gbit/s (STM-256) SDH signals. The MN4100 provides 320G non-blocking high order cross-connect capacity and 20G non-blocking low order cross connect capacity. The system could work under either AU4 or AU3 mode which is essential for international network interconnections.

MULTIPLE NETWORK/EQUIPMENT LAYER PROTECTION SCHEME

MN4100 supports Multiplex Section Protection (MSP), Subnetwork Connection Protection (SNCP), Dual Node Interconnection (DNI), 2F/4F MS-SPRING, E1 1:8 Card Failure Protection (CFP), E3/DS3/STM-1e 1:3 CFP, 802.1d STP, 802.1s MSTP and 802.1w RSTP. MN4100 supports 1+1 hot standby protection for power system, clock, cross-connect module, controller and ASON module.

- **UNIFIED DCS/SDH/ETHERNET PLATFORM**
- **RPR UNDER DEVELOPMENT**
- **LARGE CROSS CONNECT CAPACITY**
- **STM-256 LINE SPEED(TBD)**
- **MULTI-SERVICE PROVISIONING**
- **MULTIPLE TOPOLOGY SUPPORT**
- **ASON/GMPLS UNDER DEVELOPMENT**
- **FULL PROTECTION SCHEMES**
- **UNIFIED MANAGEMENT PLATFORM FOR MN SERIES PORTFOLIO**



Technical Summary

HARDWARE

DIMENSIONS	866(H) x 535(W) x 280(D)(mm) including the ear
WEIGHT	Maximum 100kg
TEMPERATURE	5 °C to 40 °C
POWER SUPPLY	-48V DC, -38V to -71V Operating Range
POWER CONSUMPTION	1300W fully loaded
COMPLIANCE	FCC Part 15 Subpart B , VCCI,CE(EMC and LVD) Latest ITU-T Standard, Telcordia GR-253-CORE, IEEE802.3u/z/ad, 802.1/q/p/d/s/w, 802.17 802.3x, ROHS5
HUMIDITY	5 %RH ~85% RH@30 °C

INTERFACE

TYPE	PORTS PER MODULE	MAXIMUM PORTS PER CHASSIS
STM-256	1	4
STM-64	1 / 2	32
STM-16	1 / 4 / 8	128
STM-4/1	8 / 16	352
STM-1 E	16	128 non-protected or 96 protected
E3/DS3	24	192 non-protected or 144 protected
E1	63	504 protected
T1	63	504 protected
10GE	1	20
GE L1 Full Rate	10	200
GE L2	12	240
10/100M FE	8FE(o)+16FE(e)	288 10/100BaseFx 128 10/100BaseT
2.5G RPR W/O MPLS	16GE/FE ports	dual 20 RPR card

(*) Supports 2 MN4100 chassis in one ETSI 300mm/600mm 2.2m rack

(**)The number of E1/T1 add/drop from one rack is also limited by cable wiring.

CROSS-CONNECTION

SDH CAPACITY Centralized non-blocking high/low order cross connect matrix:
320G HXC and 20G LXC for both AU3/AU4

TYPE Unidirectional, Bi-directional, Broadcast, Drop and Continue

TIMING/SYNCHRONIZATION

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

NETWORK MANAGEMENT TL1, LCT (Local Craft Terminal), SpectralWave MN9100(EMS),TMF814



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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