Empowered by Innovation **NEC**

SpectralWave
DW4200 series
Reconfigurable OADM System

■ **Multi-reach DWDM platform**
Higher bandwidth clients such as Gigabit Ethernet are becoming one of general demands. Service providers have to flexibly and rapidly deliver high quality and high bandwidth services anywhere and anytime.
The SpectralWave DW4200 series provides remotely controllable optical add, drop or pass-through functions at any nodes and any wavelengths on a 80 channel DWDM platform, also provides adjustable passive optical add, drop or pass-through functions. The SpectralWave DW4200 series offers high bandwidth, flexible and economical optical network.

■ **Multi-Service**
Optical networks should flexibly support various interface capability without surplus facilities for rapid and diverse service demands.
The SpectralWave DW4200 series provides a Bit-rate Free transponder (3R) for wide range of optical clients from 100Mbit/s to 2.7Gbit/s including Gigabit Ethernet and Fiber Channel.
In addition, a Multi-rate SDH/SONET transponder is provided for STM-1/OC-3, STM-4/OC-12 and STM-16/OC-48 with B1 performance monitoring of SDH/SONET frame.
For data centric demands, 10Gig-E LAN-PHY and 9-channel Gigabit Ethernet transponders are provided.

■ **Scalable and Easy System Design**
Different optical path may have different loss budget. When new paths/nodes are added, the system design is very complicated due to uneven spectral power level.
The SpectralWave DW4200 series supports predominant automatic optical power control and gain flatness control functions. These functions enable easy λ expansion and network configuration upgrade without manual gain adjustment and complicated system re-design work.

■ **Full Band Tunable Transponders**
80 channel full band tunable in C-band or L-band for spare cost saving and rapid service establishment

■ **In-service Upgrade**
Optical networks are growing according to broadband demands. Terminal nodes or in-line amplifier nodes may be upgraded to intermediate add/drop nodes for new demands.
The SpectralWave DW4200 series enables economical in-service upgrade from DWDM terminals or in-line amplifiers to ROADM configurations with minimum investment.

■ **Optical Path Protection**
Optical Layer Protection on a λ basis within 50ms of switching time

■ **Human Safety**
ITU-T G.664 Auto Power Reduction for human safety during installation work

■ **Efficient Footprint**
ETSI rack or 19 inch open rack support with high density and compact design, 10G x 6ch add/drop in a single shelf, 40ch in a single rack

■ **Integrated Management**
SNMP, Web-based management or NMS with other NEC products such as U-Node, V-Node, C-Node, MW1000 etc.

- **Client Interfaces**
  - Gig-E, 10Gig-E, 9ch Gig-E MUX
  - Dual Rate (10Gig-E and STM-64)
  - 3R Bit Rate Free (100M to 2.7G)
  - Multi-rate STM-16/4/1
  - STM-256, STM-64,
  - 4ch STM-16 MUX with AFEC

- **Digital User Interface**
  - 10base-T   4 ports

- **Housekeeping Interface**
  - HKA input   1 port
  - HKC output   1 port

- **Station Alarm Interface**
  - PM, DM, MAINT, AB, AL

- **Environment**
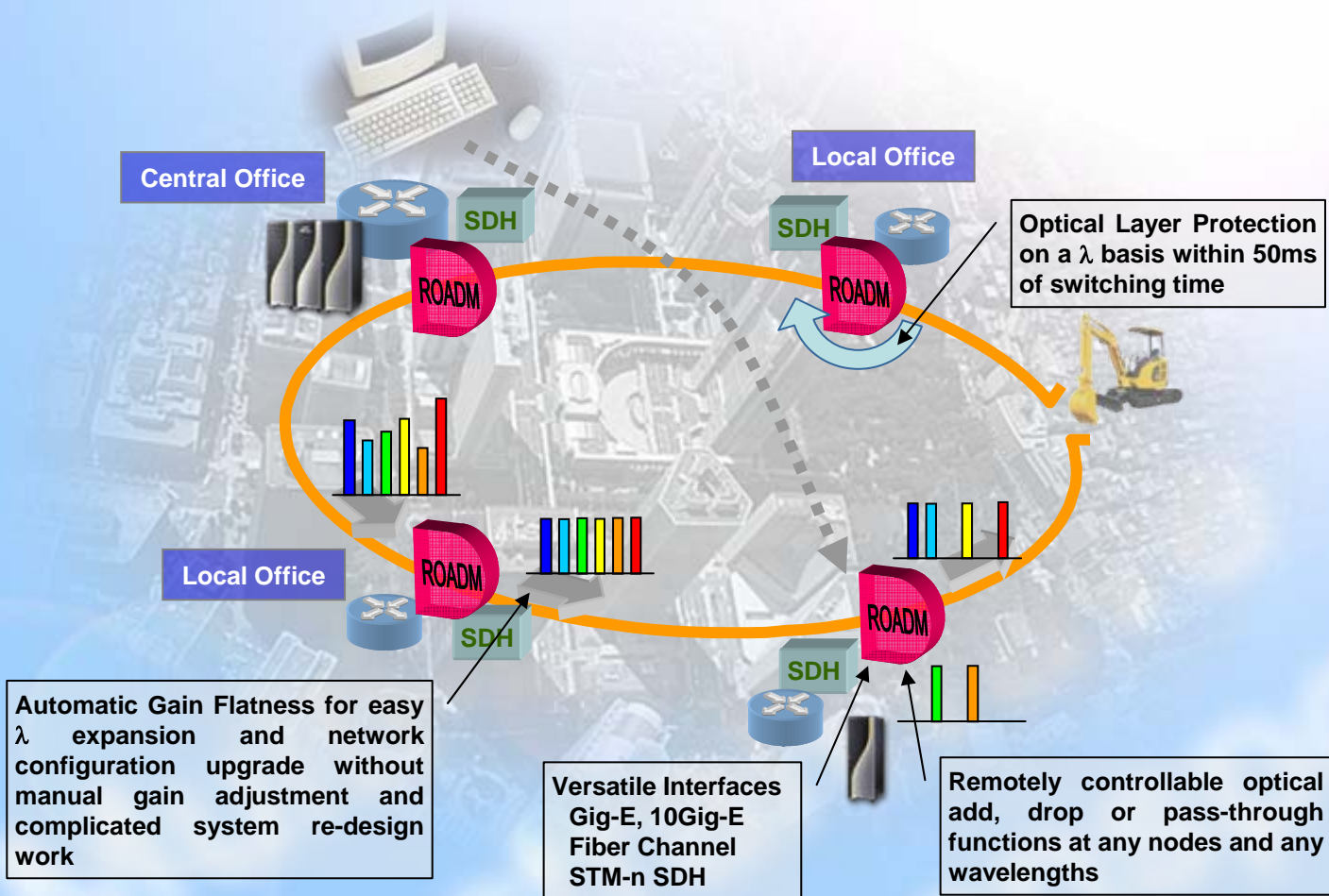 - Operating Temperature Range
    - Short term   0ºC to 45ºC
    - Long term   0ºC to 40ºC
  - Relative Humidity   5 to 85% without condensation
  - Altitude   −61 to 1,829 m

- **Power Requirements**
  - Voltage   −38.4 to −60V DC

- **Physical Dimensions**
  - ROADM Shelf   450 (H) x 450 (W) x 350mm (D)

Central Office

Local Office

Optical Layer Protection on a λ basis within 50ms of switching time

Automatic Gain Flatness for easy λ expansion and network configuration upgrade without manual gain adjustment and complicated system re-design work

Local Office

Versatile Interfaces Gig-E, 10Gig-E Fiber Channel STM-n SDH

Remotely controllable optical add, drop or pass-through functions at any nodes and any wavelengths

⚠ 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 :

NEC
URL http://www.nec-mobilesolutions.com/infrastructures/