

SpectralWave® V-Node

STM-16/4 Multi-Service Platform

■ Flexible Bandwidth using GFP and VCAT

For IP packet transport, the V-Node supports to establish transparent paths between Ethernet. For efficient and reliable Ethernet transport, Generic Framing Procedure (GFP) and VC-n-Xv Virtual Concatenation (VCAT) are adopted.

The GFP adaptation encapsulates Ethernet MAC frames for subsequent transport over SDH networks. The VCAT enables the GFP adaptation to establish flexible bandwidth path.

■ LCAS

The LCAS provides a control scheme to hitless increase or decrease the bandwidth of a VCAT Group link to meet the bandwidth needs of the application.

In addition, the LCAS automatically decrease the bandwidth if a VCAT member experiences a failure in the network, and increase the bandwidth when the network failure is repaired.

■ Various service support

The V-Node provides various interface packages, such as Gigabit Ethernet, Fast Ethernet, STM-16, STM-4, STM-1, 45M, 34M and, 2M. The V-Node main shelf has 13 interface package slots.

■ Bandwidth upgrade up to STM-16

For future traffic growth, the V-Node can be economically upgraded to dual 2-Fiber STM-16 ring system by just replacing optical interfaces.

■ 152x152 VC-4 and 2016x2016 VC-12 matrix for flexible service support

The matrix of the V-Node has flexible granularity of 152x152 VC-4 and 2016x2016 VC-12. This composite matrix enables VC-12 traffic grooming among VC-4 containers.

■ Integrated management with NEC's other SDH and SpectralWave DWDM systems

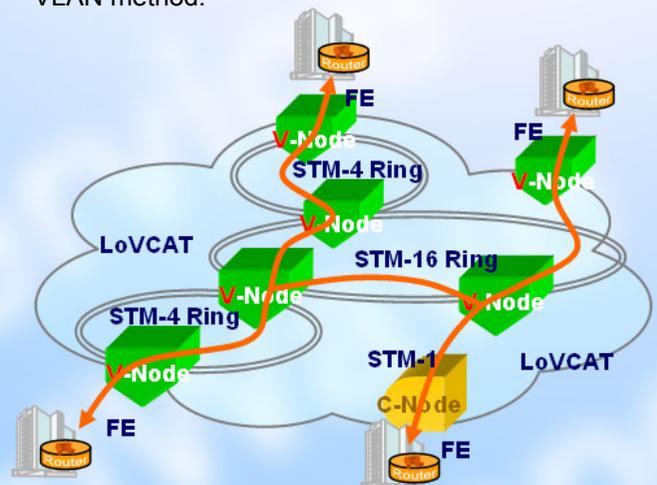
The INC-100MS offers total management of the NEC's photonic transport network composed of the SpectralWave C-Node, U-Node, the SpectralWave DWDM systems and the other SMS series SDH products.

■ Point to Point/Multipoint Ethernet Service

The V-Node can establish Ethernet Line (E-Line) service type of point-to-point paths. The bandwidth assignment itself is flexible and can be hitless changed by using VCAT and LCAS methods.

The E-Line service is a best effort type of connection service using L2SW sharing the bandwidth of VCAT paths among plural connections. Security among the connections is guaranteed by VLAN method.

The E-Line type of connection service using L2SW can be easily expanded to Ethernet LAN (E-LAN) service type of multipoint-to-multipoint connections. Security among the connections is guaranteed by VLAN method.



Technical Summary

■ Interfaces

STM-16 (Max. 6ports)	STM-4 (Max. 26ports)
STM-1 (Max. 52ports)	1000BASE (Max. 22ports)
10/100Base (Max. 66ports)	45Mbit/s (Max. 30ports)
34Mbit/s (Max. 30ports)	2Mbit/s (Max. 352ports)

■ Cross connect capacity

VC-4	152 x 152
VC-3	96 x 96
VC-12	2016 x 2016

■ Specification for Layer-2 switched service

IEEE 802.1Q	Port/Tag VLAN
IEEE 802.1D	Spanning Tree Protocol
IEEE 802.1p	Prioritization
IEEE 802.3x	Flow Control
IEEE802.3ad	Link Aggregation
Jumbo Frame	

■ Power Requirements

Voltage	-38.4 to -60V DC
	-48 to -72V DC

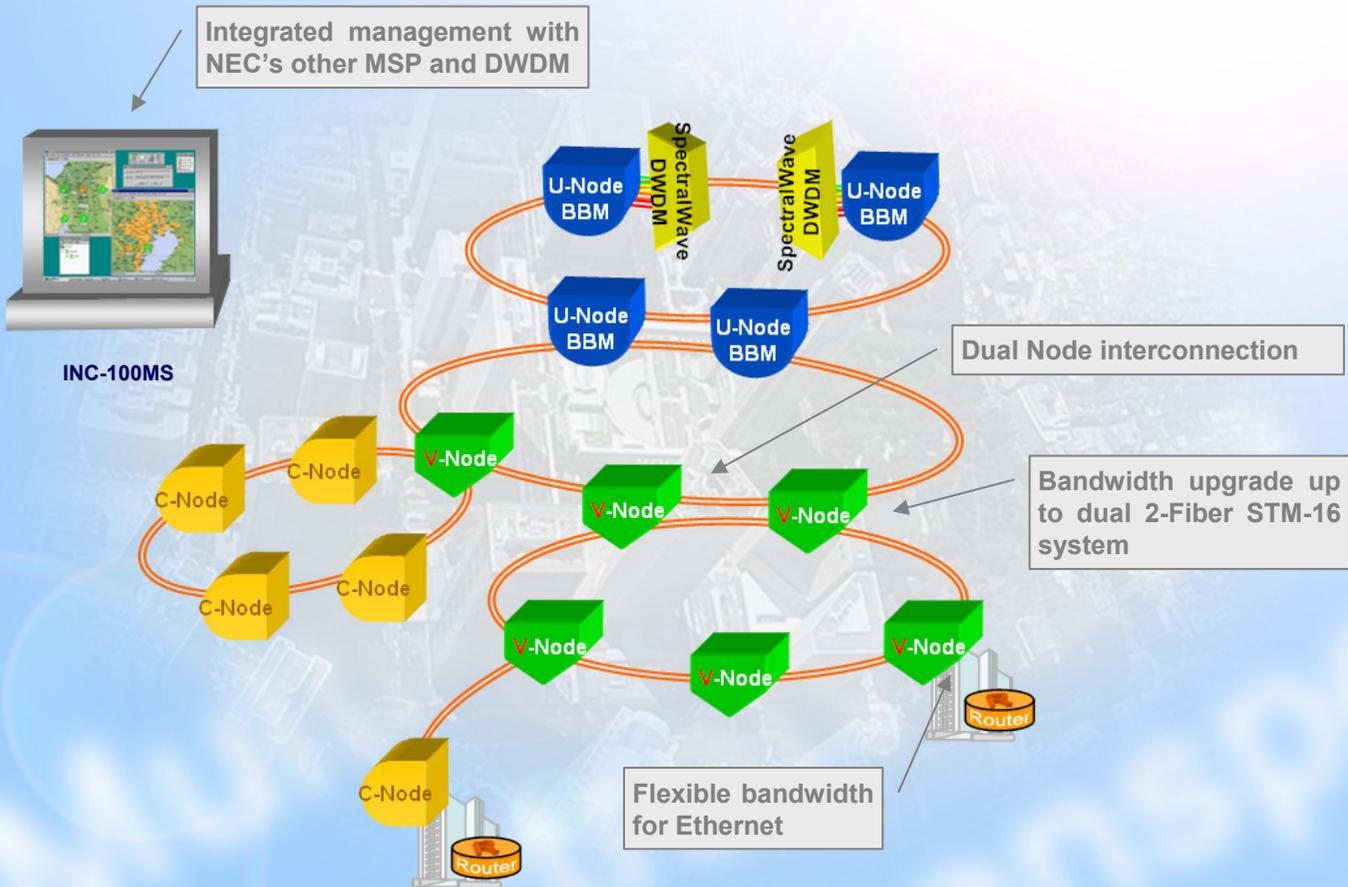
■ Environment

Operating Temperature Range	-5°C to 45°C
Relative Humidity	5 to 90% without condensation

EMC	EN55022 (Class A)
	EN50082-1
Safety	EN60950
	EN60825

■ Physical Dimensions

Shelf	493 (H) x 482 (W) x 280mm (D)
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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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- The configuration or specifications are subject to change without prior notice due to continual improvements.

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