ORION TELECOM NETWORKS INC.

VCL-STM 1, 63 E1

Introduction

The VCL100MC-1 Multi-Service Provisioning Platform (MSPP) is a compact, leading edge, and yet practical bandwidth provisioning equipment designed to meet low or medium capacity bandwidth service demands. This unique product is part of a family of Multi-Service Provisioning Platform and Access Nodes from Orion. As with all products in Orion's family, the VCL100MC-1 MSPP also supports end-to-end provisioning and management of voice and data services across all the segments of the optical network - from the customer premises to the core. It combines innovative optical networking software with the intelligence of SDH to deliver a flexible solution to today's service providers. The VCL100MC-1 can be configured as Terminal Multiplexers (TMUX) or Add-Drop Multiplexers (ADM), with mix-and-match tributary interfaces at E1, E3, DS3 or 10/100 Mbps Ethernet service interfaces. The product has a built in non-blocking cross-connect at VC-3 and VC-12 granularity for efficient traffic grooming. In view of the growing demand for packet services, VCL100MC-1 provides rate controlled 10/100 Base-T interfaces to carry inter-office traffic from corporate LANs, campus networks, or from Internet Service Providers.

Features

- E1/DS1, E3/DS3
- Multiple tributary slots
- Low priced Terminal Multiplexer and Add- Drop Multiplexer
- 3U chassis - available in rack mounting option
- Integrated multi-service delivery
- Direct Ethernet-to- SDH / SONET mapping using built-in 10/100 Base-T Interfaces
- Linear and ring topologies
- Multi-level protection schemes - Unprotected, MSP, SNCP
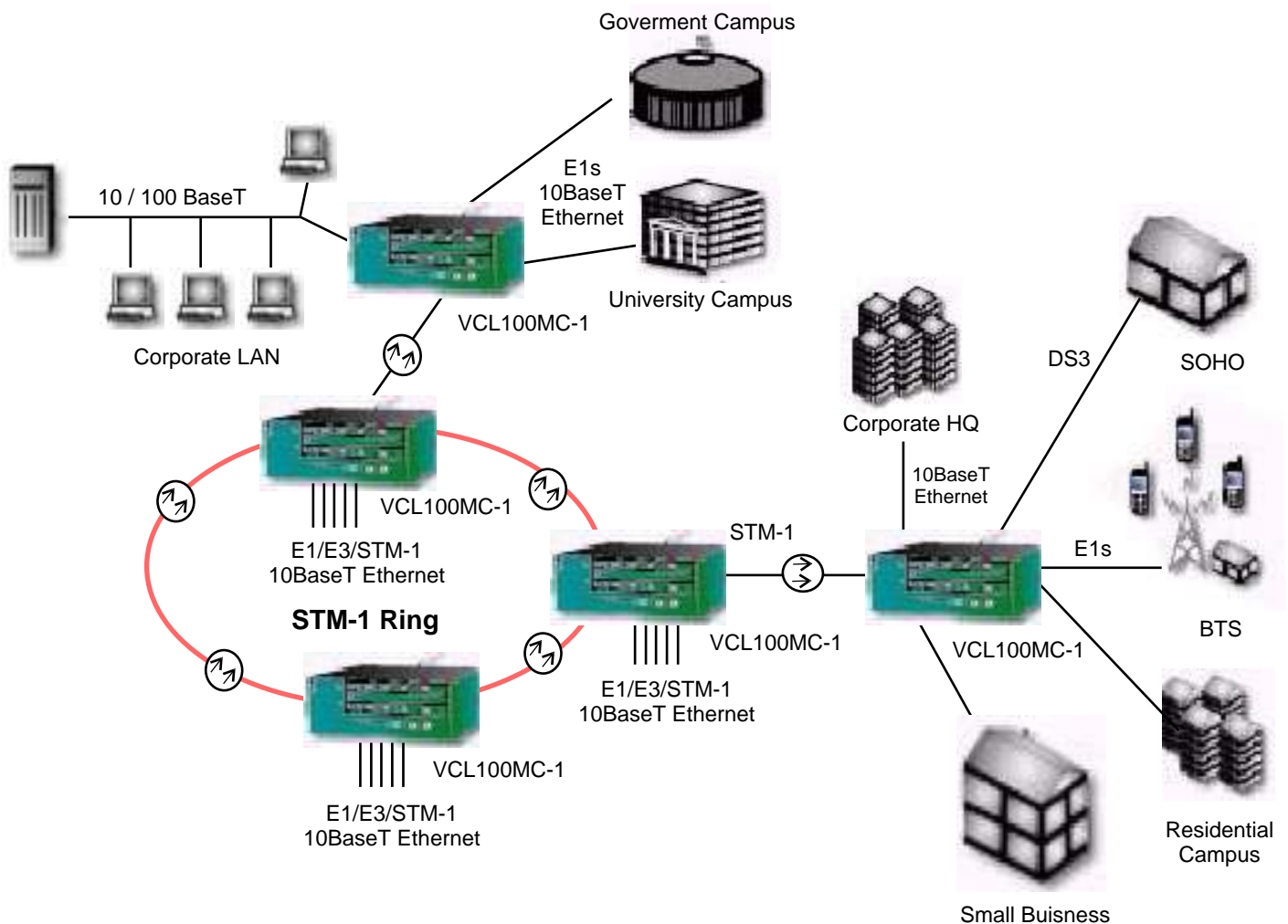- Advanced networking software with support for open standards such as OSPF

Advantages

- Flexibility and modularity in tributary configurations
- Can be placed in customer premises or PoP's with space constraints.
- Compact size
- Provision both voice and data services from the same platform. Efficient use of transport bandwidth by supporting per-port rate adaptive Ethernet services.
- Enables creation of point-to-point Transparent LAN services or Virtual Private Network Services
- Topology support to cater to customer network scenarios
- Carrier-grade protection schemes enable you to cater to differing customer protection requirements.
- Enables automatic topology discovery, shared mesh restoration and Point-and-Click Provisioning (PNCP).
- User friendly GUI based Network Element Software for local and remote provisioning

Benefits

- "Build as you grow". Pay for capabilities you require today.
- A practical and cost effective solution catering to low volume traffic requirements.
- Better utilization of available rack space and easy installation in customer premises.
- Future-proof architecture protecting investment
- Cost-effective methods to create new Ethernet Data Services for incumbent or new carriers
- Flexible and cost-effective network solutions
- Creation of differentiated services to enhance the portfolio of service offerings
- Reduction in operational costs and increase in efficiency through lower provisioning time and operator intervention

Applications

Technical Specifications

Network Topology
- Linear, Ring, Mesh

Network Element
Configurations
- Terminal Multiplexer (TMUX)
- Add-Drop Multiplexer (ADM)

Aggregate Interfaces
- 2 X STM-1e/o
- S1.1, L1.1, L1.2 (ITU-T G.957 compliant)
- Optical (1+1) Redundancy in Terminal Multiplexer Mode.

Tributary Interfaces
- E1/DS1, E3/DS3
- STM-1o
- STM-1e/E4
- 10 Base-T/100 Base-TX Ethernet

Cross Connect
- 252 X 252 VC-12
- Fully non blocking
- Line to Line, Line to Tributary, Tributary to Line, Tributary to Tributary

Maintenance
- Higher-order and Lower-order POH, all SDH level performance monitoring (as per ITU-T G.826 and ITU-T G.784)
- Software downloads

Network Management
- Element Management System: VCLNES , supports full FCAPS functionality.
- RS-232 port for craft interface
- In-band control supported using SONET/SDH Overhead bytes.
- E1 management channel support with drop facility

Power Supply
- -48V DC nominal, -36V to –60V DC
- Power consumption: 35W (without Ethernet Interfaces)

Timing & Synchronization
- Timing & Synchronization of System (as per ITU-T G. 813)

- Internal and External Timing interfaces – Two E1 BITS interfaces (as per ITU-T G.703)
- Internal oscillator capable of supplying a ITU-T G.813 compliant Stratum-3 SEC
- Support of SSM byte

Order wire support, Alarms and User data Channel
- E1/E2 bytes used for Express order wire (Omnibus/ Selective calling facilities)
- Five potential-free outputs and two potential-free inputs
- F1 byte for user data channel

Physical Dimensions
- Dimensions (H X W X D): 132 mm x 435 mm x 220 mm

Environmental
- Operating Temperature: 0° to 50° C
- Relative Humidity: 10% to 90%, non-condensing

Technical Specifications are subject to change.
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Revision 3, 1st July 2005.

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