

Product Overview

Valiant VCL100 is an ultra-compact, carrier class and cost effective bandwidth provisioning STM-1/4/16 SDH Multiplexer equipment designed to manage and deliver services from the optical core to the access.

The STM-1/4/16 SDH Multiplexer equipment supports end-to-end provisioning and management of services across all segments of the optical network.

It combines innovative optical networking software with the resilience of SDH to deliver a flexible solution to today's service providers.

The VCL100 can be configured as a Terminal Multiplexer (TMUX), Add-Drop Multiplexer (ADM), Regenerator, In-Line Amplifier or as a stand-alone Cross-Connect. A variety of service interfaces such as E1/DS1, E3/DS3, STM-1e/o and 10/100/1000 Mbps Ethernet tributary interfaces and trunk interfaces at STM-1/4/16 rates are supported. The product features non-blocking cross-connect at VC-3, VC-4 and VC-12 granularity and supports drop and continue functionality.

As transmission networks are gradually being dominated by data traffic, VCL100 provides 10/100/1000 Ethernet interface to efficiently carry inter-office data traffic from a corporate LAN, traffic from an ISP, DSL or cable networks.



**STM-1/4/16 SDH Multiplexer
Multi-Services Provisioning Platform**

Features

- Compact size
- Integrated multi-service Delivery
- Redundant cards with hot insertion capability
- Multi-level protection schemes MSP, or SNCP
- Advanced networking software with support for open standards such as GMPLS and OSPF

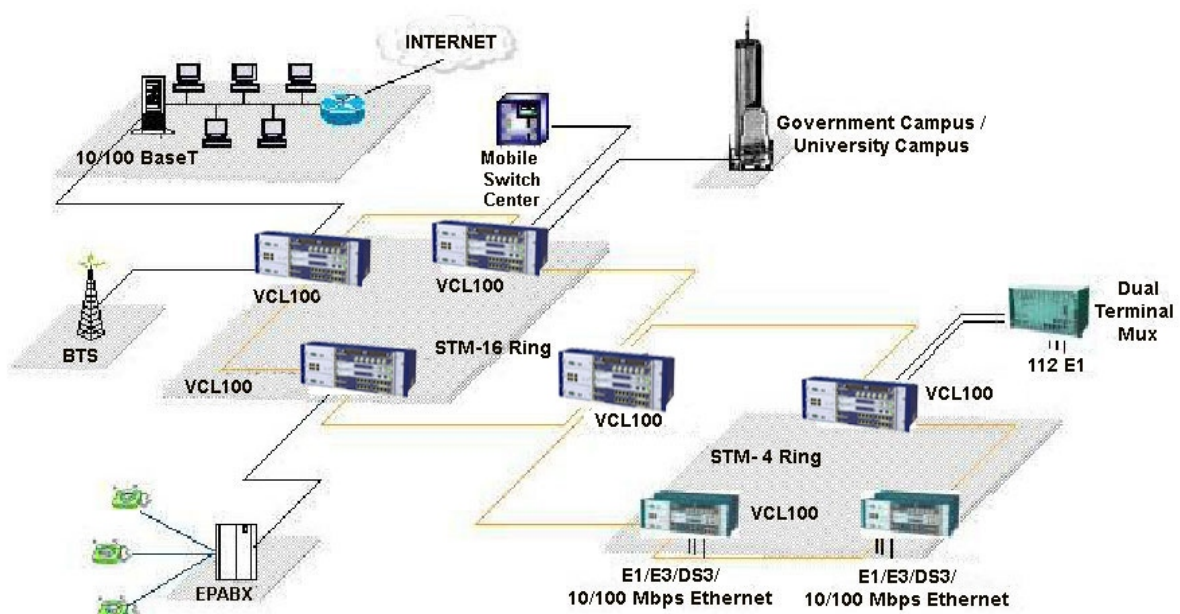
Advantages

- Half depth rack allows two VCL100s to be placed back-to-back on a standard rack
- Provision both voice and data services from the same platform. Efficient use of transport bandwidth by supporting per-port rate adaptive Ethernet Services
- Guaranteed availability and superior network resilience
- Advanced 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

- Better utilization of available rack space
- Future-proof architecture protecting investment
- Carrier-class redundancy and high network uptime with minimum loss of revenue
- 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.

Application Diagram



Technical Specifications

Network Topology

- Linear, Ring

Network Element Configurations

- Digital Cross-Connect (DXC)
- Add-Drop Multiplexer (ADM)
- Terminal Multiplexer (TMUX)
- In-Line Amplifier
- Regenerator

Aggregate Interfaces

- 1/2 x STM-1/4/16 1310 or 1550 nm (ITU-T G.967 compliant)
- S/L 1.1, L 1.2, S/L 4.1, L 4.2, S/L 16.1, L 16.2

Tributary Interfaces

- E1/DS1, E3/DS3
- STM-1o / STM-1e
- 10/100/1000 Ethernet Interfaces

Cross Connect

- 1008 x 1008 VC-12 equivalent or 64 x 64 STM-1 equivalent
- Fully non-blocking
- Line-to-Line, Line-to-Tributary, Tributary-to-Line, Tributary-to-Tributary.

Technical Specifications

Power Supply

- Power Input: -48V DC
- Power consumption: less than 85W

Physical Dimensions

- (H x W x D): 177 x 482 x 232 mm
- Can be mounted on a 19" or 23" or 600 mm rack.

Network Protection

- SNCP, 1+1 MSP (as per ITU-T Rec. G.841)
- VC-12, VC-3 level path protection

Network Management

- RS-232 port for craft interface
- V.24/V.28 Modem interface for remote management
- In-band channel control
- 10/100 Base-Tx (RJ45) management interface
- SNMP interface for NMS
- External Alarm interface and indicators

Maintenance

- Higher-order and Lower-order POH, SDH level alarms
- Performance monitoring as per ITU-T Rec. G.826 and G.784
- Local and remote loop-back
- Remote software download.

Optional Hardware Redundancy

- Power Supply redundancy
- Cross Connect, Timing and Control System Redundancy.

Timing & Synchronization

- Timing & Synchronization of System as per ITU-T Rec. G.813
- Internal oscillator capable of supplying a G.813 compliant Stratum-3 SEC
- SSM support on S1 byte
- External Timing interfaces: Two E1 BITS interfaces (G.703)
- Accepts/provides 2 Mbps/2 MHz clock References.

Order Wire Support

- E1/E2 bytes for Express Order Wire
- F1 byte for user data channel
- 7 input alarms and 4 output alarms

Environmental

- Operating Temperature: -5°C to 50°C
- Relative Humidity: 10% to 90%, non condensing.

