VCL-STM-1 Monitoring Groomer

Product Overview

The VCL-STM-1 Monitoring Groomer is a cost-effective monitoring and grooming equipment which may be used to "non-intrusively" monitor "bi-directional" STM-1 links through a 80:20 optical splitter patch panel and allow the user to select 64Kbps time-slots and groom them to E1 output ports, which may be then connected to E1 probes, E1 signaling analyzers and billing servers etc.

The equipment provides as many as 32 E1 output ports to which the selected / groomed 64Kbps time-slots may be output.

The figure shown below, illustrates a typical "non-intrusive", bi-directional monitoring application of an STM-1 link in both east and west directions and the groomed time-slots are output to E1 interfaces.

Features

Single box solution - capable of "monitoring" a bi-directional STM-1 optical link and "grooming" the selected 64 Kbps, DS-O time-slots to output E1 Ports.
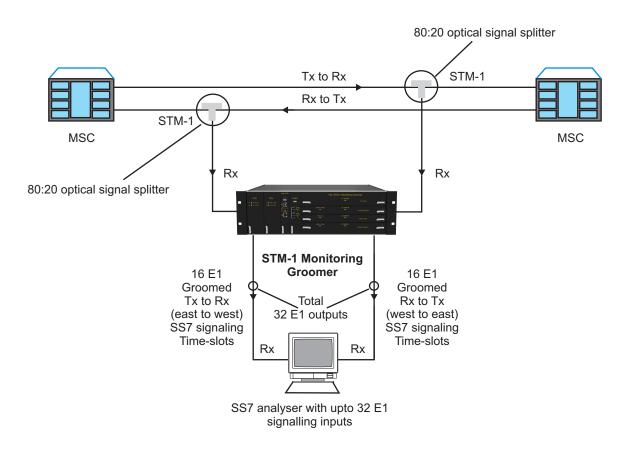Compact size.
Integrated optical amplifier.
Modular.
Easy to configure and manage.
Remote access.
Dual Power Supply Input / Dual Power Supplies.
-48 V DC operation.

Application Diagram - STM-1 link monitoring

Note: The optical signal is "tapped" through an optical patch panel using a 80:20 optical signal splitter.

Technical Specifications

STM-1 Input Interfaces

Maximum number of STM-1o Inputs	2 (For bi-directional monitoring)
Type of STM-1 signal input	1310nm or 1550 nm (ITU-T G.957 compliant)
Minimum STM-1 Input signal	-38.5dB
STM-1 Interface(s)	SFP - LC connector

E1 Output Interfaces

E1 interface outputs	32
Conformity	G.703
Framing	G.704
Bit rate	2048kbps $\pm$ 50ppm
Code	HDB3
Nominal Impedance	120 ohms balanced
Peak Voltage of a mark For 120 ohms balanced Interface	3.0 V $\pm$ 0.3 V
Peak Voltage of a space For 120 ohms balanced Interface	0 V $\pm$ 0.3 V
Nominal Pulse Width	244ns
Pulse Mask	As per CCITT rec. G.703

Power Supply

Power Input	-48V DC nominal, -36V to 60V DC range
Power consumption	Less than 60 Watts
Maximum current Consumption	1.25 Amps @ -48V DC

Timing & Synchronization

- Loop Timed (clock derived from STM-1 input signal) on Port A or Port B
- Internal Clock
- External Clock (120 Ohms Impedance)
- 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

Management

- RS232 Serial (COM) Interface
- 10/100 Base-T/RJ-45 management interface
- Alarm Indicators and External Alarm Outputs

Physical Dimensions

Dimensions (H X W X D)	133 mm x 477 mm x 260 mm
Weight	8.5 Kg

Environmental

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

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