



## **ORION TELECOM NETWORKS INC.**

# **VCL-STM-1 Monitoring Groomer**

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## **Product Brochure & Data Sheet**

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## 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.

## VCL-STM-1 Monitoring Groomer

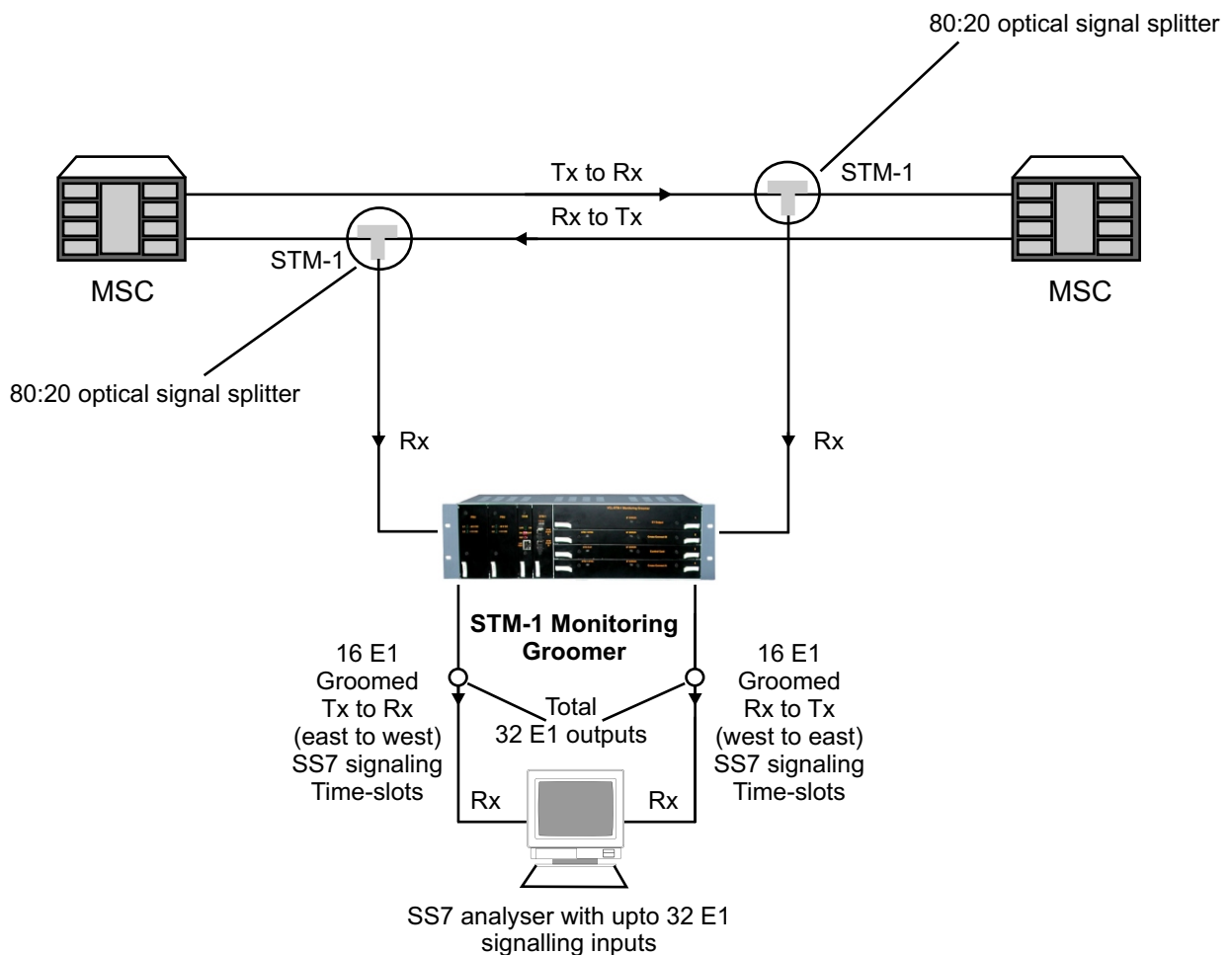


Front View

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.

### Application Diagram STM-1 link monitoring



#### Note:

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

## 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

## Technical Specifications

<b>STM-1 Input Interfaces</b>	
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
<b>E1 Output Interfaces</b>	
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

## Technical Specifications

<b>Power Supply:</b>
Power Input: -48V DC nominal, -36V to 60V DC range
Power consumption: less than 60 Watts
Maximum current consumption: 1.25 Amps @ - 48 V DC
<b>Timing &amp; Synchronization:</b>
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
<b>Management:</b>
RS232 Serial (COM) Interface
10/100 Base-T/RJ-45 management interface
Alarm Indicators and External Alarm Outputs
<b>Physical Dimensions:</b>
Dimensions (H X W X D): 133 mm x 477 mm x 260 mm
Weight: 8.5 Kg
<b>Environmental:</b>
Operating Temperature: 0° to 50°C
Relative Humidity: 10% to 90%, non-condensing

Technical specifications are subject to changes without notice.  
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