

COMARRA

TELECOM TRANSMISSION SOLUTION



64 Port Plus - T1 Monitoring Groomer

Product Brochure & Data Sheet

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64 Port Plus - T1 Monitoring Groomer

Introduction

The VCL-MegaConnect, 64 Port Plus - T1 Monitoring Groomer is suitable for non-intrusive monitoring of upto 32, "live" T1 traffic links, bidirectionally (i.e. in both transmit and receive directions through its 64 T1 receivers) through a high impedance (Hi-Z) path. Additionally, the equipment also provides 16 output T1 ports that shall connect the aggregated time-slots which have been non-intrusively "monitored" from the 32, "live" T1 traffic links to the user's protocol analysers, test probes, etc.

Description

The VCL-MegaConnect™, 64 Port Plus - T1 Monitoring Groomer, occupies only a 3U high rack-space, and is a compact 19-inch stand-alone unit. The unit is powered by and operates on a dual (1+1 protected) -48V DC power supply. An AC mains option is also available with an external AC-DC converter.

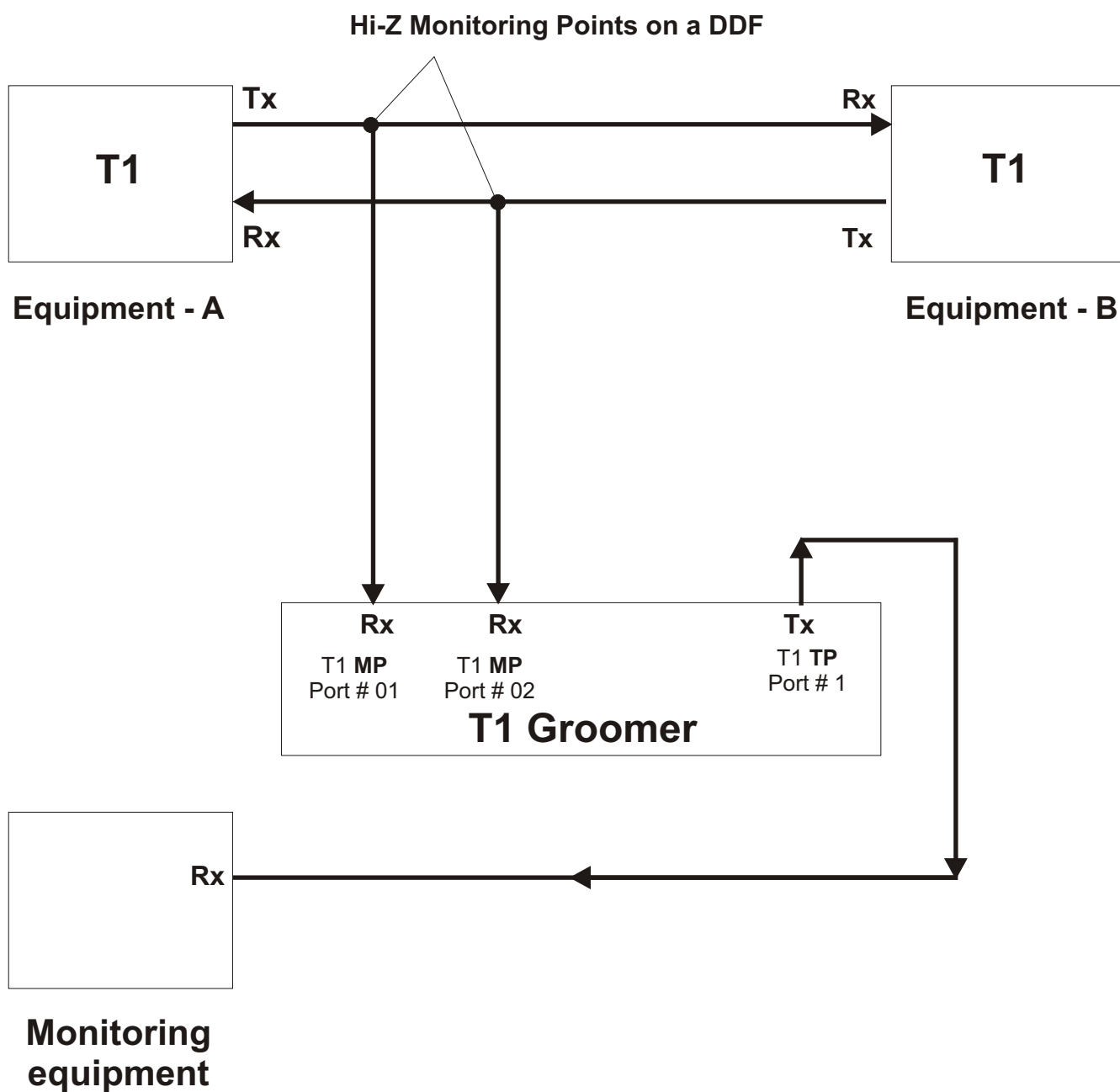
The equipment is provided with BOTH, RS232 Serial Interface for COM Port connection and as well as a TCP/IP LAN Interface (10BaseT) for providing equipment access through Telnet over a LAN/TCP/IP link. The user may select and use either of these ports for executing HyperTerminal text commands for configuration etc. The access for configuration and system management is provided through CLI (Command Line Interface) text commands which may be executed either from a serial (COM) Port of a PC or through the TCP/IP 10/100BaseT LAN Interface. The 10/100BaseT LAN Interface allows the equipment to be connected on a TCP/IP network for remote access for configuration and monitoring over LAN/TCP/IP link. The system is also supplied with an easy to use Windows (95, 98, Me, XP) Graphical User Interface that provides the user a complete control to prepare multiple configuration "maps" and store them as easy to read data files. Dry contact relay alarm output is also available at rear of the system to connect the system to an external audio/visual alarm output through a dry relay contact.

The Groomer is capable of non-intrusively monitoring upto 32 "live" T1 links and grooming the selected 64 Kbps time-slots to the 16 additional output T1 Ports provided in the equipment. The 64, T1 receivers of the Groomer shall connect to the 32, T1 "live traffic" links which are to be Monitored, Non-Intrusively. 16 additional (Normal-Z) output T1 Ports are also provided by the equipment which shall route the aggregated data of the "monitored" time-slots to the user's test equipment, such as protocol analysers, test probes, billing servers etc.

The Groomer (T1 Monitoring DACS) is capable of monitoring a -20dBdsx (0.3Volt Pulse) T1 signal through a Hi-Z path, without in any way affecting or disturbing the "live" T1 traffic that is required to be monitored.

The equipment offers the user with complete flexibility to choose and select time-slots from each of the 32 T1 links that are being monitored, without limitation or restrictions, through the internal TSI non-blocking switch (data received by the equipment's 64 T1 receivers) and then aggregate the selected time-slots to the 16 output T1 ports that shall connect to the test probes etc.

Non - Intrusive Monitoring Application



Where TP is testing T1 Point and MP is Monitoring T1 Point.

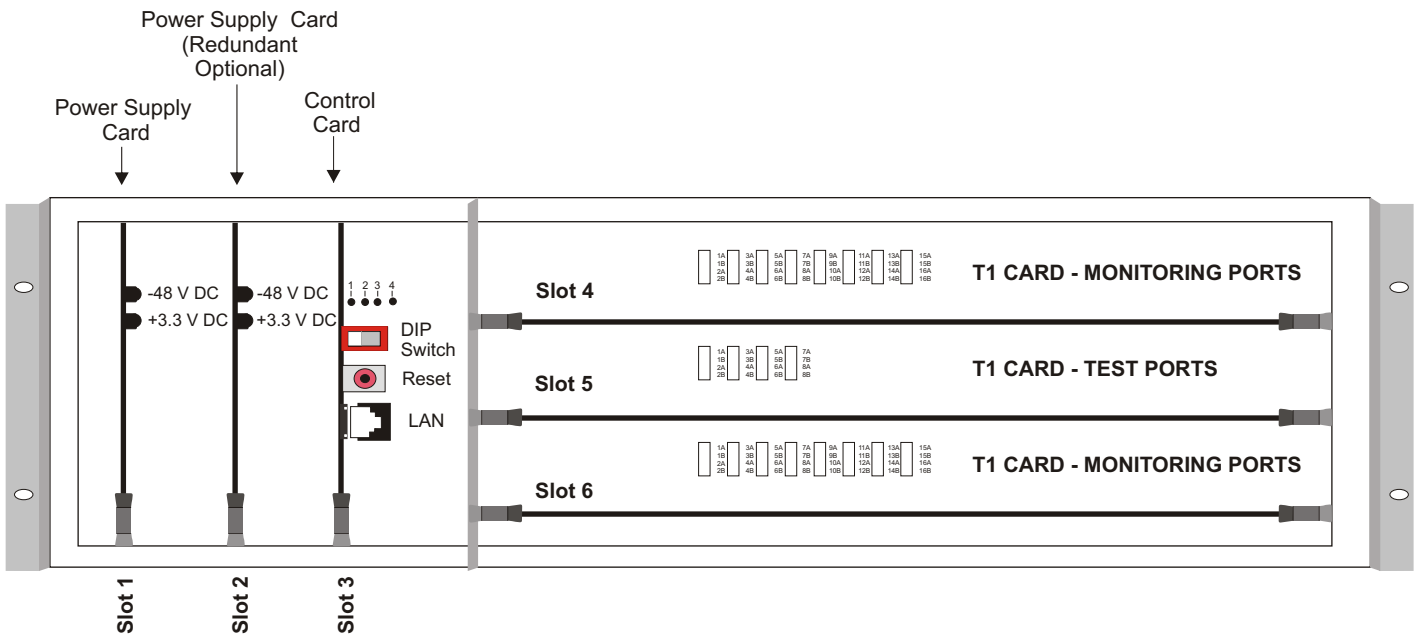
VCL-MegaConnect T1, 64 Port Groomer

Shelf Description:

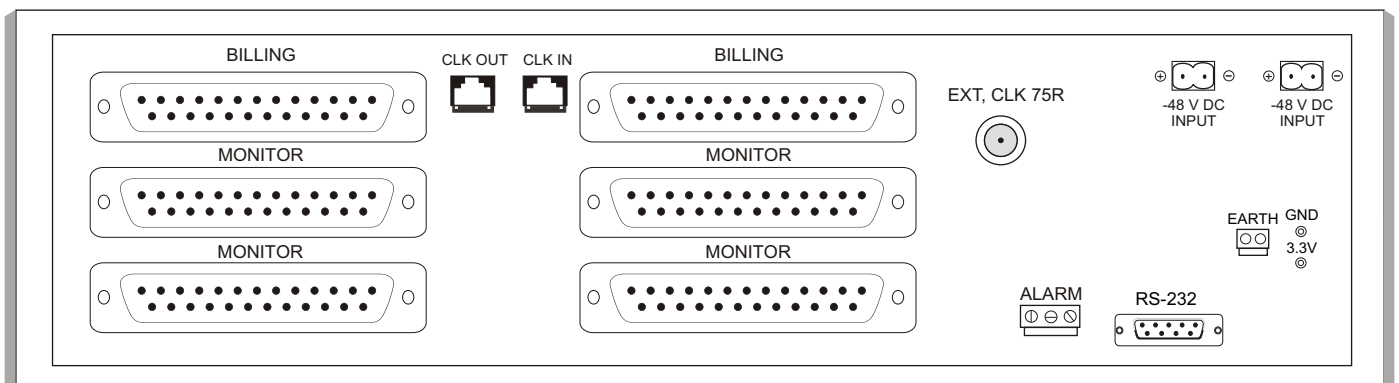
The VCL-MegaConnect T1, 64 Port Groomer unit is a 3U, 19-inch shelf, fitted with a backplane that provides rear access of all external interfaces. The 1.544 Mbps electrical I/Os, power input, alarm extension and the NMS port are all accessed from the backplane.

The 1.544 Mbps, T1 Interfaces are, 100 Ohms twisted pairs.

Front View of the Shelf



Rear View



Indications and Alarm Monitoring

- Loss of incoming signal at any T1 Port
- Configuration Error Alarm
- Clock Status
- 1 to 64 T1 Ports - LED indicators to indicate the status of each T1 Monitoring Port
- 1 to 16 T1 Ports - LED indicators to indicate the status of each T1 Test Port
- +3 Volts Power Supply
- -48V DC Input Voltage present
- Configuration Error

Programmable Features

- Specifying the priority sequence for clock selection
- Enabling or Disabling T1 Ports (masking) of the T1 Ports that are not in use
- Creating a cross connect between T1s at DS-O level (single time-slot level) using the CLI text commands or Windows based GUI
- Telnet interface for remote programming

Status Monitoring

- Clock Selection
- Status of alarms
- Enabled/Disabled status of T1 Ports
- Monitoring of the VCL-MegaConnect T1 64 Port Groomer, status and configuration

Shelf Configuration

VCL-MegaConnect 64 Port Plus - T1 Groomer			
S. No.	Part #	Product Description	Qty
1.	MC-64T1/16-MON-GROOMER	VCL-MegaConnect 64 Port Plus - T1 Groomer	1

Technical Specifications

Monitoring T1 Ports (shall connect to the T1 links that are to be Monitored) - Monitored Port (MP)

Line Rate	T1 (1.544 Mbps \pm 50 bps)
Connector	DB-37 (Female)
Impedance	Hi-Z for Non-Intrusive Monitoring
Compliance	G.703
Available Time-Slots	1-24
Jitter	G.823
Framing Structure	G.704
Framing Options	D4, ESF (Selectable)
Line Coding	AMI, B8ZS (Selectable)
Compliance (for Hi-Z Monitoring)	G.772
Receive Signal Sensitivity	Upto -20dBdsx (0.3 Volt Pulse)
Number of T1 Receivers to connect to the Monitored Links	64 T1 Receivers. Capable of non-intrusively monitoring upto 32 T1 links bidirectionally

Test T1 Port (shall connect to the Test Equipment) - Test Port (TP)

Line Rate	T1 (1.544 Mbps \pm 50 bps)
Connector	DB-37 (Female)
Impedance	100 Ohms
Available Time-Slots	1-24
Jitter	G.823
Pulse Shape Compliance	G.703
Signal Pulse	3.0 Volt - as per G.703
Framing	G.704
Number of T1 Ports	16

Power Supply

Power Supply	-48V DC (-40V DC to -60V DC)
Power Consumption	30 watts

Time-slot selection

Any MP to Any TP through an internal, best byte, non-blocking TSI Switch.

Clock

Internal	AT&T Tr62411, Telcordia GR-1244-CORE Stratum 3, Stratum 4, Enhanced and Stratum 4, ETSI ETS 300 011, ITU-T G.813 Option 1
Loop-timed	T1 Port Selection
External	100 Ohms - 1.544 Mbps 75 Ohms - 2.048 MHz

Management and Control

Serial management port (RS232) - COM Port
10/100 BaseT for remote management over a LAN
10/100 BaseT Telnet over a TCP-IP network

Xport (Telnet Specification)

Network Interface	RJ-45 Ethernet 10BaseT or 100BaseT-TX (auto sensing)
Compatibility	Ethernet Version 2.0 IEEE802.3
Protocols Supported	ARP, UDP/IP, TCP/IP, Telnet, ICMP, SNMP, DHCP, BOOTP, TFTP, Auto IP, SMTP and HTTP
LEDs	10Base-T and 100Base-TX Activity, Full/half duplex.
Management	Serial login, Telnet login, GUI (Graphical User Interface)
EMI Compliance	Radiated and conducted emissions - complies with Class B limits of EN 55022:1998 Direct and Indirect ESD - complies with EN55024:1998 RF Electromagnetic Field Immunity - complies with EN55024:1998 Electrical Fast Transient/Burst Immunity - complies with EN55024:1998 Power Frequency Magnetic Field Immunity complies with N55024:1998 RF Common Mode Conducted Susceptibility complies with EN55024:1998

Command Language

Command Line Interface (English text commands)
Windows based GUI (optional)

Chassis

3U High
19-inch rack-mounting shelf

Mechanical Specifications

Rack Mounting	Standard 19 Inch. DIN Rack
Height	133.00 mm (3U)
Depth	260.00 mm
Width	477.00 mm
Weight	4.00 kg.

Ordering Information

VCL-MegaConnect 64 Port Plus - T1 Groomer			
S. No.	Part #	Product Description	Qty
1.	MC-64T1/16-MON-GROOMER	VCL-MegaConnect 64 Port Plus - T1 Groomer	1

Notes : _____

Technical specifications are subject to changes without notice.
Revision 03 - March 10, 2007.



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