

# VALIANT COMMUNICATIONS LIMITED



## VCL-SR-MUX

G.703, 64Kbps Sub-Rate Multiplexer

### Description:

#### G.703, SR Mux 64Kbps Sub-Rate Multiplexer:



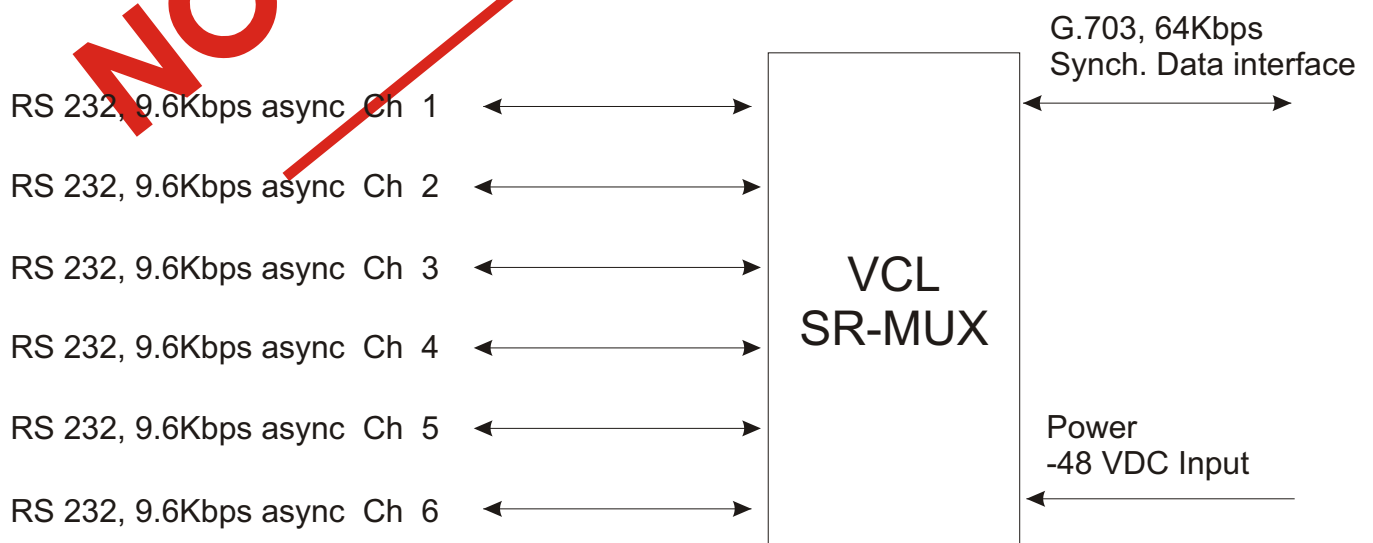
Valiant G.703, Sub-Rate Multiplexer multiplexes six 9.6Kbps RS232 asynchronous data channels to a 64Kbps, G.703 co-directional, 4 wire synchronous data channel.

The front panel has six, RS232 data ports into which upto six, RS232 asynchronous data channels @ 9.6Kbps each may be connected. The six RS232 asynchronous data channels @ 9.6Kbps are multiplexed into a 64Kbps, G.703 co-directional, 4 wire synchronous data channel, which is accessed from the system backpanel (rear).

The equipment uses data buffering and phase-lock-loop techniques to ensure error free multiplexing and demultiplexing between the synchronous and asynchronous data ports. Front panel LED indicators indicate presence of Transmit and Receive data signal on each of the data ports.

The equipment operates on a nominal -48VDC Input (-40VDC to 60VDC Input). The system also provides two dry-contact relay outputs (normally open) on the backpanel (rear) which close to indicate the presence of a system alarm.

Block Diagram of VCL Sub-Rate Multiplexer



## Applications:

- Thin-Route Telephony satellite, radio and data networks
- Establishing Multiple Telemetry Links
- SCADA Networks
- To transport multiple compressed voice channels interface with VCL-TRLD to provide upto six voice channels on 64Kbps links.
- Interface to 64Kbps radios

## Specifications of G.703 @ 64kbps, Synchronous Data Interface Port

Number of Interfaces per System	1
Conformity	To (CCITT) Rec. G.703
Type	4 Wire, co-directional
Mode	Synchronous
Bit Rate	64Kbps

## Specifications of RS 232 @ 9.6Kbps, Asynchronous Data Interface Port

Number of Interfaces per System	6
Type	RS 232 Tx, Rx, Gnd
Mode	Asynchronous
Baud Rate	9.6 kbps - Fixed
Data Size	8bits
Parity	None
Flow Control	None ( Xon / X off )
Stop Bit	1

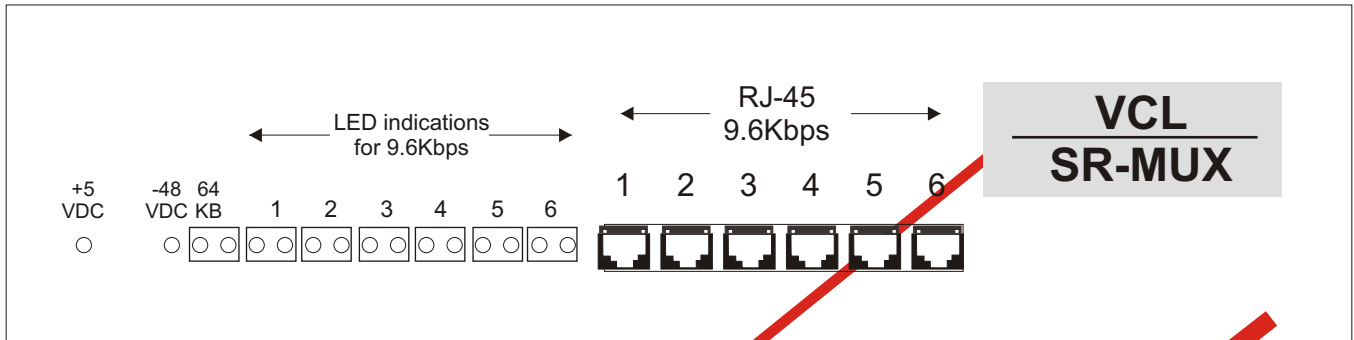
## External Interfaces And Connectors :

VCL G.703 Subrate Multiplexer provides the following interfaces to the external world:

- -48V input for on-board power supply
- 2 External alarm extensions for visual and audible alarms.
- 6x RS 232, 9.6Kbps asynchronous data interface(s)
- 1x64Kbps, G.703, Co-directional synchronous data interface

\* Please see figures on page 3, 4, 5 for reference.

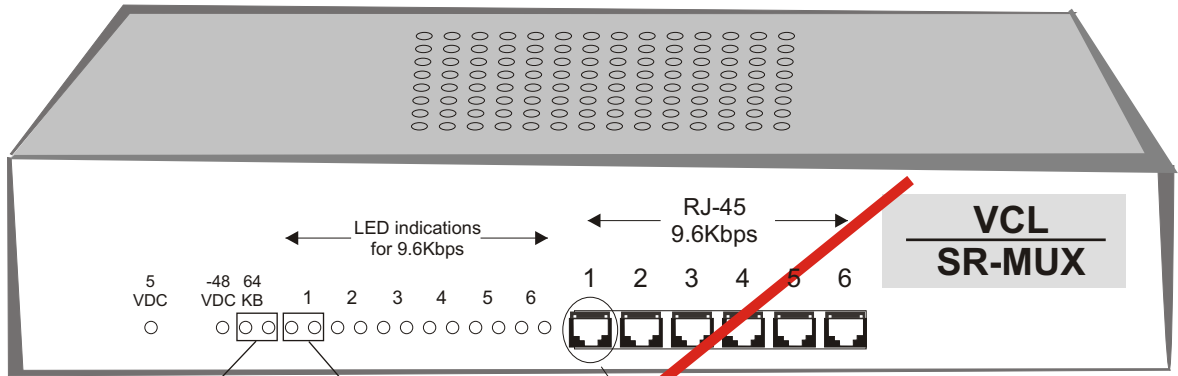
### Front View of VCL- G.703 SR-MUX



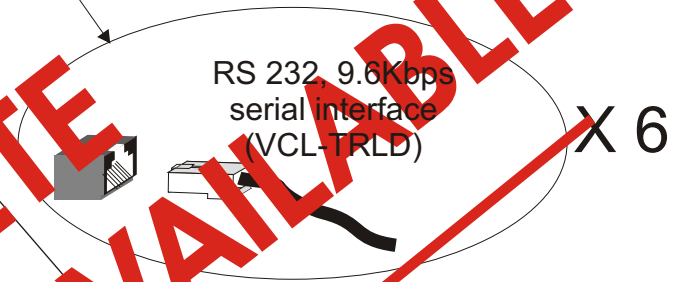
#### LED Description of VCL- G.703 SR MUX

- 1 +5 VDC present (Green LED)
- 2 -48 VDC present (Green LED)
- 3 Yellow LED presence of 64Kbps Transmit Signal
- 4 Green LED presence of 64Kbps Receive Signal
- 5 Yellow LED presence of 9.6Kbps (port 1) Transmit Signal
- 6 Green LED presence of 9.6Kbps (port 1) Receive Signal
- 7 Yellow LED presence of 9.6Kbps (port 2) Transmit Signal
- 8 Green LED presence of 9.6Kbps (port 2) Receive Signal
- 9 Yellow LED presence of 9.6Kbps (port 3) Transmit Signal
- 10 Green LED presence of 9.6Kbps (port 3) Receive Signal
- 11 Yellow LED presence of 9.6Kbps (port 4) Transmit Signal
- 12 Green LED presence of 9.6Kbps (port 4) Receive Signal
- 13 Yellow LED presence of 9.6Kbps (port 5) Transmit Signal
- 14 Green LED presence of 9.6Kbps (port 5) Receive Signal
- 15 Yellow LED presence of 9.6Kbps (port 6) Transmit Signal
- 16 Green LED presence of 9.6Kbps (port 6) Receive Signal

## External Connection to / from VCL-G.703 SR-MUX



Note : When the 64Kbps, G.703 co-directional signal is present (connected), then both LEDs of 64kbps data port shall be lit. The yellow LED indicates the presence of the 64kbps "transmit" signal and green LED indicates 64kbps "receive" signal.

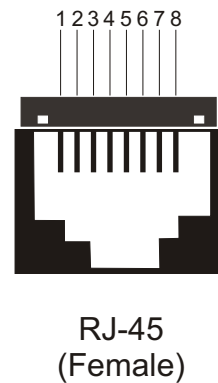


When the data connection is made on the RJ-45 (RS232) (9.6Kbps) *serial data port*, the corresponding Transmit and Receive LED indicators of that port shall light up indicating the presence of the Transmit and Receive signal.  
 Note : When the 9.6kbps signal is present, then both LEDs on serial data (9.6Kbps) port shall be lit. The yellow LED indicates the presence of the 9.6kbps "Transmit" signal and green LED indicates 9.6kbps "Receive" signal.  
 \*Any of the serial data ports # 1 thru 6.

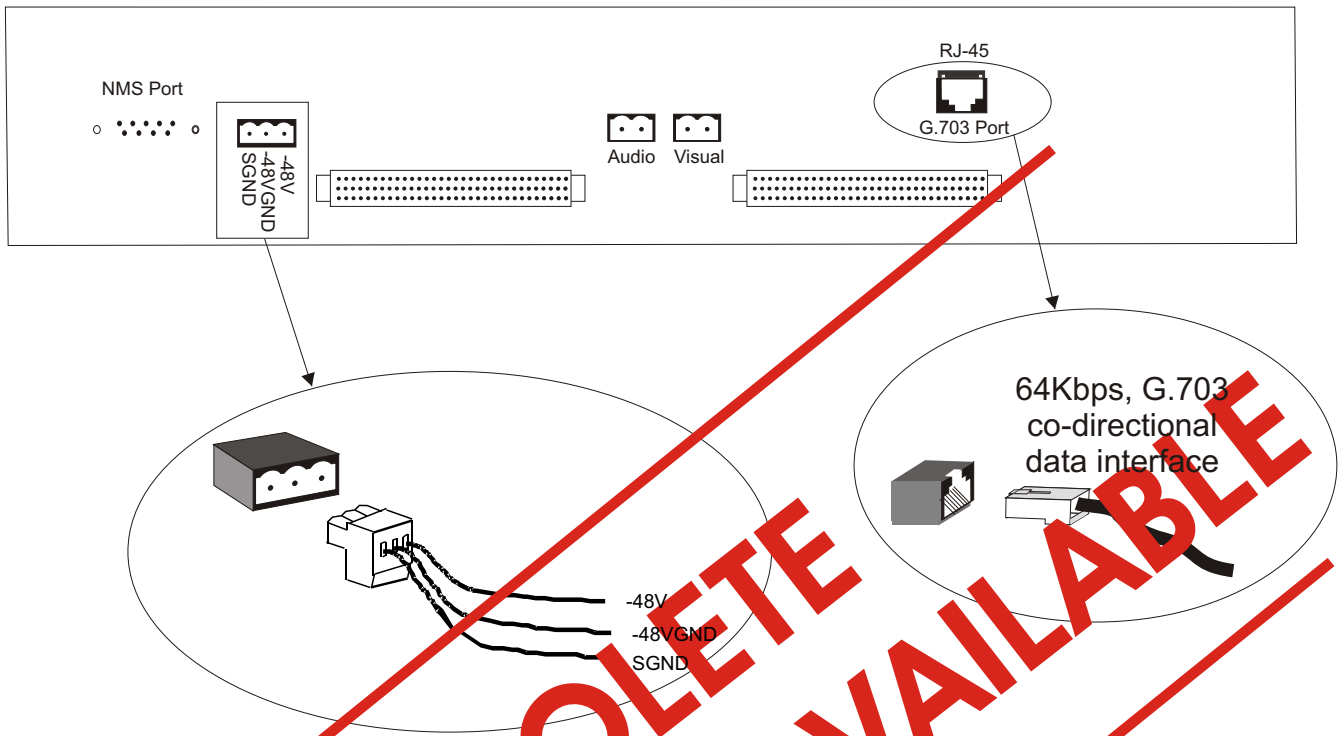
NO LONGER AVAILABLE

### Pinouts of RS 232, asynchronous 9.6Kbps serial data port

RJ - 45 Pin #	Signal in RJ - 45F (RJ-45 - Female)	Will connect to
3	Data In - To SR-Mux	Data Out
6	Data Out - From SR-Mux	Data In
4	Ground	SG

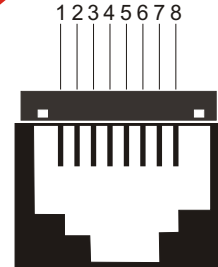


## Back Panel of VCL-G.703 SR-MUX



### Pinouts of G.703 @ 64Kbps, Synchronous Data Interface Port

Signal on RJ - 45 (female)	RJ - 45 Pin #
RJ - 45 (1) - I/P data	5
RJ - 45 (1) + I/P data	4
RJ - 45 (1) - O/P data	2
RJ - 45 (1) + O/P data	1



RJ-45 (Female)

Technical Specifications are subject to change without notice.

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Revision 03, 1st January 2003.

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