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## VCL-Ethernet to E3 Converter (Ethernet over E3 Converter)

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Product Brochure & Data Sheet

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**COMARRA**

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# Ethernet to E3 Converter

**Comarra** offers its Ethernet to E3 converters (Ethernet over E3 Converters) packaged in a 19-inch rack-mountable chassis.

**Comarra** Ethernet to E3 converters (Ethernet over E3 Converters) provides a 100BaseT data interface on the user side which may be used to transport Ethernet traffic over a E3 link. The converter provides a simple and cost effective method to convert and transport 100BaseT ethernet data over a E3 link.

## Features & Highlights

- G.703 E3 34 Mbps to Ethernet interface converter.
- 100BaseT full duplex fast Ethernet in accordance with IEEE802.34, RJ-45.
- Provides framed and un-framed E3 option
- Stratum 3 Clock
- Local & Remote access and monitoring with either RS232 or 10/100BaseT for remote management over TCP-IP network
- Power Supply: -48 VDC or AC power supply options available.

## Applications:

- 100 BaseT Ethernet to E3 Conversion (100BaseT over a E3 interface).

## Indications and Alarm Monitoring:

- E3 Loss of Signal
- Loss of incoming signal at 100 BaseT Ethernet
- Configuration Error Alarm
- Clock Status
- +3 Volts Power Supply
- -48VDC present
- Configuration Error

## Programmable Features:

- Telnet interface for remote programming by using CLI text commands.
- Easy to use programing using Windows based GUI.

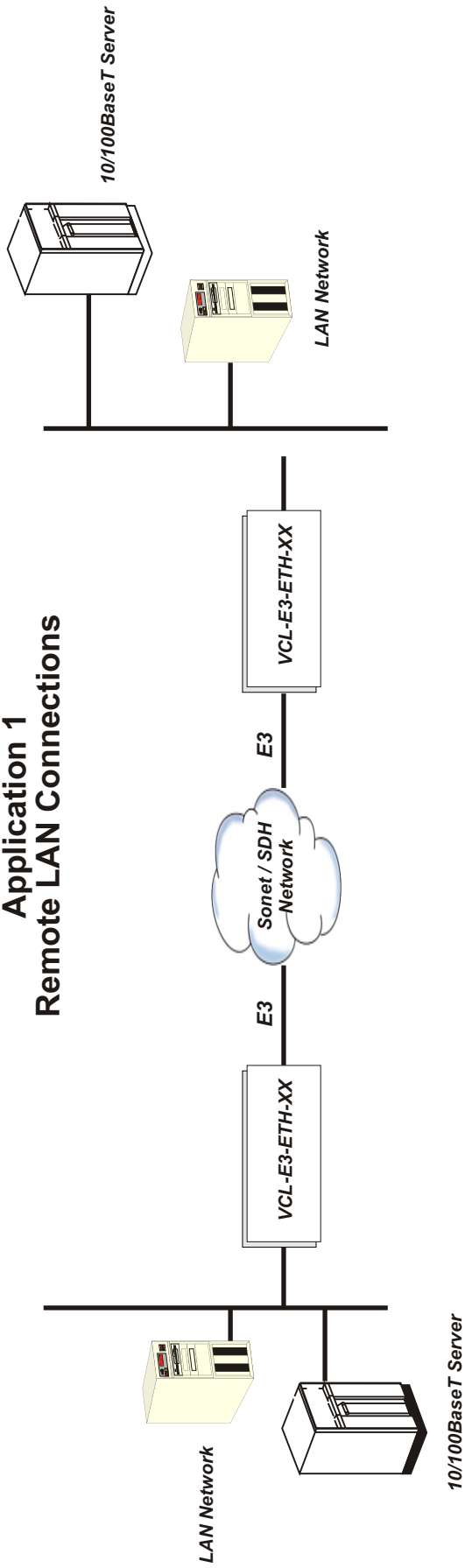
## Status Monitoring:

- Status of alarms on E3 interface
- Status of alarms on 100BaseT interface.

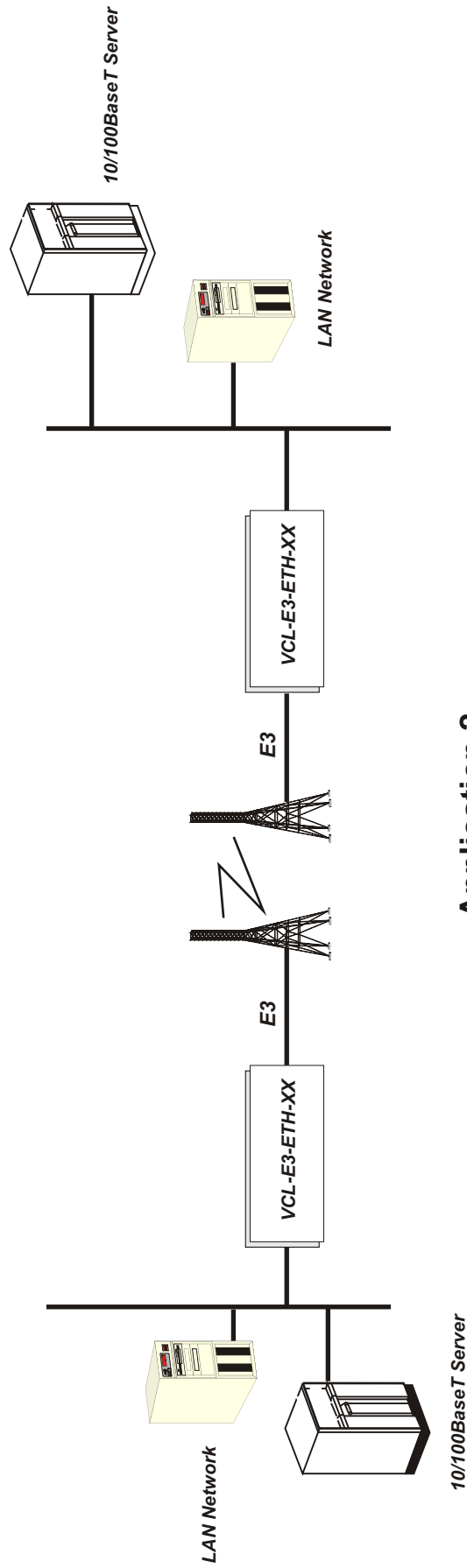
Ethernet Interface	
Interface Types	100BaseT
Standards Compliance	IEEE 802.3-2002 RFC1662 RFC2615 X.86 RMII
Interface Rate	100BaseT limited to E3 transmission rate
Protocol	User Programmable HDLC And LAPS mapping

E3 Interface	
Bit Rate	34.368 Mbps
Bit Rate Tolerance	20ppm
Line Code	HDB3
Frame Structure	as per G.751
Interfaces	as per G.703
Connectors	BNC, Co-axial Un-balanced
Impedance	75 Ohms

### Application 1 Remote LAN Connections



### Application 2 Remote LAN Connections over Wireless E3



## Technical Specifications

### DC Adapter Power Supply Specifications (DC Option)

Power Supply:	-48VDC (-40VDC to -60VDC)
Input DC voltage	-48V DC ( nominal )
Range of input	-40V to -60V DC
Output voltages	+3.3V
Full Load Output Current	2A at +3.3V
Input Voltage Reversal Protection	Provided in the Card
Over Current Protection	2A for +3.3V
Short Circuit Protection	Current limit - 3A. Recovers on removal of short
Under Voltage	< 3.17V
Over Voltage	3.5V
Efficiency at full load	>90%
Ripple at full load	<5mVrms
Spike at full load	<50mV

### AC Adapter Power Supply Specifications (AC Option)

Input AC voltage	100 - 240 Volt AC
Range of Input Voltage	100 V To 240 V AC
Output voltages	7.5 VDC to 9.0 V DC DC input polarity protection.
Maximum Full Load Output Current	2.5 A at 7.5 VDC / 9.0 V DC
Input Voltage Reversal Protection	Provided in the Card
Efficiency at full load	>86%

### Chassis:

1U High (42 mm)  
19-inch rack-mounting shelf.

### Power Supply:

Power Supply:	-48VDC (-40VDC to -60VDC) (Optional)*
Power Supply:	AC Input (Optional)*

\* Please specify the Power Supply Option (AC or DC) which is required before placing the order. Please see ordering information in this data sheet for details.

### Power Consumption:

Power Consumption:	12 Watts
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**100BaseT Interface:**

Number of Interfaces:	One
Interface Types	100BaseT
Standards Compliance	IEEE 802.3-2002 RFC1662 RFC2615 X.86 RMII
Interface Rate	100BaseT limited to E3 transmission rate
Protocol	User Programmable HDLC And LAPS mapping
Connectors	RJ45 (100 BaseT Electrical)

**E3 Interface:**

Number of E3 Interfaces:	1
Bit Rate	34.368 Mbps
Bit Rate Tolerance	+/- 20ppm
Line Code	HDB3
Frame Structure	as per G.751
Interfaces	as per G.703
Connectors	BNC, Co-axial Un-balanced
Impedance	75 Ohms
Permissible Attenuation	12dB @ 17184 KHz
Signal Level to declare Loss of Signal condition	-35dB (maximum)
Signal Level to clear Loss of Signal condition	-15dB (minimum)

**Clock:**

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	Timed from E3 Interface.
External	75 Ohms - 1.544 Mhz (TTL levels)

**Management and Control:**

Serial Management Port - RS232 interface (RJ-11 connector)

10/100 BaseT for Remote Management over a LAN.

10/100 BaseT Telnet over a TCP-IP Network.

**Command Language:**

Command Line Interface (english text commands)

Windows based GUI (optional).

**NMS (with Telnet) Xport Specifications**

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 & 100Base-TX Activity, Full/half duplex.
Management	Internal web server, SNMP (read only), Serial login, Telnet login
EMI Compliance	Radiated & conducted emissions - complies with Class B limits of EN55022:1998 Direct & 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 EN55024:1998 RF Common Mode Conducted Susceptibility - complies with EN55024:1998

## Ordering Information

<b><u>VCL-E3 to Ethernet Converter</u></b>			
S. No.	Part #	Product Description	Qty
1.	VCL-E3-ETH-DC	E3 to Ethernet Converter with -48VDC Input	1
2.	VCL-E3-ETH-AC	E3 to Ethernet Converter with AC Power Input	1

Technical specification are subject to change without notice.  
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