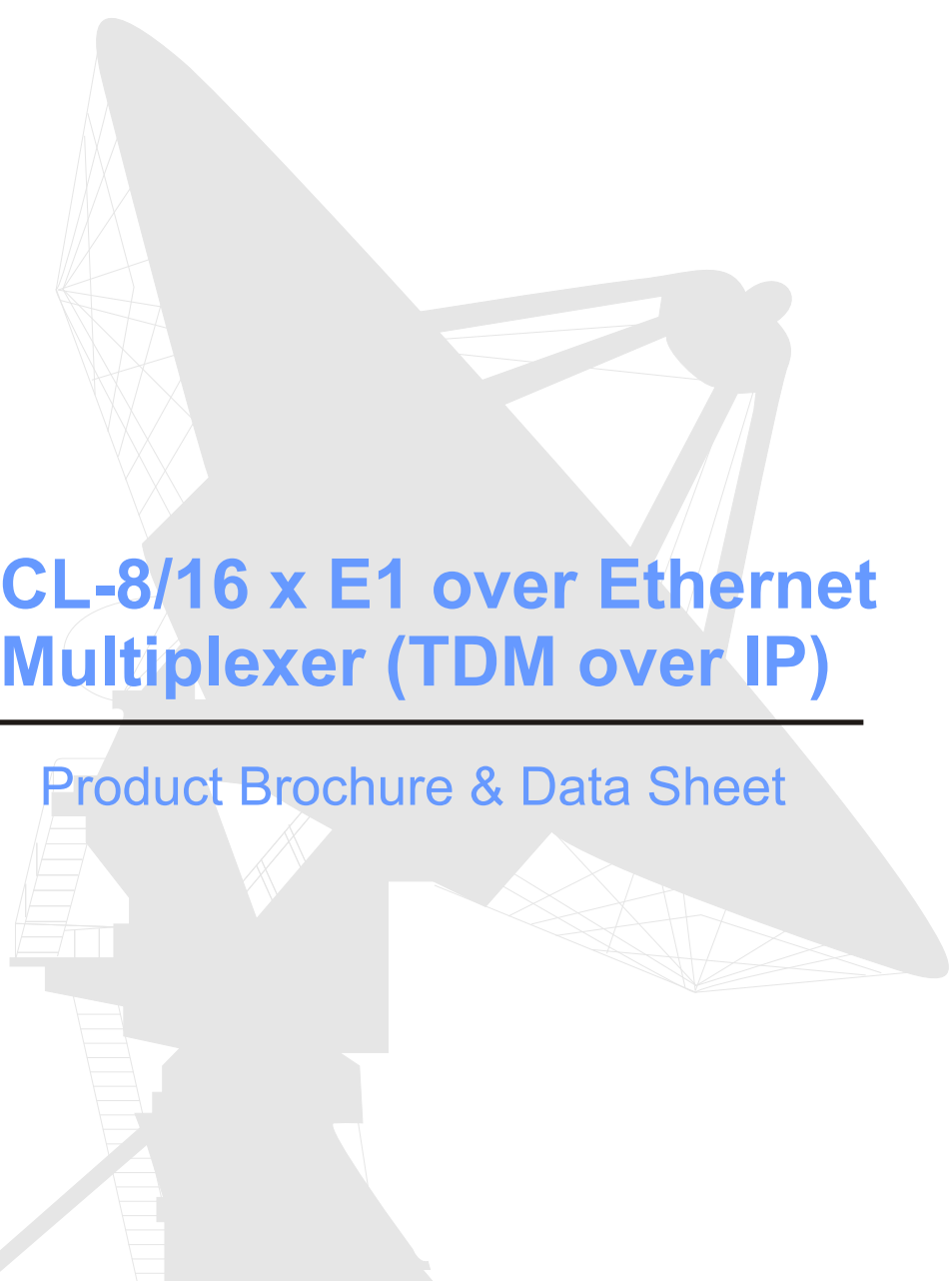
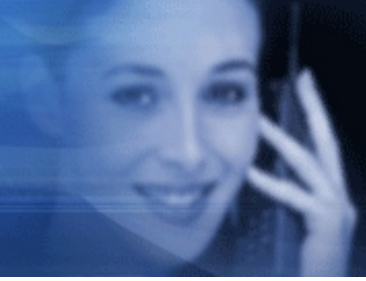


COMARRA

TELECOM TRANSMISSION SOLUTIONS



VCL-8/16 x E1 over Ethernet Multiplexer (TDM over IP)

Product Brochure & Data Sheet

COMARRA

E-Mail: info@comarra.co.uk

Web Site: <http://www.comarra.co.uk>

Description

The VCL-8/16 x E1 over Ethernet multiplexer (TDM over IP) product supports transportation of 8 E1 or 16 E1s and 5 GE electrical ports and 1 GE optical port. The uplink ports and user data ports are IEEE 802.3 compliant, 10/100/1000M auto-sensing Ethernet ports.

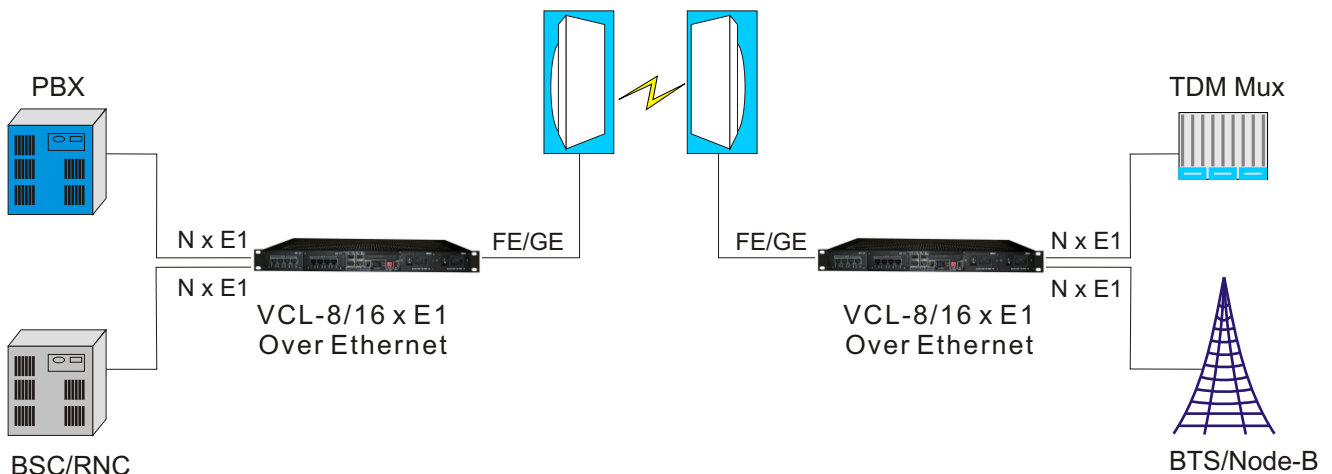


VCL-8/16 x E1 Over Ethernet Multiplexer (TDM over IP)

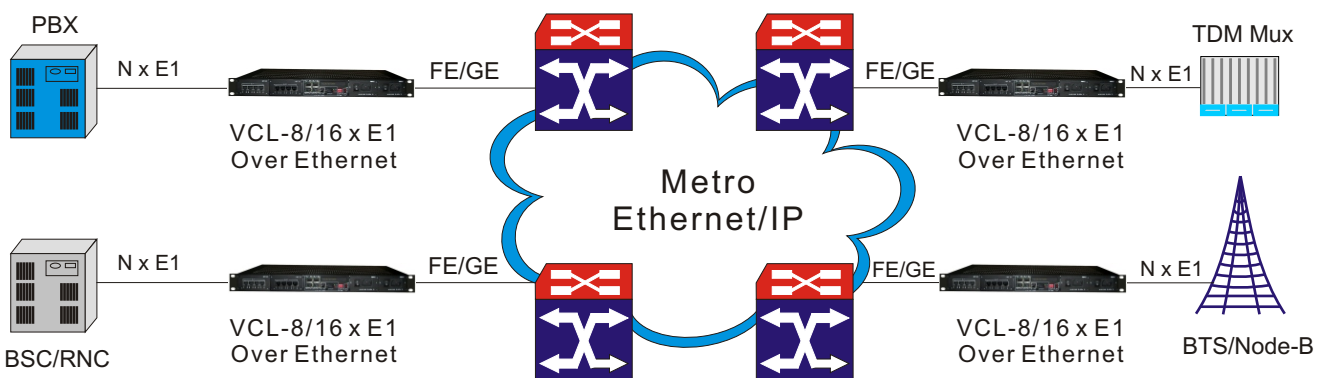
The state-of-art design provides the highest availability with the accurate timing signal and data bit stream reconstruction.

Telecom and Enterprise users can save a lot of equipment costs and generates new revenue by offering different types of services over their packet-switched infrastructure. It is also suitable for connecting to the wireless equipment to achieve fast deployment of E1/T1 services. One particular application is to build E1/T1 links with low cost Wireless LAN bridges, replacing much more costly microwave radios. Operators can use VCL- 8/16 x E1 over Ethernet multiplexer (TDM over IP) to provide legacy TDM services over wired or wireless Ethernet/IP network.

Application Diagram



(A) Typical Application in Wireless Network



(B) Typical Application in Wired Network






Features

- Provides 8 E1 or 16 E1s ports
- Provides 5 GE electrical ports and 1 GE optical port 6 GE ports serve as network uplinks or users ports of the 5 GE electrical ports may act as Management Port
- User-friendly Web server supported for easy setup and maintenance, Alarm logs provided
- Support Ethernet spanning tree protocol which enable normal work and protection in ring and mesh topology
- Support SNMP V1/V2 network management
- Ethernet built-in layer 2 switch, supports VLAN, complies with IEEE 802.3x, 802.1P
- Provide two pluggable E1 cards, each card supports 8 E1/T1s
- Point to point and point to multipoint application supported
- Stable E1 clock recovery, low jitter and wander
- Low processing delay for E1 channels, high bandwidth usage efficiency
- PCM frame synchronization protection
- User definable encapsulation packet size for different applications
- Support Ethernet encapsulation and UDP/IP protocol encapsulation
- Support VLAN settings for E1 service and in-band VLAN management
- Jitter buffer for packet delay variation (PDV)
- Local Ethernet port throughput limit assuring E1 QoS
- 120Ω balanced E1/T1 port, RJ-45 connector
- Supports 75Ω unbalanced port (optional extra)
- Support cascade concatenate for more than 16 E1 ports
- Online Upgrade for software and hardware
- - 48 V DC Power supply redundancy

Technical Specifications

Item	Description	
Model	VCL- 8/16 x E1 Over Ethernet Multiplexer (TDM Over IP)	5 GE electrical ports and 1 GE optical port, upto 16 E1s
End to end delay Latency	Ethernet to E1 frame conversion delay	4-5 ms approximately
Jitter/Buffer Size		Max 120 ms
Interfaces	IP Ports	5 GE electrical ports and 1 GE optical port Comply with IEEE 802.3, 802.1Q, 802.1P Speed and duplex auto-negotiation or manual
	E1 Ports	8 E1 Ports Supported 16 E1 Ports Supported Comply with G.703 Impedance: E1-120Ω or 75Ω (optional extra)
Management Port	Same as IP Ports	Web server and SNMP management Supported
Power	Power Supply	Pluggable dual power supply
		2 x - 48 V DC or DC+AC
		-48V~-72V DC or 100 ~ 240V AC
	Consumption	≤15W
Working Environment	Temperature	0~ 50°C
	Relative Humidity	≤ 90% (non-condensing)
Dimension	W x H x D (mm)	440 x 44 x 231 (1U height)

Interoperability Table with Wireless Bridges

LOGO	Manufacturer	Place	Model
	MOTOROLA	USA	CANOPY PTP600, 500, 400, 300, 100 series (Formerly Canopy 10/20M, 30/60M, 150/300M Backhaul Modules).
	Alvarion	Israel	BreezeNET Series B100, DS.11 etc, BreezeAccess Series LB etc .
	Proxim	USA	Tsunami™, QuickBridge20 series Tsunami™ MP.11 Series
	Firepro Wireless	India	Firepro Wireless all series
	Infinet Wireless	Russia	SkyMan NG

Note: The series TDM over IP products have excellent interoperability which could work with most of prevailing wireless bridges. .

Technical specifications are subject to change without notice.

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