

## Penril VCX 1000 Network System



### KEY FEATURES

- Provides a variety of local and remote network connectivity solutions
- Allows seamless, transparent end-to-end connectivity for your asynchronous, synchronous, LAN and X.25 users
- Provides comprehensive network wide management / configuration from a single location
- Gives terminal server capabilities using LAT and TELNET
- Hot-swappable modules, redundant power and backplane arbitration increases network availability

The **Raymar-Telenetics** Penril VCX provides the foundation for networking products available from Raymar-Telenetics. Any desired functionality and size is available by selection of VCX hardware and software modules.

The VCX 1000 can function as a Data PBX, and X.25 PAD, a statistical multiplexer, a terminal server, or any combination of these.

A single node can provide as many as 304 ports or 36 trunks. Multiple nodes can be interconnected to form a wide-area network supporting thousands of terminals and a variety of computer resources.

An extensive set of features and services allows the network administrator to manage, control, monitor, and plan his or her network.

### NETWORK MANAGEMENT

A variety of services allows node-by-node management from a single network console. Nodes, cards, ports, and trunks can be configured, monitored, or diagnosed. Configurations can be stored on disk or downloaded to a network node. Data connections can be monitored to assist terminal users experiencing problems. Noteworthy network events can be sent to a single network printer.

The VCX 1000 can also be managed by the 386 PC based Series 6000 NMS with its graphical user interface and alarm / hardware-inventory management capability.

### SECURITY

The VCX 1000 has extensive security provisions. Logon requires a user to submit a name and password. Access to trunks, dial-out modem pools and computer resources is controlled by access rights assignments. The network can be configured to be as open or as secure as the network administrator desires.

### X.25

Any trunk can be configured as an X.25 compatible interface for connection to Packet Switched Networks or Packet Hosts.

### PORT SELECTION AND CONTENTION

The VCX 1000 allows destination selection from a terminal. The destination can be a local port or a port anywhere in the network. If all ports in a desired group are busy, the request is placed in a queue and automatically connected when a port becomes free.

### AUTOMATIC CONNECTION

A VCX port can be automatically connected to a resource on behalf of the user requiring no dialog with the switch.

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# PENRIL VCX 1000 Network System

## DUAL SESSION

The terminal user can connect to two resources and "hot-key" toggle between them.

## SPEED AND FLOW CONTROL CONVERSION

All data is buffered and each end of a virtual circuit can have unique port characteristics to match the attached device. This permits speed conversion, i.e., 2400 bps terminal can dialog with a 9600 bps computer port. Also an Xon/Xoff host can interwork with a DTR printer.

## HDLC TRUNKS

All data transmitted between VCX nodes is transported using a full duplex protocol which protects against errors by retransmitting frames received in error. The statistical multiplexing protocol achieves high efficiency by transmitting data from active channels only.

## SYNCHRONOUS TRAFFIC

A TDM feature allows any synchronous protocol to be transported over the same lines as statistically multiplexed async traffic. In the case of synchronous batch traffic, when transmission is done and bandwidth not needed, the TDM is intelligent enough to give the bandwidth back to async interactive traffic under control of the RTS lead.

## LAN CONNECTIVITY

Local and remote async users can gateway to TCP/IP Telnet or DEC LAT resources via an Ethernet interface. The interface supports reverse Telnet and reverse LAT as well.

## DIRECTORY

A directory which is global or port specific can be output to the terminal user upon attachment to the switch.

## HELP

VCX has a configurable free text facility. Text screens can be given names and when connected provide useful information to the network user, such as help screens.

## CALL FORWARDING

Should a group of computer ports become inoperative or in need of maintenance all connection requested can be forwarded to an alternate set of ports.

## MNEMONIC ADDRESSING

Any port, group of ports, trunk or connection path can be given simple alphanumeric names for user selection. VCX will translate these user-friendly names into routing information.

## PORT BUSY

In the event a port(s) must be taken out of service, port busy allows a quick means to remove it from service.

## INACTIVITY TIMER

To keep idle connections from tying up valuable computer ports, VCX can automatically disconnect a user after a prescribed amount of idle time.

## MENU DRIVEN SERVICES

All services are menu driven and user-friendly making the learning process for new users simple and short.

## SOFT DRIVEN

All port/trunk parameters and network configurations are set in software stored in battery backed RAM. No switches or strap settings are necessary. Access to the configuration can be by any terminal in the network with proper access rights and passwords.

## BROADCAST

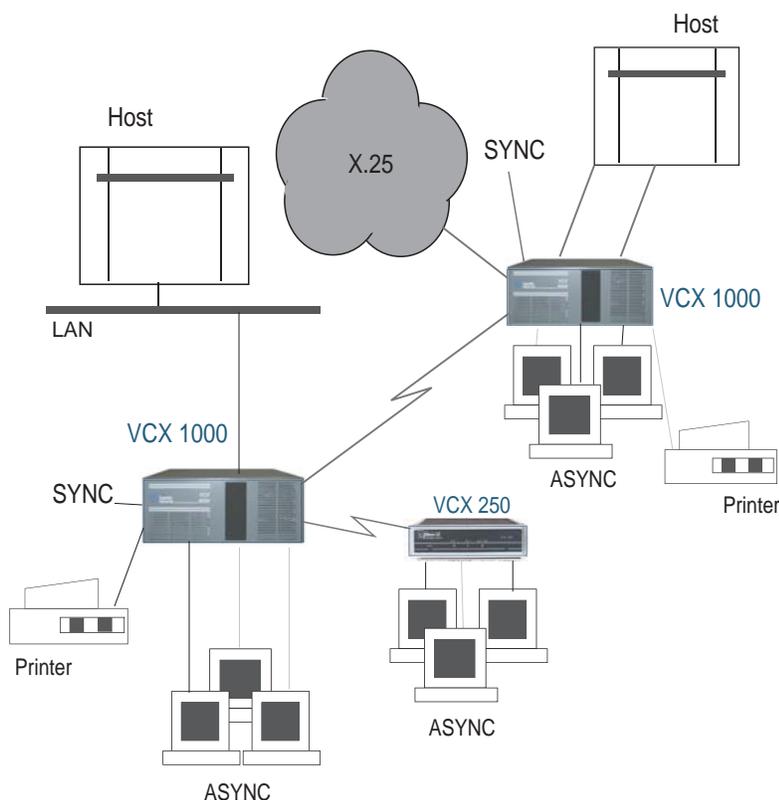
A message can be composed and sent to a single port, a group of ports, a node or the entire network. Messages can be urgent or routine. Routine messages can be blocked on a port-by-port basis.

## TRANSPARENT OPERATION

A transparent mode of operation for transfer of binary information can be invoked by the terminal user.

## LOGGING

The VCX node can log all noteworthy events. Remote nodes can be configured to pass their logging information into a single log stream for network logging.



## PRODUCT SPECIFICATIONS

### ASYNCR PORTS

Number: 4 to 304  
 Interface: RS232/V.24, DCE/DTE  
 Control Signals: DTR, DSR, RTS, CTS, DCD  
 Speeds: 75, 110, 134.5, 150, 300, 600, 1200, 1800, 2000, 2400, 4800, 9600, 19,200 bps fixed; AUTOBAUD to 19,200bps

### SYNC PORTS

Number: 3 to 54  
 Interface: RS232 / V.24, DCE  
 Control Signals: DTR, DSR, RTS, CTS, DCD, RI  
 Speeds: 1200, 2400, 4800, 7200, 9600, 12000, 14400, 16000, 19200, 32000, 38400,

### LINKS

Number: 36 maximum  
 Interface: RS-232 / V.24, V.11, V.35  
 Control Signals: DTR, DSR, RTS, CTS, DCD  
 Protocol: VCX multiplexing (HDLC) or X.25 (level 3) optional  
 Speed: 1200 to 72,000bps

### LAN CONNECTION

Number: 10 maximum  
 Sessions: up to 120 per LAN connection  
 Interface: thicknet, thinnet, twisted pair  
 Protocol: Ethernet / Telnet or LAT

### PHYSICAL

Voltage: 110 VAC (220 VAC optional), 47 through 63 Hz  
 Power: 800 Watts, 19 slot chassis; 200 Watts, 5 slot chassis  
 Weight: 18 lbs, 5 slot; 28 lbs, 19 slot  
 Size: 17.5" H x 18.88 W x 15.25" D 19 slot chassis  
 6" H x 18.88" W x 15.25" D 5 slot chassis  
 Environmental: 0-40°C operating; -20-50°C storage

## ORDERING INFORMATION

MODEL #	DESCRIPTION
PEN-4200-01	5-Slot Basic Unit
PEN-4200-02	5-Slot Basic Unit (red)
PEN-4200-03	19-Slot Basic Unit
PEN-4200-04	19-Slot Basic Unit (red)
PEN-4204-01	Arbitrator Card
PEN-4204-02	Redundant Arbitrator Card
PEN-4301-02	16-Port Async Line Card
PEN-4302-01	4-Port Async Line Card
PEN-4310-02	Dual Trunk RS-232 Sync Line Card
PEN-4311-02	Dual Trunk V.11 Sync Line Card
PEN-4312-02	Dual Trunk V.35 Sync Line Card
PEN-4320-01	ITDM Card
PEN-4325-XX	VLAN Card
SOFTWARE DESCRIPTION	
PEN-4501-02	Switching
PEN-4510-02	VCX Multiplexing
PEN-4520-01	XNET
PEN-4530-02	X.25 Interface
PEN-4590-02	64K Configuration Storage
OPTIONAL ACCESSORIES	
PEN-4801-01	16-Port RS-232 Termination Panel
PEN-4802-01	8-Port RS-232 Termination Box
PEN-4804-01	16-Port RS-422 Termination Panel



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### WARRANTY

Raymar-Telenetics manufactured products are warranted against defects in hardware material and workmanship under normal use for one (1) year from date of original retail purchase. Defective product will be repaired or replaced, determination to be made by Raymar-Telenetics, at no charge. Repaired or replaced products are warranted for 90 days or for original warranty period, whichever is longer. Warranty extends to original end-user only.