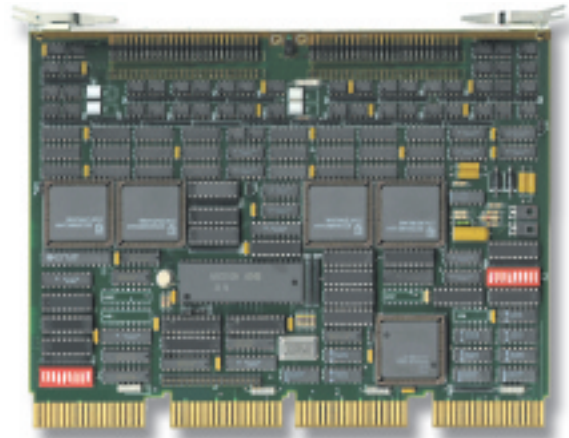# CCQ-3200

32-Line Asynchronous Q-bus Multiplexer on a Quad-width board

The CCQ-3200 provides thirty-two asynchronous DMA communication lines on a standard quad-width Q-bus controller. The controller is operating system and diagnostic compatible with Digital's DHV11, DHQ11, CXY08, and CXA16 series of communication controllers for use in MicroVax and MicroPDP-11 computer systems and Digital's line of DECserver 500 and 550 terminal servers.

Each of the asynchronous lines can be individually programmed to specify character format, line speed, and DMA or program control transfers. All lines support modem control signals for character flow control as well as remote dial-up operation.

User access to all ports is conveniently located on a remote panel assembly. The panel can be mounted in any RETMA style cabinet, under a computer floor, or wall-mounted for easy access by users and maintenance personnel.

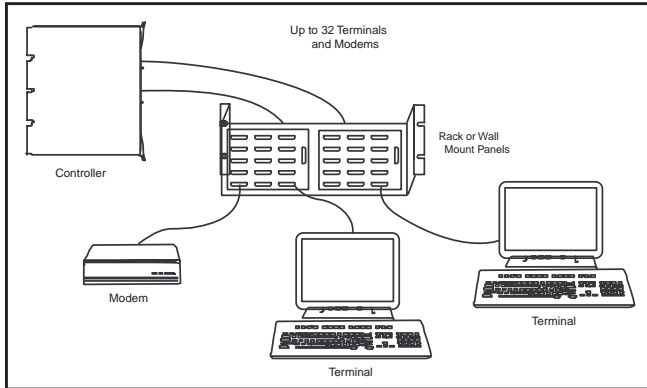A sixteen-line model is available for applications that do not require the full thirty-two lines.

Space Savings. The CCQ-3200 allows you to add more connections in less space by providing four times the ports of a DHV11 or CXY08.

Easy to use. The CCQ-3200 is easy to use—it requires no additional software or modifications and is compatible with Digital operating systems and diagnostics.

High Performance. DMA output on each line, a transmit silo for each line, and large receive silos significantly reduce processor overhead and greatly improve system performance and character throughput.

Dial-up lines. Modem control on all lines supports dial up operation and character flow control.

Easy to install and maintain. The CCQ-3200 allows you to easily verify operation of cabling, interfacing, and terminals. Just flipping a switch causes all ports to output a continuous rotating character pattern or to echo input characters. Isolating problems on the controller module is simple with the on-board diagnostics.

Description

Compatibility
The CCQ-3200 is operating system compatible with RSX, RSTS/E, VMS, DSM, and ULTRIX. It is diagnostic compatible with DHV11-CVDHA, CVDHB, CVDHC, CVHQA, and with UETP and DECX/11 exercisers.

Interrupt Vector
The base interrupt vector is set via on-board switches in the range from 000 to 770.

I/O Address
The Q-bus address is set via on-board switches in the range from 7760000 to 7767760.

Interrupt Priority
The interrupt priority level is factory set to BIRQ4 and can be user modified to level BIRQ5.

Ordering Information

Controllers
The controllers are supplied with user manuals.

CCQ-3200-A   32-port controller for Micro VAX I and II and Micro/PDP-11.

CCQ-1600-A   16-port controller for MicroVAX I and II and Micro/PDP-11.

Panels
Each panel is supplied with a twelve-foot controller-to-panel cable. Consult our factory for other panel styles.

CPX-3200   Sixteen Line EIA, DB25 panel. Use two for 32 lines.

CPX-3202   I/O Panel, extends controller signals to system backpanel for connection to CPX-3200 panel.

CPX-3203   EIA I/O Panel, provides 16 EIA DE9 connections. Use two for 32 lines.

FAB-1000   RETMA rack or wall mounting bracket for up to two panels.

Specifications

Physical **Dimensions**   Standard quad-width module measuring 10.5 in by 8.4 in (26.7 cm by 21.3 cm)

Electrical
Power Required:

+5 volts	5.2 amps
+12 volts	1.6 amps
-12 volts	not used
Q-bus loading	1 DC load, 3 AC loads
Throughput	60K characters per second

EIA Interface
Communications:

Type	Data Terminal Equipment (DTE)
Ports	CCQ-3200: 32
	CCQ-1600: 16

Interface Standards:

Data	RS-423/232
Signals Supported	TX, RX, RTS, CTS, CAR, DTR, PGND, SG

Programmable Line Parameters

Character Length	5,6,7 or 8 bits
Stop Bits	1, 1.5, or 2
Parity	Odd, Even, or no parity
Breaks	May be generated and detected on each line
Baud Rates	50, 75, 110, 134.5, 150, 300, 600, 1200, 1800, 2400, 4800, 7200, 9600, 19.2K, 38.4K bits/sec (When software blocks 38.4K bps, it is available in place of 2000 bps.)

Environmental
Operating Conditions:

Temperature	5° to 50° C (41° to 122° F)
Relative Humidity	20% to 80% noncondensing

Storage Conditions:

Temperature	-40° to 66° C (-40° to 150° F)
Relative Humidity	10% to 95% noncondensing