

DCQ-1500

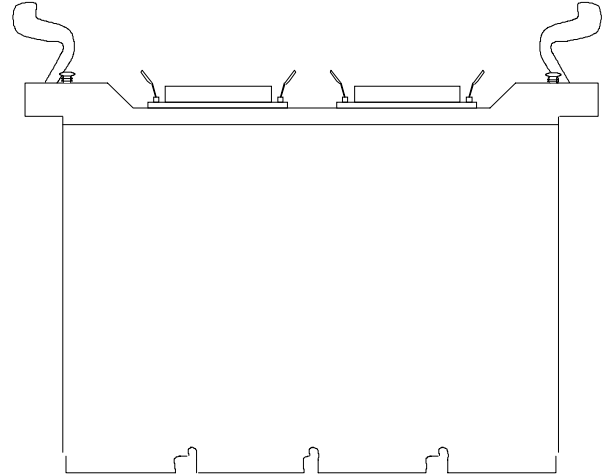
DRQ3B Compatible Parallel DMA I/O Controller

The DCQ-1500 is a plug and play replacement for Digital's DRQ3B Q-bus I/O controller. Like the DRQ3B, the DCQ-1500 is a high performance 16-bit parallel interface designed for realtime data collection or for high-speed interprocessor communications. It provides PIO and DMA transfers between a Q-bus system and external equipment at transfer rates of up to 1.3 MHz of 16-bit words..

The DCQ-1500 is hardware and software compatible with Digital's DRQ3B. The module has two independent 16-bit channels for connection to external devices, allowing it to receive or send data or do both concurrently. Additionally, it can transfer data between two memory or I/O page locations.

The DCQ-1500 is a quad-width controller that can be installed in a variety of Digital's PDP-11 and MicroVAX systems.

Data transfers are selectable as burst, block or extended block mode DMA. Interrupt priority levels are switch selectable and interrupt conditions are program selectable.



High Performance. Like the DRQ3B, the DCQ-1500 provides transfer rates of up to 1.3 megawords per second (2.6 Mbytes per second) in extended block mode. Its double buffering capability allows the DCQ-1500 to transfer data continuously up to this maximum rate.

Software Compatible. The DCQ-1500 is application software compatible providing a direct replacement for the DRQ3B.

Hardware Compatible. The DCQ-1500 is signal and connector compatible with Digital's DRQ3B allowing use of existing user cables and equipment.

Easy to Maintain. The DCQ-1500 is compatible with Digital's DRQ3B diagnostics.

Applications

General I/O Application: Use the DCQ-1500 to connect to external user equipment such as data acquisition, A/D, telemetry or industrial control equipment supporting a DRQ3B compatible interface.

Parallel Computer Link: Use the DCQ-1500 to provide a parallel data link to another system supporting a DRQ3B compatible interface.

Pin Assignments

Port 1 Signal	Pin	J1	Pin	Signal
OUT00-H	1		26	GND
OUT01-H	2		27	GND
OUT02-H	3		28	GND
OUT03-H	4		29	GND
OUT04-H	5		30	GND
OUT05-H	6		31	GND
OUT06-H	7		32	GND
OUT07-H	8		33	GND
OUT08-H	9		34	GND
OUT09-H	10		35	GND
OUT10-H	11		36	GND
OUT11-H	12		37	GND
OUT12-H	13		38	GND
OUT13-H	14		39	GND
OUT14_H	15		40	GND
OUT-15-H	16		41	GND
P1DAV-L	17		42	GND
P1ACK-L	18		43	GND
EXTINT-L	19		44	GND
LOOPC1-H	20		45	GND
INIT-L	21		46	GND
FNCTI3-H	22		47	FNCTO3-H
FNCTI4-H	23		48	FNCTO4-H
FNCTI5-H	24		49	FNCTO5-H
P1CLR-L	25		50	

PORT 0 Signal	Pin	J2	Pin	Signal
IN00-H	1		26	GND
IN01-H	2		27	GND
IN02-H	3		28	GND
IN03-H	4		29	GND
IN04-H	5		30	GND
IN05-H	6		31	GND
IN06-H	7		32	GND
IN07-H	8		33	GND
IN08-H	9		34	GND
IN09-H	10		35	GND
IN10-H	11		36	GND
IN11-H	12		37	GND
IN12-H	13		38	GND
IN13-H	14		39	GND
IN14_H	15		40	GND
IN15-H	16		41	GND
POSTB-L	17		42	GND
POACK-L	18		43	GND
EXTINT-L	19		44	GND
POEOP-I	20		45	GND
INIT-L	21		46	GND
FNCTO0-H	22		47	FNCTI0-H
FNCTO1-H	23		48	FNCTI1-H
FNCTO2-H	24		49	FNCTI2-H
	25		50	POCLR-L

Specifications

Physical Dimensions

Controller Quad-width Q-bus module,
10.5 in by 8.4 in
(26.7 cm by 21.3 cm)

Interface

User Connections Two 50-pin DRQ3B style connectors

Electrical

Power Required:

+5.0 volts dc 4.5 amp
±12 volts dc Not used

I/O Port Transceivers:

Source 16 ma
Sink 64 ma

Maximum Throughput

Burst Mode 500 kHz (1 Mbyte/sec)
Block Mode 1.1 MHz (2.2 Mbytes/sec)
Extended Block Mode 1.3 MHz (2.6 Mbytes/sec)

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

Ordering Information

DCQ-1500-AB Data controller package for BA200 enclosures. Includes controller and owners manual. Direct replacement for Digital's DRQ3B-SA or -SF.

DCQ-1500-AA Data controller package for BA23, BA123, and H96XX enclosures. Includes controller and owners manual. Direct replacement for Digital's M7658 module.

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