

DCQ-3100

IEQ11 Compatible IEC/IEEE Q-bus Interface



The DCQ-3100 is a DMA controller that interfaces a Q-bus system to two independent channels that are compatible with both the IEC and IEEE instrument buses. The instrument buses conform to both the European Standard IEC 625-1 and the U. S. Standard IEEE 488.1-1987. Each instrument bus can have up to fifteen devices, including the DCQ-3100, in a sequential configuration.

Each independent channel of the DCQ-3100 provides system controller, controller-in-charge, talker, and listener capabilities. Termination of data transfers are by E.O.I., byte count, or by match characters.

The DCQ-3100 is software and hardware compatible with Digital's IEQ11-A Q-bus controller and can be used as a direct replacement.

The DCQ-3100 is a quad-width controller that supports both 18-bit and 22-bit Q-bus operation and can be installed into a variety of Digital systems including MicroPDP-11, MicroVAX II and MicroVAX III.

The DCQ-3100-A installs in MicroPDP-11 and MicroVAX II systems and can be used with Digital cables and panels or with Logical's IEC and IEEE panels.

IEEE and IEC Compatible. The DCQ-3100 is compatible with both the U.S. standard IEEE-488.1 and European IEC 625-1 standard.

Two Independent Channels. The DCQ-3100 supports two independent channels providing flexibility for a variety of applications.

Software Compatible. The DCQ-3100 is application and diagnostic compatible providing a direct replacement for the IEQ11-A.

Hardware Compatible. The DCQ-3100 is signal and connector compatible with Digital's IEQ11-A allowing use of existing Digital cables and panels.

Specifications

Physical Dimensions

DCQ-3100 Controller	Quad-width Q-bus module, 10.5 in by 8.4 in (26.7 cm by 21.3 cm)
CPX-3100 Panel	"B" size IEEE panel measuring 2.5 in by 3.3 in (6.3 cm by 8.1 cm)
CPX-2002 Panel	"B" size IEC panel measuring 2.5 in by 3.3 in (6.3 cm by 8.1 cm)

Electrical

Power Required:	3.0 amps @ 5.0 volts ±12 volts not used
Q-Bus Loading	1 load
Logic Levels	TTL
IEC/IEEE Bus Load	1 on each bus

Performance Parameters

Operating Modes:	<ol style="list-style-type: none">1. Programmed I/O transfers with interrupt.2. DMA data transfer, byte addressing, and interrupt.
Transfer Rate:	Up to 150K bytes per second (DMA transfer). Transfer rates depend on the hardware configuration and operating system.
Block Length	64K bytes, maximum
Addressable Memory Range:	256KB (4MB on Q-22)
Interrupt Vector:	Vector A (channel 1) is selectable, while Vector B (channel 2) depends on Vector A. Vector B is set at A+4.
Priority Level:	BIRQ4

IEC/IEEE Bus Parameters

Communication Channel	Two independent IEC/IEEE buses
Number of Devices	Up to 15 devices on each bus including DCQ-3100
Maximum Cable Length	Two meters (6.56 ft) times the number of devices, or 20 meters (65.6 ft), whichever is less.

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-3100-AA	Equivalent to Digital's IEQ11-AD. IEEE controller for BA23 system packaging. Includes controller, "B" size panel, test cable and owners manual.
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