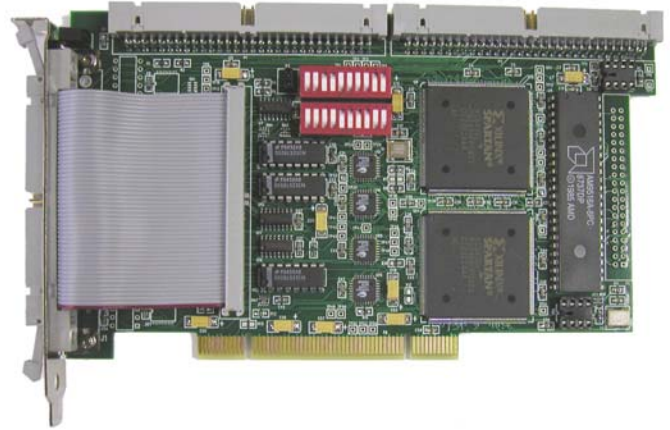


DQP-1501

DRQ3B/DRPI Compatible Combo Controller for NuVAX



The DQP-1501 PCI-based option module works with Logical's NuVAX bus adapter to allow users to migrate from a Qbus system to a PCI-based system while maintaining their investment in software and user equipment.

The DQP-1501 provides two functions:

- Plug and play replacement for Digital's DRQ3B Qbus I/O controller. Like the DRQ3B, the DQP-1501 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 to the DRPI interface at transfer rates of up to 1.3 MHz of 16-bit words.
- Plug and play replacement for the APG-63(V)1 Radar Data Processor (DRPI) controller.

The DQP-1501 installs into a single PCI slot and connects to the NuVAX bus adapter and, optionally, other PCI-based Qbus option modules by way of top-edge flat ribbon connectors. The DQP-1501 only requires DC power from the PCI slot.

DRPI

The DQP-1501 emulates the DRPI controller. The DQP-1501 operates as a single DRPI channel, so two DQP-1501 controllers may be required for DRPI applications. Connection to external RSP and RDP devices is through a 50-pin flat ribbon connector.

DRQ3B

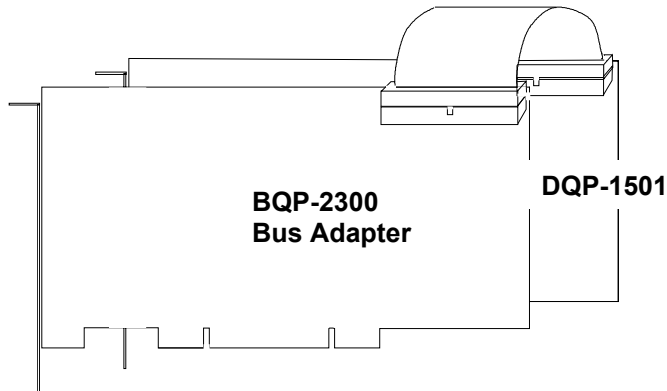
The DQP-1501 is software compatible with Digital's DRQ3B. The module has two independent 16-bit channels for connection to DRPI a device, allowing it to receive or send data or do both concurrently.

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 DQP-1501 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 DQP-1501 to transfer data continuously up to this maximum rate.

Software Compatible. The DQP-1501 works with NuVAX to provide a plug-and-play replacement for the DRQ3B.

Easy to Maintain. Fewer hardware components mean reduced maintainece overhead.



Interface

Connector
Part No.

50-pin HD SCSI connector
AMP 390379-9

Pin Assignments

Signal	Pin	Pin	Signal
HSI_CLK+	1	2	HSI_CLK-
GND	3	4	GND
HSI_D0+	5	6	HSI_D0-
HSI_D1+	7	8	HSI_D1-
HSI_D2+	9	10	HSI_D2-
HSI_DENV+	11	12	HSI_DENV-
HSI_CMDIDA+	13	14	HSI_CMDIDA-
HSI_DPBUSY+	15	16	HSI_DPBUSY-
HSI_SPBUSY+	17	18	HSI_SPBUSY-
HSI_BUSYINH+	19	20	HSI_BUSYINH-
GND	21	22	GND
STE_CLK+	23	24	STE_CLK-
STE_D0+	25	26	STE_D0-
STE_D1+	27	28	STE_D1-
STE_D2+	29	30	STE_D2-
STE_DENV+	31	32	STE_DENV-
STE_CMDIDA+	33	34	STE_CMDIDA-
STE_DPBUSY+	35	36	STE_DPBUSY-
STE_SPBUSY+	37	38	STE_SPBUSY-
GND	39	40	GND
HSI_MODE	41	42	HIS_MODE_RT N
GND	43	44	GND
PWRVLD+	45	46	PWRVLD-
Not Used	47	48	Not Used
Not Used	49	50	Not Used

Specifications

Physical Dimensions

PCI Controller PCI short card, +5 volt only, measuring 6.88 in by 4.20 in (17.46 cm by 10.67 cm)

Qbus Adapter 50-pin flat ribbon cable
Interconnect Cable

DRPI Connector 50-pin flat ribbon cable

Electrical

Power Required:
+5.0 volts dc 1.0 amp
±12 volts dc Not used

Differential TTL Signal

Driver output logic:
Logic 1 (high) 2.4V minimum, 5.0 maximum
Logic 0 (low) 0.0V minimum, 0.4V maximum
Receiver input logic:
Logic 1 (high) Voltage differential input greater than +1.0V, for positive input reference to negative input.
Logic 0 (low) Voltage differential input greater than +1.0V, for negative input reference to positive input.

Single Ended TTL Signal HSI Mode signal is pulled up to +5VDC through a 2k resistor.

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% non-condensing
Storage Conditions:
Temperature -40° to 66° C (-40° to 150° F)
Relative Humidity 10% to 95% non-condensing

Ordering Information

DQP-1501-AA PCI DRQ3B/DRPI option controller, interconnect cable and owners manual.

BQP-2300-AA NuVAX Qbus adapter with owners manual.

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