



Features

- 8-bit, 16-bit or 32-bit data at rates up to 140 MB/sec
- 280 MB/sec aggregate rate
- Two on-board C40s for memory addressing
- Four C40 comm port front panel interfaces
- VME master/slave interface with DMA controller
- Compatible with the 64xx high-speed A/Ds

Ordering Information

Model	Description
6099A	High-Speed Buffer Memory VME Board

Options:

-004	With 64 MB memory
-006	With 512 MB memory
-008	FPDP I/O
-012	Differential ECL I/O
-019	Single-ended TTL I/O

General Information

Model 6099A is a general-purpose high-speed buffer memory VME board which accepts digital data at rates up to 140 MB/sec. It uses single-ended TTL or differential ECL input receivers for reliable high-speed data transfers. Model 6099A replaces Model 6099 and offers increased memory size to 512 MB.

Two on-board C40 DSPs act as memory controllers for sophisticated DSP-based memory addressing and make four front panel comm ports available for high-speed data transfers.

Flexible Buffer Memory

Input data is packed into 32-bit words and written into one of two 32 MB DRAM data buffers, organized as 8M x 32 bits. These buffers are arranged in a “swinging buffer” configuration. While one buffer is filling, the second one is emptying its previously stored data. Both buffers can run at independent rates, which makes the board ideal for systems with processing-dependent data rates.

On-board DSPs

The intelligent address generator logic includes two C40 DSPs with resident firmware routines to accept high-level addressing commands from the VMEbus.

Output Data

Output data can be transferred via DMA to or from the VMEbus using 32-bit transfers, including block transfers (BLT) for both reads and writes.

Output data can also be transferred through the four 20 MB/sec C40 comm ports, which are directly compatible with DSP processor boards, such as the Pentek 4270, 4284 and 4285. Any of the comm ports can also be configured as input ports.

Options

Model 6099A is available with the following memory options:

Option	-004	64 MB
	-006	512 MB

One of these options must be specified when ordering.

Specifications

Memory: fast page mode, 70 nsec DRAM running at 35 nsec in fast page mode; one refresh cycle every 15 μsec

Data rates: 8-bit data, 140 MByte/sec; 16-bit data, 70 Mword/sec; 32-bit data, 35 Mlongword/sec

Processors: two TMS320C40s, 40 MHz clock; 128k x 32 local SRAM, zero wait state; 512k x 8 FLASH EPROM for booting and firmware

Comm ports: two comm ports of each C40 are interconnected to the other, while two more are brought out to the front panel

VMEbus interface: A32, I (1-7) slave; IH (1-7) master and slave; does not support A16 access as VME slave

Power: 6.0 A at +5 V dc

Size: standard 6U VMEbus board, single slot; board 160 mm (6.3 in.) x 233.5 mm (9.2 in.), panel 0.8 in. wide

Block Diagram, Model 6099A

