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**Contact us:** (888) 88-SOURCE | [sales@artisanng.com](mailto:sales@artisanng.com) | [www.artisanng.com](http://www.artisanng.com)

#### Announcements

First 8GB RACE++ VME board to include quad Serial FDDP ports...

A/D converter with six 14-bit 105 MHz channels, dual RACE++ and 8GB in a single VME slot...

μmem™ NVRAM cards now available with up to 16GB of battery-backed SDRAM...

#### Tech Notes

Crossing Boundaries: Overcoming the 256 MB limitation in RACE and MC/OS...

Basics of PCI memory mapping...

NAND vs. NOR: Different types of Flash memory for different types of applications...

#### Product Spec Sheets

Please Select One:

### MM-6490D

2 GB High Speed, Dual-Port  
VME/VME64/RACEway Buffer Memory

#### FEATURES:

Capacity: 128MB, 256MB, 512MB, 1GB and 2GB
Transfer Rate: RACEway: up to 160 MB/s VME64 bus: 80 MB/s
Cycle/Access Time: Write 100/30, Read 100/30
Compatible with VMEbus Rev D and RACEway Rev 1.4
Block Transfer (BLT) 256 bytes for VME, MBLT of 2KB for VME64, and 2KB for RACEway
Write-Wrong Parity for diagnostics under software control
RACEtrack Certified
1 Year Warranty

The MM-6490D is a high-speed, dual-port memory module that provides up to 2GB for VME/VME64/RACEway systems. It is intended for high performance applications employing Burst Mode on RACEway at data rates greater than 160 Mbytes/sec. Block Transfers on the VMEbus with data rates at 80 Mbytes/sec are also supported.

The Control Status Register (CSR), located in the short I/O address space, stores and reads bitwise parity errors detected on the VME/RACEway buses. The other bits enable Write-Wrong parity for diagnostics.

Parity generation and checking are provided for each byte; parity status is stored and transmitted via BERR.

Reliability is ensured by burn-in and running memory diagnostics that check operation for 48 hours while temperature cycling boards from 0-60° Celsius.

#### MM-6490D Specifications

- ▶ **Capacity** : 128MB, 256MB, 512MB, 1GB and 2GB
- ▶ **Cycle/Access Time** : Block Transfer (BLT) - Write:, 100/30, Read: 100/30
- ▶ **Address** : 32-bits for VMEbus and RACEway
- ▶ **Data In/Data Out** : 8, 16, 32, 64 bits (UAT) for VMEbus, 32-bit multiplexed for RACEway
- ▶ **Sequential Access** : Block Transfer (BLT) of 256/2KB, MBLT 2KB, and RACEway 2KB
- ▶ **Parity Checking** : Byte-wide parity generation and checking; parity output stored and transmitted via CSR, Write-Wrong parity for diagnostics
- ▶ **CSR** : Read/Write, 8 bits wide, jumper-selectable in VME short I/O space (A16) with VMEbus low limit address tracking
- ▶ **CSR Format** :
  - ▶ D0 Enable Parity
  - ▶ D1 Write-Wrong Parity
  - ▶ D6 VMEbus Disable
  - ▶ D7 Parity Error
  - ▶ Others: Don't Care
- ▶ **Interface** : VME Rev. D and RACEway REV 1.4
- ▶ **Modes of Operation** :Read, Write, read-modify-write, and refresh
- ▶ **Memory Selection** : Two independent memory ports, switch-selectable on 1MB boundaries for VME, Card Select for RACEway
- ▶ **Operating Temperature** : 0 to +60°C
- ▶ **Storage Temperature** : -40 to +85°C
- ▶ **Relative Humidity** : Up to 95% without condensation
- ▶ **Power Requirements** : 5V @ 2.8 Amps



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