

*SOLFLOWER's UltraVME-300 is an upgrade kit for all Sun VME-based systems to the UltraSPARC -10 performance level*



## **Key Features:**

- Compatible with Solaris 2.5.1 to 2.8
- 95 SPECint computing power.
- 64MB - 1GB of Memory
- Two 33Mhz, 32-bit PCI slot for I/O expansion.
- Intergrated UPA 24 bit 2D graphic, 24bit double-buffered 3D graphic.
- Ethernet, EIDE ports included.

## **General**

The power of the UltraSPARC 10 from Sun Microsystems, Inc is now available to all VME-based Sun systems through a cost effective and easy-to-install UltraVME-300 upgrade kit from Solflower Computer, Inc.

The combination of the best SPARC V9 64-bit RISC price/performance of Sun Ultra™ 10 motherboard and the SFPCI-300 delivers 30 to 60 times the performance of the Sun 3/X00 series at a very attractive price. Simply slide the UltraVME-300 into a Sun VME 9U chassis. Users can have all existing VME I/O devices. This unique combination of high SPCECmark, fast I/O throughput of the Ultra10 and a wide variety of "Off-the-Shelf" peripheral cards makes the UltraVME-300 an ideal low-cost, super-performance Ultra10 VME-based system.

At the heart of the UltraVME-300 is Sun's SPARC Ultra™ 10 CPU board with its computing power rated at 95 SPECint 95, which delivers more than 10 times the performance of the Sun 600MP motherboard. In addition an UPA graphic accelerator for 24 bit Creator, Creator3D, and Elite3D m3 high provide power for most demanding graphics applications.

The UltraVME-300 approach allows the user to take full advantage of the latest technology offered by Sun while protecting their previous computer investment. All Sun VME hardware components which include disk and tape controllers, graphic boards, ethernet, ALM, FDDI network and the 9U VME system chassis are supported by UltraVME-300 upgrade kit.

## **Packaging**

The size of UltraVME-300 is 14.4" x 2" x 15.25" including a space available to mount one 3 1/2" disk. The complete module is fit into 2 slots of 9U VME backplane.

## **Software**

The UltraVME-300 takes full advantage of Solaris 2.5.1, 2.6, 2.7, 2.8 and its software is fully compatible with standard Sun 4 VME device drivers. It allows existing software to be successfully used in conjunction with the power of the UltraSPARCstation series, eliminating the need to develop new device drivers

# VME I/O Specifications

## VME bus Master/PCI Bus Slave

- Conforming to VME64 specification including A64 and D64 modes
- Support Read Modify Write (RMW) and Address Only with Handshake mode (ADOH)
- Seven interrupt levels for either Fairness or Round Robin modes
- Release When Done (RWD) or Release On Request (ROR) modes programmable
- VME DMA D32 mode read/write 30-40MB/s  
VME DMA D64 mode read/write 60-70MB/s

## PCI DVMA Master Interface

- PCI Local Bus version 2.1
- Supports both 32 bit and 64 bit PCI bus
- PCI clock rate 25 - 33 Mhz
- Multiple bus masters and DMA capability
- Programmable burst size 32/64 bytes burst
- PCI DMA read/write 32 bytes per block 51MB/s
- PCI DMA read/write 64 bytes per block 74MB/s

## VME Multiprocessor

- Built-in DMA controller for transferring data across buses
- Programmable VME time-out 16 to 1024 msec
- Supports SYSCLK on slot 1 VME
- Automatic adjustment of the windows mapping when host access any VME address.
- Cover up to 8 PCI slave windows, allow simultaneous mapping of multiple VME spaces

## Software Compatibility

UltraVME-300 driver provides complete software compatibility with standard Sun-4 VME device drivers. Supports Solaris 2.5.1, 2.6, 2.7, 2.8

## Power Consumption

|        |            |
|--------|------------|
| 5VDC   | @ 6 Amps   |
| 12VDC  | @ 1 Amps.  |
| -12VDC | @ .1 Amps. |



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## UltraVME-300 back-side

### High Performance

- 360-440 Mhz, 64 bit UltraSPARC IIi microprocessor with 512KB - 2MB external cache deliver SPECint\_95 at 12.1 - 14.1
- Up to 1GB of 60ns, 168-pin EDO JEDEC DRAM with ECC error correction.
- The Advance PCI Bridge (APB) provides PCI masters direct, high-capacity access to memory
- Onboard 8-bit graphics support for up to 1280 x 1024 resolution

### Expandability

- Two PCI bus I/O slots with full master/slave support, burst rates up to 64 bytes. Up to 1-GB of RAM on CPU board.
- Internal storage capacities of up to 36GB with one 3 1/2" hard drive.
- Advanced, fast 24-bit accelerated Creator, Creator3D and Elite3D m3 UPA graphics card
- Four built-in I/O ports:
  - Ethernet port
  - Two RS-423 serial ports with Audio I/O port
  - Creator3D supports 24-bit color up to 1920 x 1200 resolution

### Physical Dimensions

Height .....2.00 inches  
Width .....14.40 inches  
Depth .....15.75 inches

### Environment

Temperature  
Operating 10° to 40° C (50° to 104° F)  
Non-operating -20° to 60° C (-4° to 140° F)