



Image Processing Add-ons for SPARC-based Systems

The development of real-time image processing applications can be greatly accelerated by using the proper tools. Datacube's MaxSPARC SBus expansion option supplies the software tools required to turn a SPARC workstation into a powerful image processing application development platform.

Development Workstations

The SBus option is one of a family of SPARC-based development system products from Datacube. MaxSPARC Workstations combine high-powered SPARC processing, easy networking, robust Sun development tools, and Datacube image processing hardware and software into an affordable, powerful, and ready-to-use package. The SBus option gives you all this, without discounting the investment you may already have made in SPARC workstations.

The complexities of specialized hardware installation and software configuration are minimized because all image processing hardware comes pre-installed in the MaxSPARC system. User-installed hardware is limited to the SBus adapter card and cable, which provides a simple connection between the MaxSPARC system and your SPARC workstation. After installing Datacube's ImageFlow software on your SPARC, you can power up your system and begin the development of frame-rate image processing applications.

In addition to one of Datacube's image processing engines, either the MaxVideo 200 or MaxVideo 250, the MaxSPARC system includes image processing libraries for the development of highly effective applications. ImageFlow, Datacube's pipeline image processor control library, delivers optimal performance for even the most demanding real-time applications.

Low-Cost Target Systems

MaxSPARC target systems provide an affordable way to implement the production phase of a project. Datacube



MaxSPARC SBus Options available in 5-, 12-, or 20-slot chassis

hardware and software are modular, so applications can easily be ported to lower-cost systems that include only those features required for implementation. Target systems can then be replicated as required.

Target systems, like all Datacube hardware and software, are built around open standards so they can communicate with a variety of industrial machines and with virtually any other computer.

Flexible Configuration

MaxSPARC provides a high-performance VMEbus platform that is compatible with a wide range of industry-standard development tools and software applications.

MaxSPARC systems are available with a choice of Datacube's MaxVideo 250 or MaxVideo 200. These powerful and versatile VME pipeline image processing boards have a phenomenal 7,000 MIPS of processing power. They can

simultaneously perform multiple parallel processes on large images, with continuous real-time acquisition, processing, storage, and display operations. All operations are reconfigurable at frame rates.

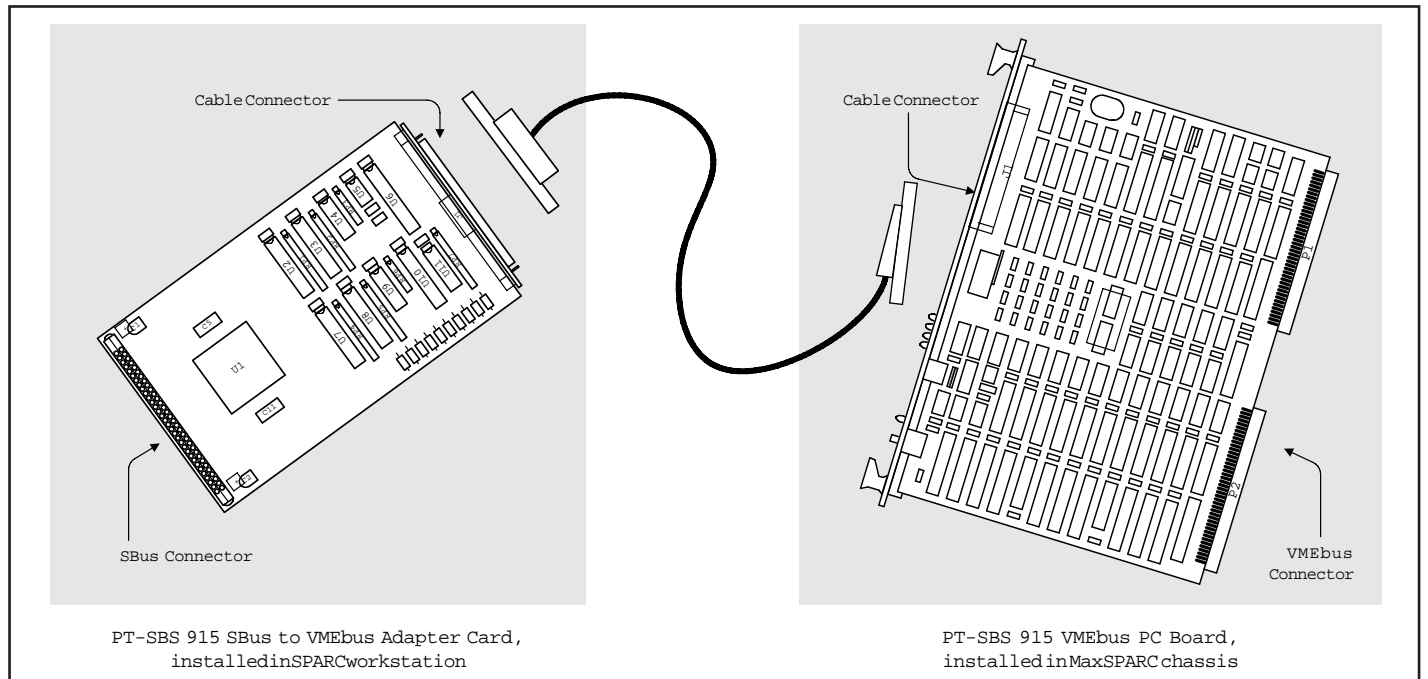
The MaxVideo 200 requires two VME slots within the MaxSPARC system chassis. Development systems containing the MaxVideo 200 are available with either 24 or 96 MB of image memory (VSIM), while target systems can have 4 to 96 MB.

The single-slot MaxVideo 250 provides 28 MB of VSIM on development systems, and either 7 or 28 MB of VSIM on target systems.

Datacube's image processing architecture is scalable. Both the MaxVideo 250 and 200 are available with a choice of daughterboard configurations. In addition, boards can be easily added to systems to meet the requirements of a broad range of applications.

- Maximizes investment already made in SPARC workstations
- Open system flexibility ensures long term value
- Industry-standard software, hardware, and networking
- 5-, 12-, or 20-slot VME, standing or rack mount chassis
- MaxVideo 200 or 250, 7,000 MIPS image processor
- Powerful ImageFlow pipeline processing function library





Minimal installation and configuration required to connect the MaxSPARC SBus Option to existing SPARC workstations

MaxSPARC SBus Specifications

Hardware

Image Processor

- MaxVideo 200 with 24 or 96 MB image memory or MaxVideo 250 with 7 or 28 MB image memory
- Analog Scanner (AS), Acquire Digital (AD), or Acquire Color (AC) input module
- Multiple parallel processing pipes, software reconfigurable, 20 and 40 MHz pipeline processing architecture

SBus to VMEbus Adapter Card Set

- Single-position SBus module, single-slot VMEbus module
- 10-foot length of shielded cable
- Flexible access window and addressing
- Full VMEbus interrupt support

Chassis

- Accepts VME 6U format cards
- Choice of 5-, 12-, or 20-slot options, standing or rack mount

Software

Image Processing

- ImageFlow libraries from Datacube for pipeline image processing programming

Operating System Compatibility

- Solaris 2.4 Desktop (client)
- Solaris 2.4 Workgroup (server)
- Solaris 1.1.1

Dimensions *

5-slot (standing)

- 17.4" H x 5.5" W x 18.4" D
- Weight: 39 lbs.

12-slot (standing)

- 17.3" H x 12.25" W x 20.5" D
- Weight: 61 lbs.

20-slot (standing)

- 10.0" H x 17.1" W x 20.0" D
- Weight: 62 lbs.

* Measurements and weights provided include boards and peripherals. Rack-mount systems fit in standard 19" racks.

Electrical

- All: AC Input 90-265V AC, 50-60 Hz
- 5-slot: DC Output 300 Watt
Available for user devices: 14.5A @ +5V, 3.5A @ -12V, 5.5A @ +12V
- 12-slot: DC Output 500 Watt
Available for user devices: 59.0A @ +5V, 3.5A @ -12V, 16.0A @ +12V
- 20-slot: DC Output 1000 Watt
Available for user devices: 135.0A @ +5V, 9.5A @ -12V, 9.0A @ +12V

Additional Information

- For more information about the products mentioned in this document, please refer to the following Datacube literature:

[MaxVideo 250 Data Sheet](#)

[ImageFlow Data Sheet](#)

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