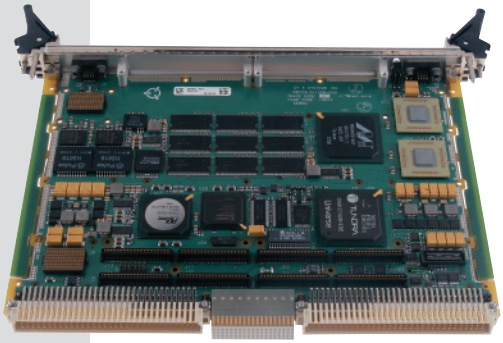
Product Fact Sheet

# SVME/DMV-183

- Powerful general-purpose single or dual-processor single board computer
- 7447A/7448 processors at up to 1.4 GHz
- Full complement of I/O capability (Ethernet, SCSI, serial, USB 2.0, 1553, Serial ATA, TTL and differential discretes...,)
- VxWorks BSP and Driver Suite
- INTEGRITY BSP and Driver Suite
- CWCEC Linux 2.6 SDK
- Comprehensive foundation firmware including Built-In Test, non-volatile memory programmer, and secure erase utility
- Designed for military harsh-environment applications, both air- and conduction-cooled
- Supports easy upgrade path for 178, 179, 181, 182 SBCs

Using single or dual Motorola MPC7447A/7448 PowerPC™ processors with AltiVec™ technology and 1 Gbyte of state-of-the-art DDR SDRAM, the SVME/DMV-183 represents the latest step in the evolution of rugged high-performance, highly integrated Single Board Computers. With two 64-bit PMC sites, one supporting 100 MHz PCI-X, and an unparalleled complement of I/O capability such as Gigabit Ethernet, SCSI, up to six serial ports, and two USB 2.0 ports, the 183 satisfies the most demanding requirements of embedded computing applications. Available in the full Curtiss-Wright Controls Embedded Computing (CWCEC) range of environmental build grades the 183 is targeted to the sophisticated data- and digital signal-processing needs of tactical aircraft, armored vehicles and harsh environment naval systems.



For retrofit and technology insertion applications, the SVME/DMV-183 offers a superset of the I/O features of earlier generations of CWCEC PowerPC SBCs and optional pin-out modes for backplane compatibility as well. As a member of our continuously evolving stream of PowerPC SBCs including the SVME/DMV-178, SVME/DMV-179, SVME/DMV-181, and SVME/DMV-182, the SVME/DMV-183 supports the life-cycle model of successive technology insertions throughout a platform's lifetime.

For more information on our broad range of high-integrity computing solutions, please visit our website at **www.cwcembedded.com**.

CURTISS WRIGHT Controls
Embedded Computing

# SVME/DMV-183

## Features

- Single or dual PowerPC™ 7447A/7448 (AltiVec Technology™-enhanced) CPUs, each with:
  - 64 Kbytes L1 cache
  - core-speed internal L2 cache
  - Altivec™ technology-enabled
  - 11.2 GFLOPS peak processing power at 1.4 GHz core frequency
- 512 Mbytes or 1 Gbyte of DDR SDRAM with ECC
  - growth to 2 Gbyte DDR SDRAM
- 133 MHz system bus
- 128 or 256 Mbytes of contiguous direct-mapped Flash memory
  - growth to 512 Mbytes
- Hardware Flash write protection jumper
- Permanent Alternate Boot Site (PABS) provides back-up boot capability
- 128 Kbytes AutoStore nvSRAM
- Two 64-bit PMC sites on independent PCI buses
  - one 100 MHz PCI-X capable, one 66 MHz PCI capable
  - optimized cooling of conduction-cooled PMCs
  - controlled impedance I/O routing for Fibre Channel, digital video, StarFabric, and other high-speed interfaces
- Three Ethernet interfaces:
  - one 10/100BaseTx to front panel
  - one 10/100/1000BaseTX to P0
  - either 10/100BaseTX or 10/100/1000BaseTX to P2 depending on IPM installed
- 2 asynchronous RS-232 serial ports
- 2 USB 2.0 ports
- Factory-installed I/O Personality Module (IPM) allows for choice of following I/O bundles:
  - 4 RS-232/422/485 serial channels and 14 TTL discretes
  - 8-bit SCSI, 2 RS-232/422/485 serial channels, and 14 TTL discretes
  - 16-bit SCSI, 1 RS-232/422/485 serial channel, and 14 TTL discretes
  - 2 MIL-STD-1553 channels, 2 RS-232/422/485 serial channels, and 14 TTL discretes (also provide GbE capability on P2 Ethernet)
  - 2 RS-232/422/485 serial channels, 14 TTL discretes (also provides GbE capability on P2 Ethernet)
  - 2 RS-232/422/485 serial channels, 14 TTL discretes, 2 Serial ATA ports, single 1553, GbE signals to P2
  - each TTL discrete software-configurable as input or output, with interrupt capability as inputs
  - each RS-232/422/485 serial channel has full DMA support
  - each serial signal software-configurable as discrete I/O, with interrupt capability on inputs
- Four general-purpose 32-bit user timers
- 4 general-purpose PCI/SDRAM DMA controllers
- Six 32-bit OS timers, 3 per processor
- Two avionics-style watchdog timers with software programmable upper and lower bounds, with external watchdog event indicator discrete
- Real-Time Clock with automatic 5V/5V STDBY switchover
- Tundra Universe II™ VME64 master/slave interface with VME DMA
- Four on-board temperature sensors, with alarm interrupts
- +5V-only operation
- Occupies single .8" slot in all configurations
- Optimized conduction cooling with TherMax™-style thermal frame
- Available in a range of ruggedization levels