



SVME/DMV-194

Dual Freescale™ Power

Architecture™ QorIQ P2020 SBC



- ◆ Powerful general-purpose single or dual processor single board computer (SBC)
- ◆ Freescale Power Architecture™ QorIQ P2020 processor up to 1.2GHz
- ◆ Full complement of I/O capability (Ethernet, SCSI, serial, USB 2.0, MIL-STD-1553, SATA, TTL and differential discretes)
- ◆ VxWorks® BSP and Driver Suite
- ◆ INTEGRITY® BSP and Driver Suite
- ◆ Curtiss-Wright WindRiver Linux® 4.x
- ◆ Comprehensive foundation firmware including Built-in-Test (BIT), non-volatile memory programmer, and secure erase utility
- ◆ Designed for harsh environment applications, both air- and conduction-cooled
- ◆ Supports upgrade path for 179, 181, 182, 183 and 184 SBCs

The SVME/DMV-194 is a member of Curtiss-Wright Controls Embedded Computing's QorIQ family of products. It is the next step in the evolution of rugged high-performance, highly integrated SBCs and is designed for applications where low power with dual-core performance is a requirement. With two 64-bit PMC and XMC sites and a large complement of I/O capability such as Gigabit Ethernet, up to six serial ports, SATA, 1553 and USB 2.0 ports, the SVME/DMV-194 can satisfy the most demanding requirements of embedded computing applications.

Available in the full Curtiss-Wright range of ruggedness levels, the SVME/DMV-194 is targeted at lower performance, lower power harsh environment embedded applications.

For retrofit and technology insertion applications, the SVME/DMV-194 offers the equivalent of I/O featured in earlier generations of Curtiss-Wright PowerPC SBCs with backplane pinout compatibility. As a member of our continuously evolving family of PowerPC SBCs, it provides a upgrade path from SVME/DMV-179, SVME/DMV-181, SVME/DMV-182, SVME/DMV-183 and SVME/DMV-184, supporting the life-cycle model of successive technology insertions throughout a platform's lifetime.

Features

- ◆ Dual-core P2020 QorIQ processor at 1.2GHz with:
 - 64KB L1 data and instruction cache
 - 512KB shared L2 cache
- ◆ 2GB of DDR3 SDRAM with ECC
 - Growth path to 4GB DDR3 SDRAM
- ◆ 512MB of contiguous direct-mapped flash memory
- ◆ Hardware flash write protection jumper
- ◆ Permanent Alternate Boot Site (PABS) provides back-up boot capability
- ◆ 512KB AutoStore FRAM
- ◆ Optional 8GB NAND flash

Learn More

Sales Info: sales.cwembedded.com

Sales Email: sales@cwembedded.com

ABOVE & BEYOND

**CURTISS
WRIGHT** Controls
Embedded Computing
cwembedded.com



Features continued

- ◆ Two 64-bit PMC sites on independent PCI buses
 - x1 100MHz PCI-X, 1x 133MHz PCI-X
 - Optimized cooling of conduction-cooled PMCs
 - Select controlled impedance I/O routing
- ◆ Two x4 PCIe Gen1 capable XMC sites, both with I/O on PMC Pn4 connector
- ◆ Three Ethernet interfaces:
 - One 10/100/1000Base-Tx to front panel
 - One 10/100/1000Base-Tx to P0
 - Either 10/100Base-Tx or 10/100/1000Base-Tx to P2 depending on IPM installed
- ◆ Two asynchronous RS-232 serial ports
- ◆ Two USB 2.0 ports
- ◆ Factory-installed I/O Personality Module (IPM) allows for choice of following I/O bundles:
 - Four RS-232/422/485 serial channels and 14 TTL discretes
 - Two MIL-STD-1553 channels, two RS-232/422/485 serial channels, and 14 TTL discretes (also provide GbE capability on P2 Ethernet)
 - Two RS-232/422/485 serial channels, 14 TTL discretes (also provides GbE capability on P2 Ethernet)
- ◆ Two RS-232/422/485 serial channels, 14 TTL discretes, two SATA 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
- ◆ Four general-purpose DMA controllers
- ◆ Six 32-bit OS timers, three per processor
- ◆ Two avionics-style watchdog timers with software programmable upper and lower bounds, with external watchdog event indicator discrete
- ◆ Real-Time Clock (RTC) with automatic 5V/5V STDBY switch over
- ◆ IDT Tempe Tsi148 VME interface with VME DMA
- ◆ Three 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

Figure 1: SVME/DMV-194 Core Processing Architecture

