

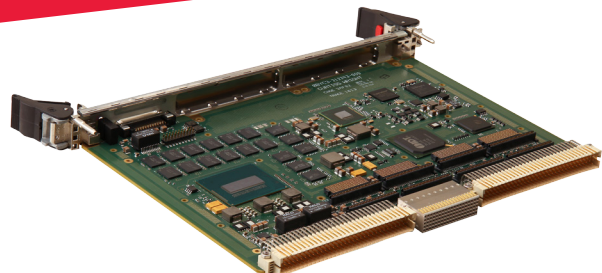


Data Sheet

SVME/DMV-1908

6U VME Intel® Core™ i7

4th Gen Single Board Computer



Features

- ◆ Processor
 - Intel® Core™ i7 'Haswell' 4th Gen Processor
 - 2.4 GHz, Quad-core
 - Integrated two-channel memory controller with ECC
 - 256 KB L2 cache per core, 6 MB Shared L3 Cache
 - Intel SSE 4.2 floating-point
 - Intel Trusted Execution Technology (TxT)
 - Intel Virtualization Technology (Vt-d)
 - Intel 64 Architecture
- ◆ Platform
 - Intel 4th Generation PCH
 - Integrated Graphics Controller
- ◆ Volatile Memory
 - ECC, Dual-channel Memory Configuration
 - 8/16 GB DDR3 at 1600 MHz (32 GB planned)
- ◆ Non-volatile Memory
 - 8/16 GB Soldered NAND Flash (32/64 GB planned)
 - 8 MB SPI flash for BIOS functions
- ◆ Dual Mezzanine Sites
 - 100 MHz PCI-X PMC/x8 PCIe XMC
- ◆ Front I/O (air-cooled only)
 - 2x EIA-232 Serial Channels
 - 1x USB 2.0 Port
 - 1x Gigabit Ethernet Port
 - 1x DVI/DP Graphics Port
- ◆ Rear I/O (depending on variant)
 - 2x EIA-232 Serial Channels
 - 3x EIA-422 Serial Channels
 - 8x Discrete I/O
 - 3x USB 2.0 Ports
 - 2x SATA 3.0 Ports
 - 2x Gigabit Ethernet Ports
 - 2x DVI/DP Graphics Ports
 - 1x RGB/VGA Graphics Port
- ◆ Optional Interfaces
 - VME 320 2eSST
- ◆ Mechanical
 - Air-cooled 6U VME single-slot
 - Conduction-cooled 6U VME single-slot
 - Compliant to IEEE STD 1101.2-1992, VITA 20, VITA 31.1
- ◆ Software Support
 - Fedora™ Linux®
 - Wind River® VxWorks® 6.9
 - Microsoft® WES7



Learn More

Web / cwcdefense.com/sales

Email / defensesales@curtisswright.com

ABOVE & BEYOND

**CURTISS
WRIGHT** **Controls**
Defense Solutions

cwcdefense.com

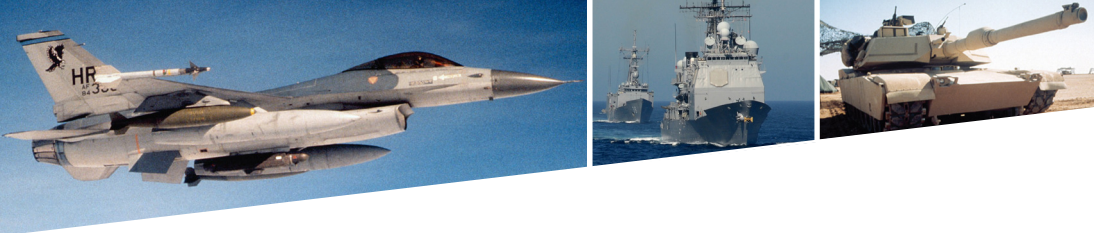
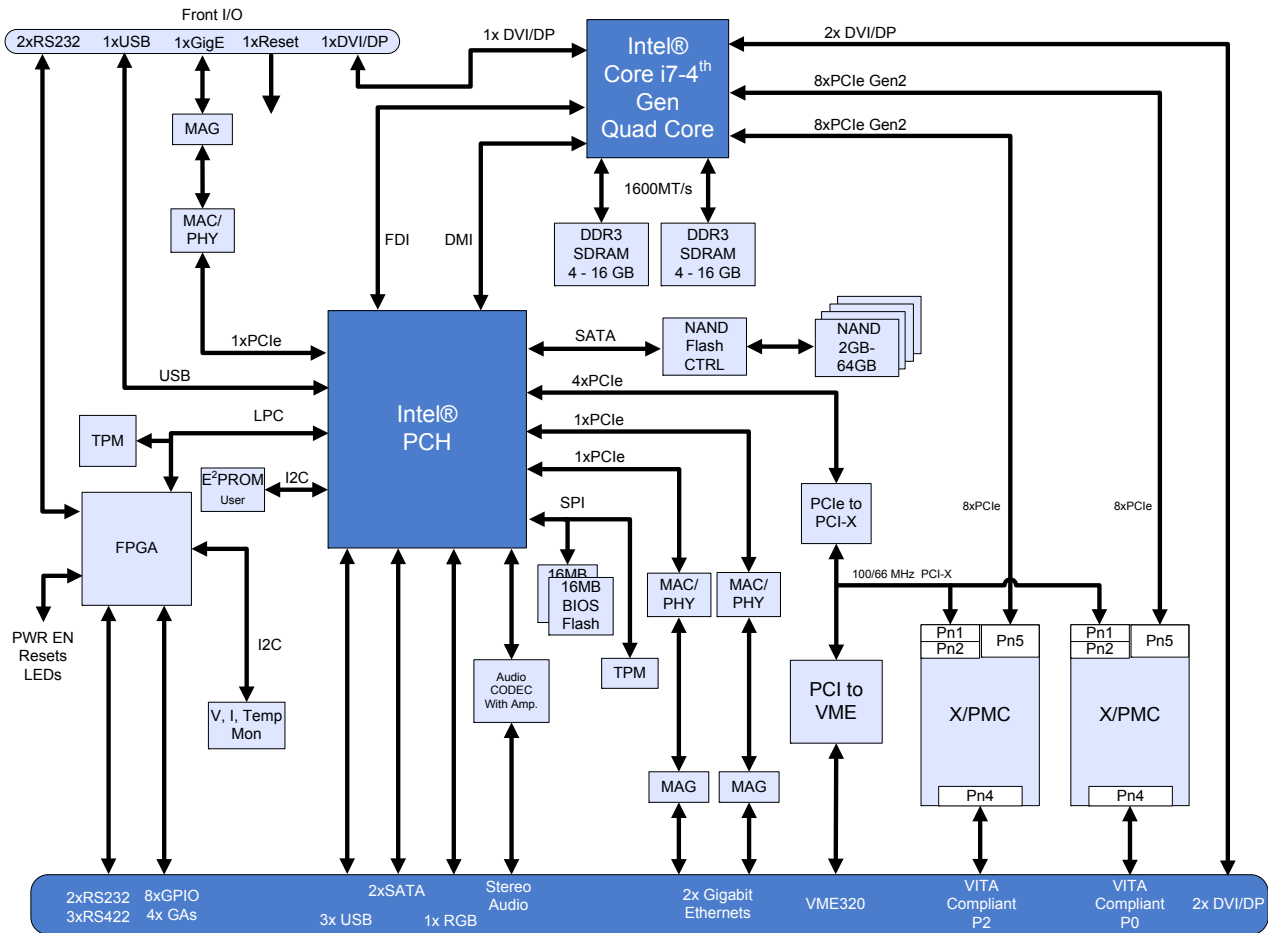


Figure 1: S/VME-1908 Block Diagram



The S/DMV-1908 from Curtiss-Wright Controls Defense Solutions is designed from the start to be a low-cost, high performance technology insertion Single Board Computer (SBC). The S/DMV-1908 supports Intel's latest mobile processor technology, the 4th Generation Core i7 Processor. Utilizing this advanced quad-core CPU and Curtiss-Wright's proven ruggedization technology, the S/DMV-1908 is a perfect replacement for older SBCs, breathing new life and increased performance into systems required to be around for years to come.

With a contemporary high speed DDR3 memory subsystem connected directly to the processor and with a capacity of up to 32 GB, the S/DMV-1908 is able to maximize the Intel floating point processing units through the Core i7 processor. The Core i7 is also equipped with L3 cache allowing it to process larger vectors at peak rates than previous processor technologies.

Up to 64 GB of flash make the S/DMV-1908 an ideal SBC for handling applications with demanding storage, data logging and sensor processing requirements.

The S/DMV-1908 includes dual X/PMC sites for the latest as well as legacy daughter cards. Additionally, the board supports a host of standard I/O including Gigabit Ethernet, RS-232/422, GPIO, DVI, SATA, USB, and Audio.

Three popular operating systems, VxWorks 6.9, WES7, and Fedora Core are available on the S/DMV-1908.



Powerful Intel 4th Gen Quad Core Processing

The Intel Core i7 processor is based on Intel's industry-leading silicon technology and the latest micro-architecture enhancements. This 4th Generation Core i7 processor builds on the tremendous success of the revolutionary micro-architecture and marks the next step in Intel's continual cadence for delivering contemporary technology to the aerospace and defense industry.

Intel's 4th Generation Core i7 delivers unmatched performance at manageable power levels required to support legacy system upgrades.

Power Consumption & CPU Tuning

The S/DMV-1908 provides extremely flexible and dynamic methods of controlling power consumption. From statically parking cores in the BIOS to dynamically adjusting CPU clock at run time, the S/DMV-1908 will meet your low-power requirements.

Intel 4th Generation PCH

The S/DMV-1908 employs the Intel 4th Generation PCH. The Intel PCH comes equipped with an integrated video controller that provides graphics options for DVI/DP/RGB interfaces. The Intel PCH also handles the flow of information between the board's I/O interfaces and the Intel Core i7 processor.

Dual SATA

The S/DMV-1908 provides two SATA 3.0 (3.0 GB/s) interfaces. Each interface incorporates several performance enhancing features such as:

- ◆ Independent DMA channel with 2K FIFO
- ◆ Independent command fetch, scatter/gather, and command executions

Software Support

Continuum Software Architecture (CSA)

The S/DMV-1908 is supported by a suite of firmware, RTOS board support packages (BSP), communication libraries and signal processing libraries. The Continuum Software Architecture is Curtiss-Wright's suite of firmware and BSP APIs that is common to SBCs (VME, CompactPCI and VPX) and multi-processor boards. Developers of mixed systems will find a common set of features and software interfaces for all future processing products from Curtiss-Wright.

Continuum BIT

Continuum Built-in Test (BIT) is a library of diagnostic routines to support Power-up BIT (PBIT), Initiated BIT (IBIT), and Continuous BIT (CBIT) designed to provide 95% fault coverage.

Operating System Software

The S/DMV-1908 is supported with an extensive array of software items, which cover all facets of developing application code for the board. Users have the option of choosing to develop with a variety of operating systems and development tools. The following operating systems are supported or planned for the S/DMV-1908.

- ◆ Wind River VxWorks 6.9
- ◆ Fedora Linux
- ◆ Microsoft Windows WES7

Temperature Sensors

The S/DMV-1908 provides temperature sensors to measure board and processor temperatures. There is a sensor at each edge of the card and one sensor in close proximity to the processor. The sensors can be read by software and they can be configured to generate an interrupt in case of an over temperature condition.

Ruggedization Levels

Air-cooled cards are available at Level 0 and Level 100.

Conduction-cooled cards are available in Level 200.



Warranty

This product has a one year warranty.

Contact Information

To find your appropriate sales representative:

Website: www.cwcdefense.com/sales

Email: defensesales@curtisswright.com

Technical Support

For technical support:

Website: www.cwcdefense.com/support

Email: support@curtisswright.com

The information in this document is subject to change without notice and should not be construed as a commitment by Curtiss-Wright Controls Defense Solutions. While reasonable precautions have been taken, Curtiss-Wright assumes no responsibility for any errors that may appear in this document. All products shown or mentioned are trademarks or registered trademarks of their respective owners.