VPX3-1252
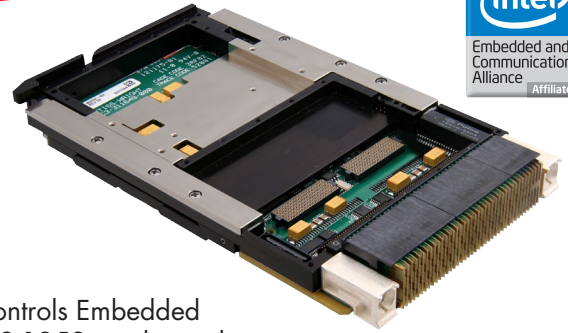
Intel® Core™2 Duo SP9300 Single Board Computer

- High-speed general purpose SBC with Intel Core2 Duo SP9300

- Intel Core2 Duo SP9300 with two cores running at 2.26 GHz

- Up to 8 GB DDR3 SRDAM

- Full compliment of I/O Capability (Ethernet, Serial, USB 2.0, PCI Express®, SATA and DIO)

- VPX format with two 4-lane PCIe fabric ports

- VxWorks® 6.x BSP, Driver Suite supporting Workbench® 2.x IDE, Windows® XPe, Curtiss-Wright Wind River® Linux® GPP LE and LynxOS®

- Continuum Software Architecture (CSA) firmware providing a comprehensive suite of system debug, exerciser, and update functions, BIT, and non-volatile memory sanitization function

- Designed for harsh-environment applications, both air- and conduction-cooled

Curtiss-Wright Controls Embedded Computing's VPX3-1252 combines the performance and the advanced I/O capabilities of the Intel Core2 Duo SP9300 processor and Intel GS45 Chipset with an extensive I/O complement, to provide a highly capable processing platform for a wide range of high-performance applications. Designed for space constrained applications, the VPX3-1252 represents the latest step in the evolution of rugged high-performance, highly integrated, small form factor single board computers (SBCs).

Available in a full range of environmental build grades, the VPX3-1252 is specifically designed to meet the challenges of rugged deployed high density computing. The VPX3-1252 packs the greatest functionality into the smallest standard form factor, draws the lowest possible power while retaining maximum flexibility, and offers an impressive complement of I/O capability to satisfy the most demanding harsh environment application needs.

The VPX3-1252 is designed to occupy a standard 0.8" slot and may be used for upgrading existing CompactPCI (cPCI) systems in the same footprint.

Please note:
All hardware features may not be supported by all operating systems.
Contact Curtiss-Wright for details and release schedules.

CURTISS WRIGHT *Controls*
Embedded Computing
cwcembedded.com

VPX3-1252

Features

Intel Core2 Duo SP9300 Processor

- 2.26 GHz
- 6 MB L2 Cache
- 1067 MHz FSB
- SSE4 floating point libraries

Memory

- up to 8 GB DDR3 SDRAM
- 4 GB NAND Flash
- 512 KB of NVRAM
- Memory bank DDR3 SDRAM up to 1066 MHz

Fabric Ports

- Two x4 lane PCIe fabric ports on the VPX P1 connector mapped as per VITA 46.2

I/O

- 2 GbE
- 2 RS-232
- 2 RS-422/485
- 3 USB 2.0
- 8 DIO
- 3 SATA

IPMI

- XMC site with 8 lanes of PCI
  - IEEE 1386.1 Compliant

Operating System

- WindowsXPe
- VxWorks
- Linux
- LynxOS

Built-in Test

- BIT compliant with COTS Continuum features
- CBIT
- IBIT
- PBIT

BIOS provides user selectable power management features – processor frequency can be stepped to 2.2 GHz, 1.8 GHz, 1.4 GHz and 1.0 GHz

Ruggedization Levels

- Air-cooled
- Conduction-cooled
- Conduction-cooled VPX REDI LRM

Table 1: Power Dissipation at 85°C

Core Speed GHz	Single-core Watts	Dual-core Watts	Typ. Board Power (Dual-core) Watts
1.60	15.7	19.0	29.8
2.26	2.26	26.3	41.9

Figure 1: VPX3-1252 Block Diagram