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Data Sheet

August 15, 2026

CURTISS-WRIGHT

Curtiss-Wright VPX6-185-A01A6 Single Board Computer

The Curtiss-Wright VPX6-185-A01A6 is a 6U VPX single board computer engineered for demanding embedded computing and signal processing in harsh environments. Built on the Freescale Power Architecture MPC8640/1 processor, it delivers dual-core e600 performance at 21.3 GFLOPs @1.33 GHz with integrated AltiVec acceleration. The platform combines high-speed fabric connectivity - sRIO up to 3.125 Gbps and PCIe at 2.5 Gbps - with extensive I/O and 8.6 GB/s memory bandwidth to support tactical avionics, armored vehicle computing, and naval systems requiring resilience in extreme conditions. Up to 2 GB DDR2 SDRAM with ECC (single-bit error correction, multi-bit error detection) Dual-channel DDR2 memory controllers operating up to 500 MHz, 8.6 GB/s peak bandwidth Four 10/100/1000Base-TX Gigabit Ethernet ports (one air-cooled front panel or backplane option; three routed to backplane P4)



MODEL

**Curtiss-Wright
VPX6-185-A01A6**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

VPX6-185-A01A6

LISTING

<https://aumictechlabs.com/products/vpx6-185-a01a6-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

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21.3 GFLOPs @1.33 GHz with integrated AltiVec acceleration. The platform combines high-speed fabric connectivity - sRIO up to 3.125 Gbps and PCIe at 2.5 Gbps - with extensive I/O and 8.6 GB/s memory bandwidth to support tactical avionics, armored vehicle computing, and naval systems requiring resilience in extreme conditions. Technical Specifications Processor Freescale Power Architecture MPC8640/1 with single or dual-core e600 options 64 KB L1 cache per core; 1 MB L2 cache with ECC per core 21.3 GFLOPs @1.33 GHz dual-core performance Memory Up to 2 GB DDR2 SDRAM with ECC (single-bit error correction, multi-bit error detection) Dual-channel DDR2 memory controllers operating up to 500 MHz, 8.6 GB/s peak bandwidth 256 MB or 512 MB Flash memory with write protection 128 KB AutoStore NVSRAM with hardware write protection VPX Fabric VITA 46 core fabric with Serial Rapid I/O (sRIO) and PCIe Up to four sRIO interfaces at 3.125 Gbps Up to two PCIe interfaces at 2.5 Gbps I/O Interfaces Four 10/100/1000Base-TX Gigabit Ethernet ports (one air-cooled front panel or backplane option; three routed to backplane P4) Four asynchronous EIA-232 serial ports; four synchronous/asynchronous EIA-232/422/485 channels with HDLC/SDLC Up to 14 VTTL discrete I/O; up to 16 EIA-422/485 differential signals (8 inputs, 8 outputs) Two USB 2.0 ports; two I2C channels Six general-purpose 32-bit timers; four DMA controllers; eight 31-bit OS timers; two avionics-style watchdog timers Mezzanine Expansion Two XMC/PMC mezzanine sites: one supporting 100 MHz PCI-X PMC or 8-lane PCIe XMC; one supporting 66 MHz PCI-X PMC or 4-lane PCIe XMC Key Features Dual-core processor with cache ECC and memory error correction Configurable sRIO and PCIe fabric for processor-to-processor communication Multiple serial, discrete, and Ethernet I/O options Hardware watchdog and timer redundancy for applications Typical Applications Tactical aircraft computing platforms Armored vehicle embedded systems Naval systems requiring harsh-environment resilience Real-time data and digital signal processing Compatibility & Integration Supports VITA 46 VPX backplanes. Accommodates both PMC and XMC mezzanine modules at specified clock rates.

VPX6185A01A6 Characteristics / Specifications

PARAMETER	VALUE
Model	VPX6-185
Instrument Type	6U VPX single board computer
Form Factor	6U VPX VITA 46
Processor Family	Freescale MPC8640 or MPC8641
Core Count	single or dual e600
Cpu Speed Maximum Class	up to 1.5 GHz class literature
Peak Floating Point Dual Core Class	up to 24 GFLOPS at 1.5 GHz with AltiVec
Memory Maximum	2 GB DDR2 SDRAM with ECC
Memory Controllers	dual 64 bit DDR2 controllers
Flash Maximum Class	up to 512 MB with write protection
Nvsram	128 KB AutoStore with hardware write protection
Boot Feature	Permanent Alternate Boot Site PABS
Xmc Pmc Sites	2
Fabric Ports	four x4 ports configurable as sRIO or PCIe
Backplane Bandwidth Class	multi GB/s VPX fabric class
Vme Interface	2eSST capable VME for legacy cards
Ethernet Ports Class	up to 4 Gigabit Ethernet
Serial Ports Class	multifunction RS232/422/485
Usb	USB 2.0 class
Sata	Serial ATA class
Discrete Io Class	TTL and differential discretes
Mil Std 1553 Class	available on configurations
Cooling Grades	air cooled and conduction cooled environmental builds
Os Support Class	VxWorks INTEGRITY and Continuum CSA firmware
Bandwidth	Class: multi GB/s VPX fabric class

VPX6185A01A6 Specifications

PARAMETER	VALUE
Key Features	MPC8640/8641 single or dual core with AltiVec
Up to 2 GB DDR2 SDRAM with ECC	Four x4 fabric ports sRIO or PCIe
Technical Specifications	Model: VPX6-185

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Os Support Class	VxWorks INTEGRITY and Continuum CSA firmware Notes Numeric rows from Curtiss-Wright VPX6-185 product announcements and catalog summaries for MPC8640/8641-based 6U VPX SBCs. Exact speed memory and I/O personality follow the configuration dash code.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

performance with VME legacy support.	
Key Features	
MPC8640/8641 single or dual core with AltiVec	
Up to 2 GB DDR2 SDRAM with ECC	
Four x4 fabric ports sRIO or PCIe	
Dual XMC/PMC mezzanine sites	
Permanent Alternate Boot Site and NVSRAM	
Technical Specifications	
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Notes

Numeric rows from Curtiss-Wright VPX6-185 product announcements and catalog summaries for MPC8640/8641-based 6U VPX SBCs. Exact speed memory and I/O personality follow the configuration dash code.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.