

SCVPX6U-95 Series

OpenVPX High Performance Embedded Computing Platform

The SCVPX6U-95 Series OpenVPX High Performance Embedded Computing (HPEC) product family offers flexible, application ready, Modular Open System Architecture (MOSA) platforms using Abaco Systems' COTS VITA65 processors, I/O, switch fabric modules (SFMs) and integrated software.

Applications developed on HPC blade servers and multi-node clusters can be ported to a range of deployable processing boards including our very latest Intel 2nd and 3rd generation Core i7 SBCs, Multiprocessors and NVIDIA CUDA GPGPUs.

Abaco's rugged HPEC circuit card assemblies (CCAs) are designed for use in a variety of convection, conduction and air flow through build styles to cater for extended temperature, shock and vibration.

System integrators can develop, test and demonstrate this platform secure in the knowledge that the very same CCAs can be re-packaged for airborne, ground and naval applications to expand and extend operational capabilities for a range of Intelligence, Surveillance and Reconnaissance (ISR) platforms.

Size, weight, power and cost

Abaco's HPEC platforms combine state of the art performance and open architectures to meet the most demanding SWaP-C

budgets for deployed sensor, image and data processing.

Accelerated SW development

The AXIS application development framework shortens time to solution and reduces risk and cost by providing a user friendly interface to the scalable multi-processor platform. Application developers can get off to a quick start by using preconfigured DSP examples and performance libraries to harness the full potential of the underlying hardware. Further application tuning turns concepts into flyable customer demonstrations within a matter of days rather than months.

Technology re-use

The system can be scaled up or down to meet varying SWaP-C profiles thus providing the application developer with a high degree of technology re-use across multiple platforms.

Planned technology refresh

Abaco's OpenVPX product road maps offer form, fit and function upgrades to safe guard our customers' investment in application SW. This multi-generation product set harnesses mainstream, cluster computing and network technology from the wider HPC market to the benefit of defense and aerospace system integrators across an expanding landscape of rugged deployed platforms.

FEATURES:

- Modular Open System Architecture (MOSA)
- Native development via standard GUI, keyboard and mouse HMI
- Intel® 2nd and 3rd Gen Core™ i7
- NVIDIA GPGPU
- Fabrics: 10GigE and PCIe
- I/O Options: Ethernet & 10GigE, sFPDP
- Multiple HDDs
- User I/O via rear panel connectors
- Integrated and tested
- Integrated Software
- 64 bit Linux
- AXIS Advanced Multiprocessor Integrated Software
- AXISVIEW GUI
- AXISFLOW IPC
- AXISLIB performance libraries for DSP and math
- Third Party Software
- Sourcery VSIPL++ from Mentor Graphics
- OpenFabrics.org - OFED RDMA/ OpenMPI
- GPU Direct
- Training and Support
 - Abaco Systems HPEC Center of Excellence
 - Tutorials and dedicated training classes
 - Performance tuning and application optimization
 - Linux integration and support

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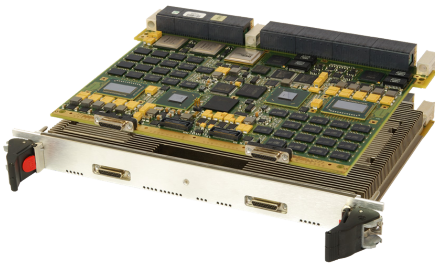
Specifications

- Fully integrated and tested 64bit Linux Beowulf cluster
- Head node configured with full Human Machine Interface (HMI) for native development
- AXIS SW pre-installed and configured
- 8 x Intel 2nd Gen Quad Core i7 CPUs
- Fully managed Ethernet SFM
- 10GigE Data plane
- GigE control plane
- 2 x HDDs
- 1200Watt PSU
- User I/O via DSP280RTMs
- Optional Network I/O via GBX460RTM
- Rear transition modules (RTMs) provide access to payload processor interfaces
- Additional backplane options available

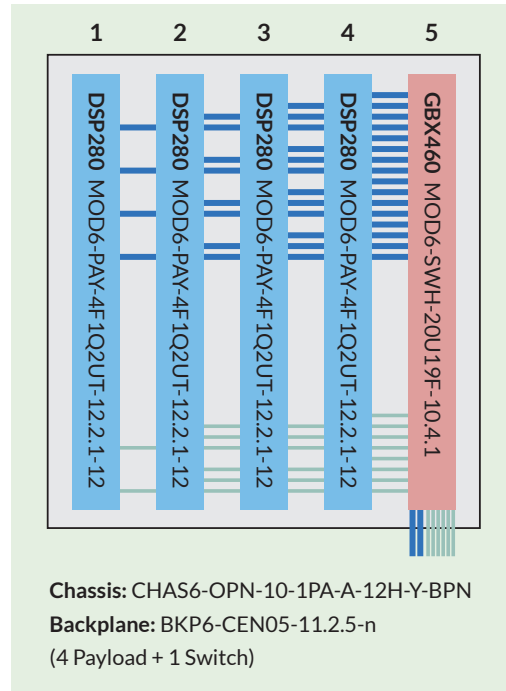
Additional system configurations can include combinations of the below selection Abaco COTS modules:

- SBC62x Intel SBCs
- DSP28x Dual Intel MPs
- NPN24x dual NVIDIA GPGPU
- IPN25x Intel + NVIDIA SBCs
- PEX442 PMC/XMC Carrier
- SPR507B sFPDP XMC I/O

Contact Abaco Systems' HPEC Center of Excellence for more information on these HPEC starter systems and for advice on system architectures, performance and training services.



OpenVPX System Profile



Ordering information

SCVPX6U-95G4D0B

- Fully integrated HPEC application development system with:
- 4 x DSP280-142A0103 Dual 2nd Gen Intel Quad Core i7 multiprocessors
 - 4 x DSP280RTM-11 User I/O rear transition modules
 - 1 x GBX460-120001 managed 10GigE Switch Fabric Module (SFM)
 - 4 x Hard disk drives
 - Internal 1200Watt PSU
 - 64bit Linux Beowulf cluster configuration
 - AXIS Advanced multiprocessor integrated software pre-installed

WE INNOVATE. WE DELIVER. YOU SUCCEED.

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