



CHARON™-VAX XK+ for Windows

CHARON Version 3.2

Software Concepts
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Advanced CPU Emulation
 Advanced CPU Emulation (ACE) dynamically optimizes the VAX instruction interpretation. This does not require code pre-processing and provides its full capability instantly. As the optimization takes place below the virtualized hardware level, the software remains fully VAX hardware compatible and is completely transparent to VAX operating systems and applications.

HP Transfer Licenses
 Hewlett-Packard (HP) recognizes CHARON-VAX as a valid VAX replacement platform to run OpenVMS, and CHARON-VAX has passed the original VAX hardware qualification tests.

HP provides transfer licenses for the VAX/VMS operating system and layered products, so that customers can continue to use their HP software and support contracts without modification.



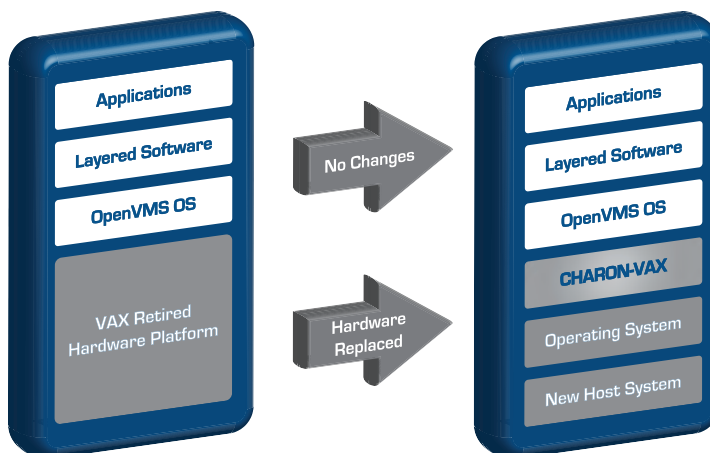
CHARON-VAX/XK+ for Windows is a third generation VAX system virtualization. By virtualizing a variety of VAX CPUs with different features, CHARON-VAX/XK+ can replace a wide range of VAX server hardware with modern Windows servers running CHARON-VAX/XK+ as a Windows application.

CHARON-VAX/XK+ provides an exact model of the virtualized CPUs, on which VAX/VMS, layered software, and user applications execute unmodified. No conversion of binary VAX code is required. The built-in ACE (Advanced CPU Emulation) feature of the CHARON-VAX/XK+ software provides a 3 to 5 times CPU performance improvement as opposed to products without the ACE feature.

The compatibility of the software with VAX hardware is tested with the original VAX hardware design tools and diagnostics.

Features

- Provides VAX CPU virtualization for VAXserver 4000-108, MicroVAX 3100-98, or VAXserver 3600/3900. Only one of these CPUs can execute at a given time.
- Does not require VAX application code conversion nor application sources. VMS, layered software, and applications can be directly installed on CHARON-VAX/XK+ and do not require any modifications. The application binaries, user interface, and functionality remain unchanged.
- Each virtualized VAX model follows the characteristics of the VAX hardware it is derived from, requires the corresponding level of VAX/VMS license units and supports the peripherals particular to that VAX model. See the Features Matrix on the next page.
- Installs and runs the standard VAX/VMS and other standard VAX operating systems.
- CHARON-VAX/XK+ can operate as an unattended Windows service.
- VMS and layered product transfer licenses from an existing VAX system to CHARON-VAX/XK+ are available from HP.
- Passes HP's AXE architecture test for VAX instruction compatibility.
- CHARON-VAX/XK+ emulates up to 256 MB VAX memory.
- The virtualized Ethernet adapter(s) supports 10 or 100 (*) Mbps network connections to other systems, NI clusters, terminal servers and X-terminal (emulators). Virtualization is transparent to DECnet and/or TCP/IP network protocols.
- CHARON-VAX/XK+ can be configured as a VMS NI-cluster member or as a cluster member with shared disk clustering.
- Upgrading to a faster host system provides an immediate performance increase.
- Provides a choice between one year (extendable) or perpetual usage licenses.
- Two levels of optional software support service.



Software Product Description CHVX-221-PE-WI

Typical Applications

- Replacing any VAX platform requiring up to 256 MB of VAX memory with a Windows host system while using unmodified VAX application software.
- Improving VAX system performance for CPU or I/O intensive workloads while replacing the hardware with a Windows platform.
- Replacing departmental or corporate VAX computers by modern host systems to reduce maintenance, space, and operating costs.

Features Matrix

	VAX 4000-108	VAX 3100-98	VAX 3600/3900
Emulated VAX CPU	KA57-A	KA59-A	KA650-B / KA655-B
Earliest VMS version supported	5.5-2	5.5-2	4.6
Maximum VAX memory emulated	256 MB	256 MB	256 MB
(T)MSCP Device Controller	Yes (**)(***)	N/A	Yes (**)(***)
SCSI Subsystem	Two controllers, each supporting seven addresses; using LUNs each address supports eight similar devices	Two controllers, each supporting seven addresses; using LUNs each address supports eight similar devices	N/A
VAX SCSI disks	VAX SCSI disks can be represented by physical SCSI disks or disk image files	VAX SCSI disks can be represented by physical SCSI disks or disk image files	N/A
VAX SCSI tapes	SCSI tape drives connect via a host SCSI port	SCSI tape drives connect via a host SCSI port	N/A
Ethernet	Up to five Ethernet adapters, including one SGEC. Connection speed of up to 100 Mbps with Plus option(*).	One SGEC adapter. Connection speed of up to 100 Mbps with Plus option(*). Non-Plus option connects at 10 Mbps.	Up to four Ethernet adapters. Connection speeds up to 100 Mbps with Plus option (*).
VAX/VMS clustering	NI Cluster or Shared Disk Clustering with simulated MSCP controllers	NI Cluster	NI Cluster or Shared Disk Clustering with simulated MSCP controllers
Asynchronous serial line emulation	CXA16, CXB16, CXY08, DHQ11, DHV11, DHW42-AA, DHW42-BA, DHW42-CA	DHW42-AA, DHW42-BA, DHW42-CA	CXA16, CXB16, CXY08, DHQ11, DHV11
Qbus subsystem	Yes (**)	N/A	Yes (**)
Host memory requirement	1 GB	1 GB	1 GB

Ordering Information

CHARON-VAX/XK+ for Windows

Unlimited run time license	CHVX-221-PE-WI
One year license	CHVX-221-BE-WI
Back-up key	CHVX-221-KE-WI
GOLD Support	CHVX-221-UE-WI
PLATINUM Support (****)	CHVX-221-TE-WI

(*) The effective aggregate throughput depends on the host system's performance.

(**) Configurable Qbus components are the MSCP disk controller RQDX3, the TMSCP tape controller TQK50, the serial line controllers as above, and the Ethernet controllers DEQNA, DELQA and DESQA.

(***) MSCP disk emulation is the preferred storage device emulation in the case of heavy disk I/O.

(****) Subject to geographical availability

Host System Requirements

A dedicated 32-bit Windows 2000, XP or 2003 Server Standard Edition host system with a dual CPU of at least 1 GHz, a CD-ROM, minimum one (1) dedicated Ethernet adapter, a USB port for the license key and enough storage space for the VAX disks. The minimum host memory requirement depends on the CPU emulated and whether ACE is used. For a list of virtualized components please see the Features Matrix.

Recommended Tools

HP Pathworks 32:

- VT525 terminal emulator
- X-terminal emulator
- Windows file copy

Product Contents

Distribution CD

License key

License Key

The CHARON hardware license key is permanently connected to the host system running the software. It preserves the customer specific license parameters, allows remote electronic updates and enables rapid change of host systems as the CHARON executable itself can be installed on multiple systems.

The MTBF (mean time between failures) of the key is more than 100 years. For mission-critical applications, a backup key containing 720 hours execution time can be ordered to meet any disaster recovery plan that requires replacement hardware.

Warranty

The 3 months standard warranty for this product is the readability of the distribution media.

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