



# SOFTWARE PRODUCT DESCRIPTION

## CHARON-VAX/66x0 PLUS for Windows

Product version: 4.0; Build 122-04

### Description

CHARON-VAX/66x0 PLUS represents 4 products that are designed to replace XMI-based 6000 and 7000 series multi CPU VAX systems. They are members of the CHARON cross-platform hardware virtualization family.

VAX hardware		Virtual VAX 66x0 product
VAX6610, VAX 7610	⇒	CHARON-VAX/6610 PLUS
VAX6620, VAX 7620	⇒	CHARON-VAX/6620 PLUS
VAX6630, VAX 7630	⇒	CHARON-VAX/6630 PLUS
VAX6660, VAX 7660	⇒	CHARON-VAX/6660 PLUS

CHARON-VAX creates the virtual replica of the original VAX hardware interface inside a standard computer system. It will run the VAX operating system and application software in their existing, binary form. It runs your VAX software to a more modern general purpose computer.

**CHARON-VAX/66x0 PLUS for Windows** is designed to emulate a VAX6000-610, -620, -630 or -660 system by its virtual equivalent running on a Windows 7 or Windows Server 2008 (R2) Standard or Enterprise Edition host platform. It can also be used to replace any XMI based multi CPU VAX system from 6000, 7000, 8000, and 10000 series. Most VAX hardware is virtualized, allowing the VAX/VMS operating system and all software that is running in that environment to remain working as always. Almost no changes to the VAX operating system, layered products or applications, its procedures or handling have to be applied.

### Network

CHARON-VAX virtualizes the Ethernet controllers as included in the original VAX hardware that is replaced. Any protocol that ran on these controllers (DECnet, TCP/IP, LAT) will run over this virtualized link.

### Storage

The CHARON-VAX/66x0 family provides support for the KDM70 VAX6000 (T)MSCP storage devices. CHARON translates the VAX types to any modern technology (SCSI, IDE, SATA, SAS, iSCSI or SAN) by means of logical files in a Windows directory, physical Windows disks or physical SCSI devices.

### Host system requirements

A dedicated Windows host system, with N+1 CPU cores of at least 2 GHz (where N is the number of emulated VAX CPUs), from 3 GB to 6 GB host memory (dependent on the VAX memory that is virtualized), CD-ROM, minimum one dedicated Ethernet adapter, a USB port for the license key and enough disk space for the VAX disks. CHARON-VAX/66x0 PLUS software requires approximately 30 MB disk space on the host system.



### Performance

The CHARON-VAX/66x0 PLUS CPU performance scales with the clock frequency of the host CPUs provided the host memory latency is increased by the same factor. Performance comparison VAX hardware/virtual VAX:

	Hardware VAX	CHARON-VAX <sup>*)</sup>
VAX6610	32 VUPS	125 VUPS
VAX6620	50 VUPS	225 VUPS
VAX6630	75 VUPS	338 VUPS
VAX6660	150 VUPS	675 VUPS

<sup>\*)</sup> When run on an Intel i7 965 (3.2 GHz) based system

### Product license key

The CHARON USB-type license key is permanently connected to the host system running the emulator. 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. HASP license key is used allowing wide functionality, including running multiple CHARON occurrences on a single host computer.

### Documentation

- User manual, on the installation CD and on the web.
- Release notes, on the installation CD and the web.

### Additional utilities

**Program Launcher:** start/stop/configure CHARON-VAX.

**Service Manager:** to manage CHARON-VAX as a service

**MKdisk:** to create empty VAX disk images.

**DECTray:** taskbar icon for network activity display.

**SCSIcheck:** to locate CHARON names for disks, tapes, CD's floppy disks and other SCSI devices.

**Network Control Center:** to manage CHARON network components.

**Idle:** to suspend host CPU usage when the VAX OS is idle (energy save mode). Applicable to single CPU systems only.

**HASP-HL-VIEW:** to view the license content.

**HASPRUS:** to apply remote HASP license updates.

## User environment

After installation the system will behave like the VAX it replaces and should be treated like that VAX. Operating procedures will be the same and we advise not to treat it as a Windows system, despite the fact it runs on a Windows kernel. The product documentation includes an advisory for switching off unused Windows services and the Windows kernel can be disconnected from the network after installation.

## Virtualized hardware

	VAX6000-610	VAX6000-620	VAX6000-630	VAX6000-660
<b>Virtualized VAX CPU</b>	KA66-A (1 VAX CPU)	KA66-A (2 VAX CPU's)	KA66-A (3 VAX CPU's)	KA66-A (6 VAX CPU's)
<b>Earliest VMS version</b>	5.5-2	5.5-2	5.5-2	5.5-2
<b>Max. virtual VAX memory</b>	1 GB	2 GB	2 GB on 32 bit Windows 3 GB on 64 bit Windows	2 GB on 32 bit Windows 3 GB on 64 bit Windows
<b>Internal bus</b>	XMI	XMI	XMI	XMI
<b>SCSI and QBUS buses</b>	N/A	N/A	N/A	N/A
<b>Emulated VAX disks</b>	KDM70 XMI disks	KDM70 XMI disks	KDM70 XMI disks	KDM70 XMI disks
<b>Emulated VAX tapes</b>	KDM70 XMI tapes Tapes only for data exchange, boot from tape not supported	KDM70 XMI tapes Tapes only for data exchange, boot from tape not supported	KDM70 XMI tapes Tapes only for data exchange, boot from tape not supported	KDM70 XMI tapes Tapes only for data exchange, boot from tape not supported
<b>Ethernet</b>	Multiple emulated DEMNA Ethernet adapters up to the available maximum slots on the emulated XMI bus. Connection speed on the emulated VAX level is 10 or 100 Mbps <sup>1)</sup>	Multiple emulated DEMNA Ethernet adapters up to the available maximum slots on the emulated XMI bus. Connection speed on the emulated VAX level is 10 or 100 Mbps <sup>1)</sup>	Multiple emulated DEMNA Ethernet adapters up to the available maximum slots on the emulated XMI bus. Connection speed on the emulated VAX level is 10 or 100 Mbps <sup>1)</sup>	Multiple emulated DEMNA Ethernet adapters up to the available maximum slots on the emulated XMI bus. Connection speed on the emulated VAX level is 10 or 100 Mbps <sup>1)</sup>
<b>VAX/VMS clustering</b>	NI cluster or Shared Disk Cluster with simulated MSCP controllers	NI cluster or Shared Disk Cluster with simulated MSCP controllers	NI cluster or Shared Disk Cluster with simulated MSCP controllers	NI cluster or Shared Disk Cluster with simulated MSCP controllers
<b>Original VAX hardware performance</b>	32 VUPS	50 VUPS	75 VUPS	150 VUPS
<b>CHARON-VAX/66x0 performance on a Intel Core i7 965 (3.2 GHz) host</b>	125 VUPS	225 VUPS	338 VUPS	675 VUPS
<b>Host memory requirement</b>	3 GB	4 GB	6 GB	6 GB

<sup>1)</sup> The effective aggregate throughput depends on the host system performance.

Each virtual VAX model follows the characteristics of its VAX hardware equivalent, requiring the corresponding level of license units and supports the peripherals particular to that VAX model. The virtual VAX does not include diagnostic and maintenance modes or delays to simulate mechanical device behavior.

## Ordering information

	CHARON-VAX/6610 PLUS	CHARON-VAX/6620 PLUS	CHARON-VAX/6630 PLUS	CHARON-VAX/6660 PLUS
Unlimited Run time license	CHVX-261-PG-WI	CHVX-262-PH-WI	CHVX-263-PH-WI	CHVX-260-PH-WI
One year license	CHVX-261-YG-WI	CHVX-262-YH-WI	CHVX-263-YH-WI	CHVX-260-YH-WI
Disaster recovery license (720 hours)	CHVX-261-KG-WI	CHVX-262-KH-WI	CHVX-263-KH-WI	CHVX-260-KH-WI
GOLD-support (9x5)	CHVX-261-UG-WI	CHVX-262-UH-WI	CHVX-263-UH-WI	CHVX-260-UH-WI
Platinum support (24x7)	CHVX-261-TG-WI	CHVX-262-TH-WI	CHVX-263-TH-WI	CHVX-260-TH-WI

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