

SOFTWARE PRODUCT DESCRIPTION

CHARON-AXP/4100 for Windows

Product version: 2.3.108

Description

CHARON-AXP/4100 is a member of the CHARON cross-platform hardware virtualization product-family by Stromasys. CHARON-AXP creates the virtual replica of the original Alpha hardware interface inside a standard computer system. It will run the Alpha operating systems OpenVMS and Tru64 UNIX including the layered products and application software in their existing, binary form. It quickly moves your Alpha software and data to a general purpose computer.

CHARON-AXP/4100 for Windows is designed to replace the AlphaServer 2000, 2100, 4000 or 4100 computer systems by its virtual equivalent running on a Windows XP/2003/Vista/2008 64bit host platform.

Most of the original Alpha-hardware is virtualized, allowing the **OpenVMS** or **Tru64** operating system and all software that is running in that environment to remain working as always. No changes to the original software (operating system, layered products or applications), its procedures or handling have to be applied.

Network

CHARON-AXP/4100 virtualizes the 10/100 Mbps Ethernet controller DE500, warranting support of even the earliest installation. Any protocol that ran over this Ethernet link (DECnet, TCP/IP, LAT) will run over this virtualized link. The virtual DE500 is recognized by the operating system which assumes it will run at 10/100Mbps. Since the DE500 is virtualized it may exceed that speed when connected to a faster adapter in the host system. It also supports FDDI network adapter DEPFA in passthrough mode.

Storage

CHARON-AXP/4100 provides support for Alpha storage devices: disk and tape via virtual KZPBA SCSI and KGPSA FibreChannel adapters. CHARON-AXP/4100 allows connecting Alpha SCSI devices to logical disks or tapes that appear as container files in the host operating system, connections to Windows physical devices and direct SCSI addressing. When emulating the KGPSA FibreChannel adapter an Emulex FibreChannel adapter in the host system is required (see page 2 for details)

Performance

CHARON-AXP/4100 benefits from the newer, faster hardware models, offering owners of most Alpha hardware systems equal or better performance at installation.

With the rapid pace at which new hardware is introduced and the additional improvements Stromasys makes to the CHARON products will further shift the balance in favor of cross-platform virtualization. This table shows performance measurements of the original Alpha hardware, comparing it with the CHARON solution, using the standard SPEC2000 benchmark.



	SPEC2000	
	INT	FP
(results are per CPU)		
AlphaServer 4100 5/533	176	176
AlphaServer DS10 6/500	300	383
AlphaServer DS20 6/667	425	455
AlphaServer ES40 6/500	299	382
AlphaServer GS80 6/731	352	405
AlphaServer GS160 68/1001	561	581

CHARON-AXP delivers 325 SPEC2000 INT and 470 SPEC2000 FP when run on a Xeon 5580 (3.2 GHz) host.

The CHARON-AXP/4100 base license includes 2 virtual Alpha CPU's, a 2 CPU option can be added.

Host System Requirements

CHARON-AXP is designed to run on Windows 2003 and 2008 (x64), which is supported by AMD/Intel systems.

CHARON-AXP/4100 can virtualize a 2 or 4 CPU Alpha-Server system and therefore claims one of the CPU's on the host system for every virtual Alpha CPU. Additional host CPU capacity is required for I/O handling and other virtualization support tasks. CHARON-AXP/4100 licensing allows combining multiple licenses on one multi-core host system, when the rule of reserving 1 support CPU for every 2 virtual Alpha CPU's is observed.

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.

The MTBF 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.



User environment

After installation the system will behave like the Alpha it replaces and should be treated like that Alpha. 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	2000	2100	4000	4100
Number of Alpha CPU's in base license	2	2	2	2
Additional Alpha CPU's	No	Yes	No	Yes
Maximum number of Alpha CPU's supported	2	4	2	4
Maximum supported Alpha memory	2 GB	2 GB	8 GB	8 GB
Ethernet (DE500) support	Yes (1 fixed)	Yes (1 fixed)	Yes	Yes
SCSI adapter (KZPBA) support	Yes (1 fixed)	Yes (1 fixed)	Yes (1 fixed)	Yes (1 fixed)
FibreChannel adapter (KGPSA) support ¹⁾	Yes	Yes	Yes	Yes
Maximum number of adapters supported (Ethernet, SCSI and FibreChannel)	4	4	17	9
IDE support	-	-	-	-
FDDI support ²⁾	Yes	Yes	Yes	Yes
Earliest OpenVMS version	6.2-1h3	6.2-1h3	6.2-1h3	6.2-1h3
Earliest Tru64 version	4.0B	4.0B	4.0B	4.0B

¹⁾ For FibreChannel support the installation of an Emulex FibreChannel adapter is required (LPe1105 or LPe11002)

²⁾ For FDDI support the installation of the DEFPA adapter is required

Additional utilities

Program Launcher: start/stop/manage CHARON-AXP

Service Manager: manage CHARON-AXP as a service

MKdisk: Create empty AXP disk images

SCSIcheck: Locate CHARON names for disks, tapes, CD's floppy disks and other SCSI devices

Network Control Center: Manage CHARON network components

HASP_HL_VIEW: License content viewer

HASPRUS: License update utility

Ordering information

CHARON-AXP/4100

Unlimited run time license

One year license

720 hour disaster recovery license

GOLD-support (9x5)

Platinum support (24-7)

Additional 2 Alpha CPU's

License

CHAXP-806IP-WI

CHAXP-806IB-WI

CHAXP-806IK-WI

CHAXP-806IT-WI

CHAXP-806IU-WI

CHAXP-806CP-WI

PRESERVING YOUR SOFTWARE INVESTMENT ACROSS HARDWARE GENERATIONS !

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