



# CHARON™ Alpha 6/500 for Windows



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### Functionality

CHARON Alpha 6/500 for Windows can be used to replace aging Alpha hardware. Your unmodified application code and the Alpha operating system still 'sees' the Alpha CPU, memory and peripherals recreated in real-time by the HAL software layer.

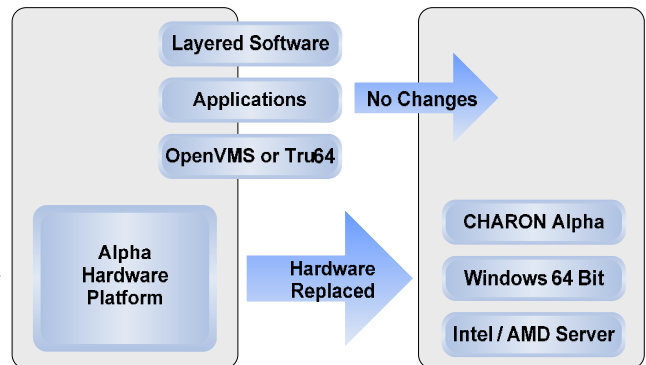
CHARON Alpha 6/500 for Windows can in principle execute any Alpha operating system or binary application that runs on the equivalent hardware Alpha configuration.

For a list of emulated components please see the Features Matrix.

**CHARON Alpha 6/500** creates the hardware environment of an AlphaServer DS10 or DS20 inside a standard Windows x64 based server system providing hardware renewal without software migration. It does not require application code to be recompiled or re-built in any way. Copying the Alpha application and related files (or the complete Alpha disk contents) to the virtual Alpha is sufficient to run the original software.

Both OpenVMS/Alpha and Tru64/Alpha are supported by CHARON Alpha 6/500. CHARON Alpha 6/500 demands the same licenses and license units as the original hardware. Transfer licenses are available to support transporting the license from the original Alpha to the virtual one.

CHARON Alpha is a virtual Alpha and uses the same well-known, well established operating procedures to manage the system. It runs as a service under Windows x64 and is managed via a Graphical User Interface that is accessible from the Windows task bar. OpenVMS and Tru64 clustering are supported.



**CHARON Alpha 6/500** implements a single CPU Alpha system on a standard AMD or Intel (64 bit) server, running Windows Server 2003 (64 bit version):

- ◆ Alpha 21264 (EV6) CPU with 2,500 TPS of performance
- ◆ 4 GB of emulated Alpha memory, expandable with a 4 GB option to 8 GB maximum,
- ◆ Virtual Alpha disks (logical disk files, Windows physical disks and raw SCSI devices),
- ◆ SCSI Storage adapter
- ◆ SCSI Tape device support
- ◆ CD-ROM
- ◆ Floppy drive
- ◆ Maximum 4 Ethernet ports up to 1000 MB speed
- ◆ Maximum 8 serial lines ports and 2 COM ports
- ◆ VT-type terminal emulator

CHARON Alpha Supports Alpha/OpenVMS 7.1-2 or newer versions and Tru64, including NI clustering. CHARON Alpha provides the functionality of the original AlphaServer or its peripherals and not necessarily the hardware itself (e.g. EISA bus). The standard storage supported by CHARON is SCSI. For OpenVMS however a special storage driver is included that allows the continued support for non-SCSI devices, like DSSI, IDE and FibreChannel presenting the OpenVMS operating system with the appropriate disk ID's. No graphic terminal emulation is provided with this product. Commercially available X-terminal emulation software should be loaded next to the emulator when this capability is required.

CHARON Alpha 6/500 requires 1 host CPU to run the Alpha Virtualization process, a second host CPU is used for the host operating system, networking, I/O handling and virtualization preprocessing. Multiple instances of CHARON Alpha can be combined into one multi-CPU host system when the host CPU requirements are observed. A special licensing mechanism is developed to support this server consolidation capability. CHARON Alpha also offers the capability to run multiple instances in a company network. In this instance, a special license is available.



### Recommended tools:

A commercially available X-terminal emulator, in case graphical feature is needed.

### Product contents:

- ◆ Distribution CD, containing the product executables and the documentation.
- ◆ License key

### License key:

The CHARON hardware 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.

### Warranty:

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

The emulated functionality does not include diagnostic or maintenance modes or delays to simulate mechanical device behavior. For a list of emulated components please see the Features matrix.

### Host Hardware Requirements:

Windows 64-bit capable Intel Xeon (5000 or 7000 series) or AMD Opteron (2000 or 8000 series) server, 3 GHz or faster,

- ◆ Number of physical CPU's or CPU cores: Each instance of CHARON Alpha 6/500 for
- ◆ Windows requires two dedicated CPU cores in the host system.
- ◆ Windows Server 2003, 64 bit version,
- ◆ Memory requirement for each instance: 1.5 GB plus amount of emulated Alpha memory
- ◆ Minimum one USB-slot for the license key
- ◆ CD-ROM
- ◆ Minimum one Ethernet adapter for each instance
- ◆ Sufficient disk space to store the original Alpha disk's content

The CHARON Alpha license does not include any OpenVMS or Tru64 software and/or licenses. Use the licenses of the retiring AlphaServer hardware for the virtual Alpha or purchase new licenses from Hewlett Packard. VMS and layered product transfer licenses from an existing Alpha system to CHARON Alpha are available from HP.

### Supported options matrix (Virtualized hardware CHARON Alpha 6/500)

- ◆ Alpha CPU 21264 or EV6 with 2,500 TPS of performance
- ◆ Maximum Alpha memory 4 GB (additional 4 GB available by option purchase)
- ◆ Max # of storage adapters (KZPBA) 10
- ◆ Max # of Ethernet adapters (DE435, DE450 or DE500) 4 up to 1000 MB speed
- ◆ SCSI disk support (DKx) Yes
- ◆ SCSI tape drive support (MKx) Yes
- ◆ Raw SCSI device (GKx) Yes
- ◆ FibreChannel disk support (DGx) OpenVMS only
- ◆ IDE disk support (DQx) OpenVMS only
- ◆ MSCP disk support (Dux) OpenVMS only
- ◆ DSSI disk support (Dlx) OpenVMS only
- ◆ EISA RAID disk support (DRx) OpenVMS only
- ◆ Serial Lines support, 8 ports (PBXDA) Yes
- ◆ Earliest OpenVMS release 7.1-2, Earliest Tru64 release 4.0

### Ordering information — CHARON Alpha 6/500 for Windows

- ◆ Unlimited run time license
- ◆ Initial (one year) license
- ◆ License extension for one year
- ◆ Back-up key
- ◆ GOLD Support
- ◆ PLATINUM Support

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