

Ksenos DVR Installer's Manual

Please keep this document up-to-date!

March 11, 2008

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Chapter 1

Hardware guidelines

1.1 Selecting the hardware

1.1.1 System architecture

We prefer Intel Core 2 Duo based systems for better performance and compatibility. Some capturing board manufacturers have no support for AMD based computers because of PCI bus clock problems. However, if only network cameras are used, this is no issue.

1.1.2 Processor

The processor must match the computing power needed by video capturing, motion detection, image displaying and image compression. Also situations where the DVR system is being under remote use and record viewing must be considered. Therefore, the processor should be overestimated for the system in normal use. When all cameras are showed and they record continuously, the system CPU usage should be around 50-70%. Too high usage slows down the fluent use of the software and shortens the lifespan of the processor.

1.1.3 Motherboard

The motherboard should be selected so that it has all the necessary features a customer could want. These include:

- Multiple USB slots (one is reserved for the copy protection)
- Dual memory channel
- AGP 4x slot or faster, or PCIe
- Two free PCI slots, so that one can be left free between the display adapter and the capturing card - this will extend both cards' lifespan

1.1.4 System memory

At least 1024 MB of RAM is highly recommended for Ksenos DVR. 32-bit systems (all current Ksenos systems) cannot take advantage of more than about 3 GB of memory.

1.1.5 Display adapter

Ksenos DVR utilises the OpenGL API for 3D acceleration hardware for many tasks, most important being showing the camera images. This provides very good image quality with no performance loss when scaling the pictures. However, this sets some limitations.

- There should be at least 128 MB of display memory
- Many integrated graphics cards are not powerful enough

Below is a table of recommended cards:

Display adapter	Systems in which can be used	More information
ATI Radeon boards (128MB and up)	Windows XP, Mac	Avoid ATI on Linux
NVidia Geforce boards (128MB and up)	Windows XP, Linux, Mac	

We will be updating this table as soon as we get more information.

1.1.6 Hard drives

The recording space can be spread to multiple drives. External hard disk devices (USB 2/FireWire) can also be used.

1.2 Operating Systems

1.2.1 Linux

- Ubuntu 6.06
- CentOS 5

1.2.2 Mac OS X

- 10.4 Tiger
- 10.5 Leopard

1.2.3 Windows

- 2000
- XP

1.3 Recommended system sample

A sample system using a 100fps capturing board could be:

- Intel Core 2 Duo processor, 2.0 GHz
- Asus P5LD2 motherboard
- 2 × 1024MB DDR RAM
- 1 × 500GB SATA HDD
- NVIDIA GeForce 7300 128MB
- CD-R/RW drive
- XeCap 100 16-channel board
- Wheel mouse + Keyboard
- Microsoft Windows XP
- Ksenos DVR software

Chapter 2

Installing the software (Windows)

2.1 Ksenos software installation

2.1.1 Updating

Uninstall the previous version of Ksenos DVR. It is strongly recommended to delete the database file (d:\capture\index.db) before installing the update. This will destroy all recordings, but is necessary because the database may have been corrupted by the previous version of the database engine.

2.1.2 Installation

Attach the copy protection dongle and insert the Ksenos software CD into the CD drive. Open the contents of the CD and run the file “Ksenos DVR Install”.

2.1.2.1 Data storage configuration - Drivesetup

Drivesetup is shown after installing the software. D: hard disk partition must exist for the database. Drivesetup suggests to create a directory for the database. Select “Create a directory for the database” and press “Solve”. At this point you can add other hard disk partitions to extend the recordings space by pressing “Add”. After adding the desired drives you can use sliders to adjust the disk usage or reserve the recordings spaces automatically. The recordings spaces have been correctly set up if the Drivesetup shows no problems.

2.2 XeCap driver installation (only needed in Ksenos Hybrid)

There is a script for installing Xecap capture boards in the following directory: C:\Ksenos\Install scripts\

- **Install_XeCap_series_driver.vbs** installs XeCap board drivers automatically

When using these scripts, you **must** click 'Cancel' for any automatic dialogs prompting for drivers before running.

2.3 First run

After the software installation is complete, there is a Ksenos DVR icon on the desktop. By double-clicking it the program will start. There will be a small window on the bottom of the screen, titled “Ksenos DVR”. A preset dialog will appear and several presets for different Xecap boards are shown. A preset can be selected or the user can skip it by pressing cancel. If a preset is chosen, the user must go to settings and save the changes.

2.4 Configuring the software

The default procedure for configuring the software usually consists of the following steps:

- Set the desired options in program settings, (recorder name, automatic login, video export resolution and quality, communications settings etc.)

- Add a capture device by double-clicking on “Add a device..”
- Add cameras by double-clicking “Add new camera...” and selecting the desired cameras from the list
- set the framerates for the cameras (see the Tables appendix for framerate setup tables)
- set up the users - Users are not necessary but recommended. NOTE! The first user added is the super user who has rights to any part of the program

2.5 Complete system setup and testing checklist

The following steps should be done:

- assemble the computer
- install a capturing device (only needed in Ksenos Hybrid)
- set the power failure default state to “Power On” in system BIOS
- install the operating system and the Ksenos DVR software
- attach the USB copy protection dongle
- turn off power management features and the screen saver
- install the device driver for the capturing device
- add the device to Ksenos DVR
- test briefly with camera signals
- check the recordings
- reboot the computer and check that the automatic startup works

Chapter 3

Updating Ksenos

3.1 Getting the latest updates

All updates are downloadable from the Ksenos DVR website (<http://www.ksenos.eu/>). Please note that in some cases it might be necessary to first uninstall the previous version. This will not remove your settings, unless you manually delete the Ksenos directory completely.

3.2 Error reporting

You can report errors at our website (<http://www.ksenos.eu>) either by using the contact form, or sending mail to development@ksenos.eu.

Chapter 4

Troubleshooting

4.1 PC system problems

4.1.1 One of the hard drives is broken or corrupted

- If this happens, you have to replace it and currently also reset all recordings. You must delete the database (d:\capture\index.db) if it still exists. Please run drivesetup when you've attached and formatted the new hard drive.

4.2 Software problems

4.2.1 The software does not start

Here's a list of things that can be done:

- Check the capturing hardware and protection dongle. If there is a conflict or error with any of these, the program may not even start.
- Rename the file **settings.kse** in the program installation directory to something else, such as **settings.backup**. All program settings are reset, in case of a faulty setting causing the problem.
- Check the disk storage - if there is a corrupt hard disk in the list of capturing storage disks, the program may not start.

4.2.2 Capturing hardware can not be added

If the list of supported devices to be added contains nothing but "TCP/IP Client", the software is missing the software protection dongle. Check if the dongle is attached. If the dongle *is* attached:

- Restart the software
- Check the file **ksenos.log** in the program installation directory. Look at the last few lines, they can provide a clue.

4.2.3 Camera shows black picture

This can be caused by several things:

- Wrong capturing hardware driver version
- Faulty video signal in camera input
- Wrong or faulty display adapter driver

4.2.4 There is a Ksenos DVR logo instead of camera picture

There is no signal in the camera input. If the signals are connected through, remember to disable the termination resistors from the capturing board (Xecap only).

Chapter 5

Appendices

5.1 Tables

5.1.1 Xecap framerate tables

Image capturing in Xecap boards is divided into groups. Each group shares the default framerate of the video standard (PAL: 25, NTSC: 30). Below are tables which shows in which group each camera belongs.

100fps capturing boards (Xecap100)

Group					->	(24)		(32)		
[1]	1	5	9	13		17	21	25	29	total 25/30 fps
[2]	2	6	10	14		18	22	26	30	total 25/30 fps
[3]	3	7	11	15		19	23	27	31	total 25/30 fps
[4]	4	8	12	16		20	24	28	32	total 25/30 fps

200fps capturing boards (Xecap200)

Group			->	(24)	(32)	
[1]	1	9		17	25	total 25/30 fps
[2]	2	10		18	26	total 25/30 fps
[3]	3	11		19	27	total 25/30 fps
[4]	4	12		20	28	total 25/30 fps
[5]	5	13		21	29	total 25/30 fps
[6]	6	14		22	30	total 25/30 fps
[7]	7	15		23	31	total 25/30 fps
[8]	8	16		24	32	total 25/30 fps