Katimon Handbook

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Contents

Abstract

Katimon is a KDE program for monitoring and controlling some aspects of ATI graphics cards.

Chapter 1

Introduction

Katimon is a KDE program for monitoring and controlling some aspects of ATI graphics cards. It can:

- Display value and graph of gpu temperature
- Display value and graph of fan speed
- Display value and graph of core speed
- Display value and graph of gpu usage
- Automatically control the fan speed to keep temperature in predefined limits
- Manually control the fan speed
- Overclock the GPU and the memory
- Save and restore overclocking settings on startup
- Alert when temperature reaches a critical limit

It also provides a nice tray icon with three bars for fan speed, temperature and usage.

Katimon was originally developed for an ASUS EAH4870 graphics card to auto-adjust the fan speed because the fan was extremely noisy. Since then is has evolved to a more complete application that can monitor the health of ATI graphics cards.

Chapter 2

Using Katimon

The Katimon consists of the following parts:

- The system tray icon
- The main window (monitor)
- The fan control logic
- The overclocking part

2.1 How it works

Katimon uses the **aticonfig** command line tool to monitor and alter ATI graphics card behavior. For Katimon to work, your graphics card must be able to be controlled by this tool. Currently (as of 2009), this mostly (only?) applies to high-end Radeon graphics cards that support the ATI Overdrive™ feature.

Katimon runs **aticonfig** every 3 seconds to fetch new information. There can be cases where this stalls running rendering, like when playing games. Even though this wasn't noticed until now, you may want to stop katimon when playing games if you experience problems.

2.2 The System Tray Icon

The system tray icon was originally the main part of Katimon. It's purpose is to provide a quick overview and an entry-point to the rest of the application.

The icon has three bars. From left to right:

- The first one shows the current fan speed. This is shown as a percentage of full fan speed.
- The second shows the gpu usage. Again, as a percentage.
- The third shows the current temperature. This is scaled to the temperature limits, as they are defined in the configuration dialog.

2.3 The main window

The main window purpose is to be... well... the main window.

From the main window you can:

- Select between manual or automatic fan speed setting.
- Set the fan speed that will be used when fan control is set to manual.
- View graphics card health information:
  - The current temperature.
  - The current fan speed.
  - The target fan speed (see fan speed control).
- View clocking information:
  - The current gpu core speed.
  - The maximum gpu core speed. The graphics card may auto-change the gpu core speed depending on the gpu usage. This is the current "maximum" setting and not the maximum speed that the graphics card can be overclocked to.
  - The current memory speed.
  - The maximum memory speed. Just like maximum gpu speed, this is the current maximum and not the maximum clock speed the graphics card memory can be overclocked to.
- View the history of four measurements, split in two graphs (left and right):
  - Graph of GPU Temperature (left graph).
  - Graph of FAN Speed (left graph).
  - Graph of GPU Usage (right graph).
  - Graph of GPU Core Speed (right graph).

2.4 Fan control logic

Katimon was originally made to keep the noise of an Asus EAH4870 card to low levels without risking high temperatures. In other words, it was made to auto-adjust the fan speed depending on the card temperature.

The automatic fan control uses two predefined temperature limits, a lower limit and an upper limit. They are both defined in the settings dialog. It also uses two predefined fan speed limits (again a lower and an upper limit). When the temperature is lower than the lower limit, the fan speed becomes the lower defined fan speed. When the temperature exceeds the upper limit, the fan speed becomes the maximum one. The fan speed changes proportionally to the temperature.

The fan speed increases in steps of 20 percentage units and decreases in steps of 10 percentage units. This ensures that the fan speed will increase fast enough when the temperature raises. The actual fan speed can differ up to 10 percentage units from the target fan speed. This avoids the ping-pong effect of continuously increasing and decreasing the fan speed which has really annoying noise results (really!).

The fan control logic seems to be quite effective and very stable. GPU temperature is kept in the predefined limits (as long as the fan can cope with the temperature). The noise level is kept to a minimum without risking graphics card damage.

2.5 Overclocking

The overclocking part of Katimon is just a front-end to the **aticonfig** tool.

> WARNING
> Be very careful when overclocking! You can make your system unstable or damage your graphics card or shorten its life!

> NOTE
> Katimon will never store the settings to the graphics card's memory. Whatever you do will be lost in the next boot. This is a safety measure that you have no reason to bypass. Graphics cards may have the option to store those settings but there is a better way to accomplish the same. Read bellow.

The overclocking settings are available through the Edit → Overclocking menu. To be able to overclock your card you need to first check the Enable Overclocking option. After that you may change the core speed and the memory speed. *Read your graphics card instructions first!*

All overclocking settings will be lost after the next boot. If you select the Enable Continuous Overclocking option, the settings will be saved in a configuration file and will be reloaded and reapplied whenever Katimon is started. This way you can have the benefits of storing the overclocking settings in the graphics' card memory without the risk of making it unusable. If you ever have problems just change those settings or completely remove the katimon configuration file.

Chapter 3

Command Reference

3.1 The main Katimon window

3.1.1 The File Menu

File → Minimize Hide Katimon to the system tray

File → Exit Exit Katimon

3.1.2 The Edit Menu

Edit → Settings Open the main settings dialog

Edit → Overclocking Open the overclocking settings dialog

3.1.3 The Help Menu

Help → Katimon Handbook (F1) Invokes the KDE Help system starting at the Katimon help pages. (this document).

Help → What's This? (Shift+F1) Changes the mouse cursor to a combination arrow and question mark. Clicking on items within Katimon will open a help window (if one exists for the particular item) explaining the item's function.

Help → Report Bug... Opens the Bug report dialog where you can report a bug or request a 'wishlist' feature.

Help → Switch Application Language... Opens a dialog where you can edit the Primary language and Fallback language for this application.

Help → **About Katimon** This will display version and author information.

Help → **About KDE** This displays the KDE version and other basic information.

Chapter 4

Questions and Answers

This document may have been updated since your installation. You can find the latest version at http://docs.kde.org/ .

Chapter 5

Credits and License

Katimon

Appendix A

Installation

A.1 How to obtain Katimon

Katimon is part of the KDE project http://www.kde.org/ .

Katimon can be found in the extragear package on ftp://ftp.kde.org/pub/-kde/ , the main FTP site of the KDE project.

A.2 Requirements

A.2.1 Libraries

Katimon requires the following libraries:

- Python Qt4 support (python-qt4)
- Python KDE4 support (python-kde4)
- Python Qwt support (python-qwt5-qt4)

A.2.2 Software / Drivers

In order to use Katimon you must be using the ATI fglrx proprietary driver and have the **aticonfig** tool installed and available in your path.

A.2.3 Hardware

You also need to own a graphics card that is supported. Katimon supports all graphics card that can be monitored and/or controlled by the **aticonfig** tool. Models that are known to work are:

- HD4870

If you own a graphics card that is supported and is not listed here, please mention that by email to v13@v13.gr.

A.3 Compilation and Installation

For detailed information on how to compile and install KDE applications see Building KDE4 From Source

Since KDE uses **cmake** you should have no trouble compiling it. Should you run into problems please report them to the KDE mailing lists.