

**APPLICATION NOTE**

**AN-G02**

**December 21, 2005**

**LYNX GigE CAMERA SERIES**

**HIGH PERFORMANCE DRIVER DIAGNOSTIC**

**Abstract: This application note describes the usage and diagnostic of LYNX GigE High Performance Driver**

## 1 Introduction

This application note is applicable to LYNX GigE High Performance IP Device Driver. It is to be used to diagnose the root cause of driver-related fatal crashes.

The driver that is shipped and installed is the normal release version of the LYNX GigE High Performance IP driver. If for any reason, you experience a crash, the infamous *Blue Screen of Death*, or a complete system freeze, we recommend that you switch to the diagnostic version of the high-performance driver.

This diagnostic driver will not solve the problem you are having nor will the information it provided be useful to you. Instead, the diagnostic driver tracks information and statistics that will allow Imperx support to quickly isolate and address the problem.

In order to use the diagnostic driver, there are five relatively easy steps to follow:

1. Install the diagnostic driver.
2. Set the system to generate a crash dump.
3. Setting the system to force a crash in the case of a system freeze (optionally).
4. Recreate the problem.
5. Send the crash dump to Imperx

## 2 Installing the diagnostic driver

This step assumes that the High-Performance driver is installed correctly in the first place.

To install the diagnostic driver, copy the following file:

<installation directory>\Drivers\Windows 2000\Diagnostic\Pro1000.sys

to the following directory:

<windows directory>\System32\Pro1000.sys.

After the file copy, a system reboot will be required.

## 3 Setting the system to generate a crash dump

Follow these steps to have Windows generate a relevant crash dump:

Open the Control Panel (

- 1) Figure 1)

Double-click the System icon. (

2) Figure 1)

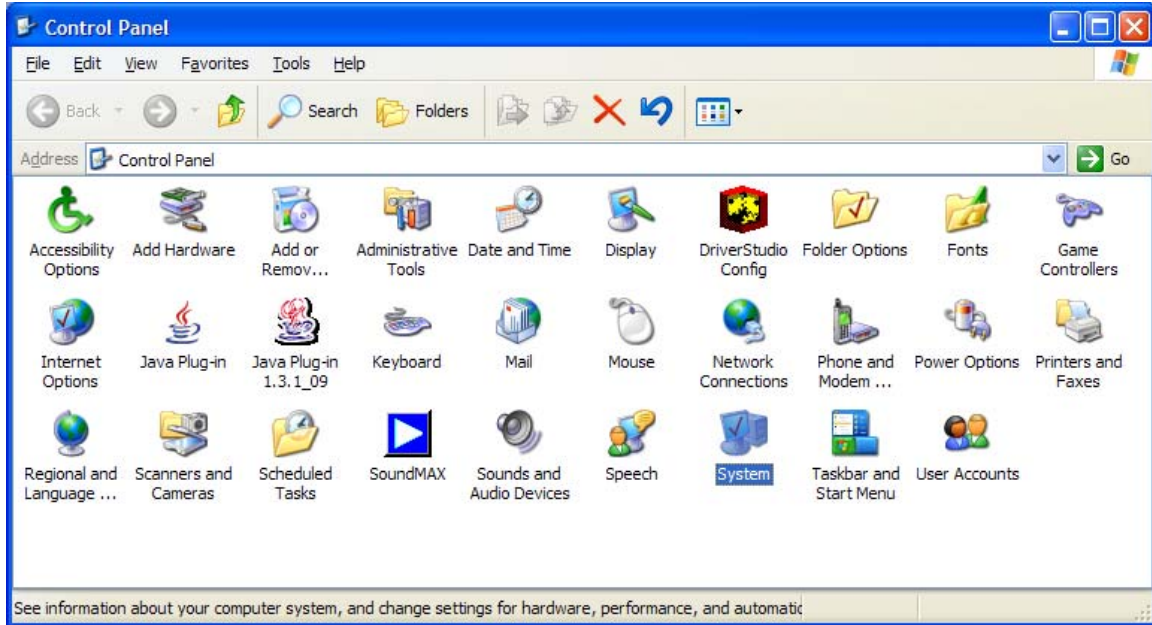


Figure 1: Control Panel

3) Click the *Advanced* tab (Figure 2)

4) Click the *Settings* button in the *Startup and Recovery* section (Figure 3)

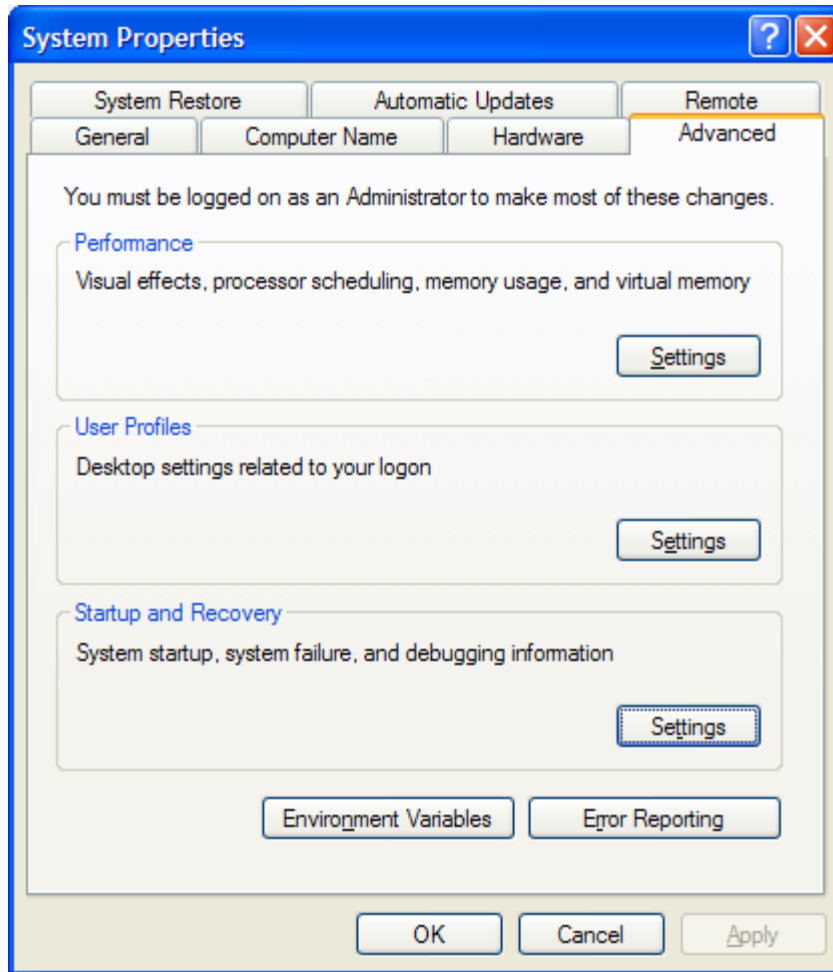


Figure 2: System Properties

- 5) In the *Startup and Recovery* dialog, in the *Write debugging information* section (Figure 3), select the following options:
  - a. Kernel memory dump
  - b. Dump file: %SystemRoot%\MEMORY.DMP
  - c. Check the *Overwrite any existing file*

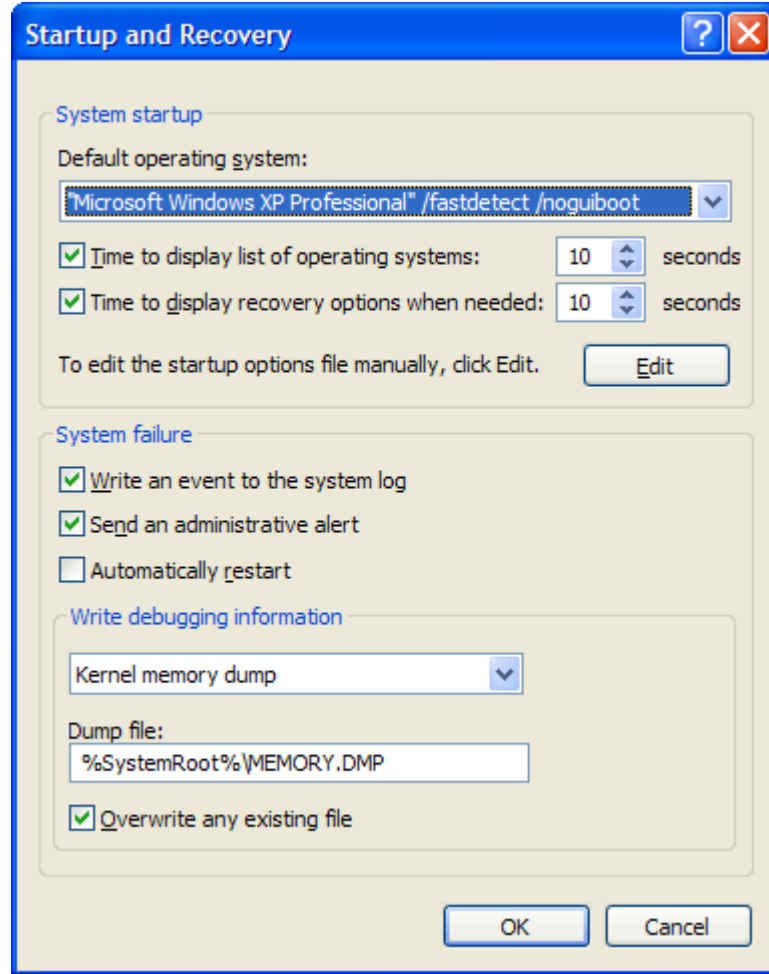


Figure 3: Startup and Recovery

- 6) Click OK
- 7) Reboot the system.

Now, on the next crash, Windows will dump all the kernel memory to the specified file (usually c:\windows\MEMORY.DMP), including the extra information and statistics from the diagnostic High-Performance Driver.

## 4 Setting the system to force a crash in the case of a system freeze

If the problem you are experiencing is a system freeze, a crash dump by itself will be insufficient to generate the MEMORY.DMP file.

It is fortunately possible to set up a Windows feature that allows the MEMORY.DMP file to be generated with a keyboard command.



Please follow the instructions on the following link on the Microsoft support site: <http://support.microsoft.com/default.aspx?scid=kb;en-us;244139>. Depending on your keyboard, you may need to edit the registry.

Note: it may not be clear from the link, but the correct key strokes are:

- Press and hold the RIGHT control key
- Press Scroll Lock
- Press Scroll Lock again

## 5 Recreating the problem

After the system has been configured and the diagnostic driver installed, you simply need to run the application that caused the problem.

If a freeze occurs, simply type the RIGHTCONTROL-SCROLL\_LOCK-SCROLL\_LOCK key combination to cause a “crash” of the system and create the MEMORY.DMP file.

## 6 Sending the crash dump to Imperx

After the crash has occurred, simply reboot the system. There will be a *c:\windows\MEMORY.DMP* (or wherever %SystemRoot% points).

Simply proceed with these steps to forward it to Imperx Inc.:

- 1) Zip the file. Use the following naming convention for the ZIP file:  
<yourcompany>\_MMDDYY.zip
- 2) Send the file to [support@imperx.com](mailto:support@imperx.com) with details about the problem.

## 7 Technical Support

Additional technical support can be obtained by contacting Applications Support at Imperx Inc. at +1 (561) 989-0006 or via email at [support@imperx.com](mailto:support@imperx.com).

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**Imperx, Inc**  
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