



Imagination PX Series

Guide To
Troubleshooting
Frame Grabber
Installations

Imagination PX Series Frame Grabbers
PX500, PX510, PX610 & PX610A

Covering all Microsoft Win32 Operating Systems
Windows 95, 98, 98SE, and Me
Windows NT 4.0, 2000, and XP

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problem: Computer locks at boot / reboot

This problem means that the operating system did not finish its boot process. You cannot use your system. The operating system may be locked, may be stuck in an infinite loop, or may be waiting for something that will never happen. Nonetheless, the result is the same--you were never given control of your machine. The two problems, “locks at boot” and “locks at reboot” are similar.

CASE 1: “LOCKS AT BOOT” DEFINITION

1. You turned off your computer.
2. You installed a PX Series frame grabber.
3. You turned on the power to allow the computer to boot.
4. The boot process never completed.

CASE 2: “LOCKS AT REBOOT” DEFINITION

1. You turned off your computer.
2. You installed a PX Series frame grabber.
3. You turned on the power to allow the computer to boot.
4. The operating system initialized.
5. You loaded the PX Series drivers.
6. You rebooted.
7. The boot process never completed.

There is an important difference between the two cases. In Case 1, the PX Series drivers have not been loaded. The most likely cause for Case 1 is a bad board. In Case 2, the drivers have been loaded, which means there are more possible causes.

Try This . . .

SOLUTION: TRY A DIFFERENT PX SERIES FRAME GRABBER

The PX Series frame grabber may have been damaged during shipment. If you have another PX board, try it. Otherwise, contact CyberOptics Semiconductor for an RMA number.

or Try This . . .

SOLUTION: DISABLE “PLUG AND PLAY OS” IN THE BIOS

If you are not sure how to modify the BIOS on your computer, please consult your PC manual or contact your PC vendor.

Most newer motherboards have a BIOS setting entitled “Plug and Play OS.” Setting its value to “NO” can sometimes fix the lock-up problem.

EXPLANATION:

The Imagenation PX Series frame grabbers are NOT “Plug and Play.”

The newer generation of motherboards has a BIOS setting called “Plug and Play OS,” and it is typically set to “YES.” The “YES” setting will never work on either DOS or Windows NT 4.0, because neither of them is a “Plug and Play” operating system.

Windows 98 and 2000 can also have problems if the “Plug and Play OS” setting is “YES.”

or Try This . . .**SOLUTION: TRY A DIFFERENT PCI SLOT**

Move the PX Series frame grabber to another PCI slot.

problem: Crash or “blue screen” on boot / reboot

The terms “crash” and “blue screen” refer to the same problem on different operating systems. The Windows 9x systems (95, 98, and Me) will “crash.” The Windows NT systems (NT, 2000, XP) will “crash” by displaying a data dump on a “blue screen.”

Try This . . .

SOLUTION: DISABLE “PLUG AND PLAY OS” IN THE BIOS

If you are not sure how to modify the BIOS on your computer, please consult your PC manual or contact your PC vendor.

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Windows 98 and 2000 can also have problems if the “Plug and Play OS” setting is “YES.”

or Try This . . .

SOLUTION: INSTALL THE LATEST DRIVER PACKAGE

The driver package that is shipped with the PX Series frame grabber should always be the latest version. However, if you are unsure, or if you did not receive a driver package (floppy disk set), please download the latest package from the Imagination Web site at:

http://www.imagination.com/dnpages/px_files.html

Use the following procedure to delete old driver packages:

1. Run the “PX Series Uninstall” program.
2. Search your disk for PX Series files, and delete them.
3. Delete PX Series registry entries.
4. Reboot.
5. Install the new driver package.

problem: No video

The “no video” problem is a result of the following sequence of actions:

1. A PX Series frame grabber has been installed with no problems.
2. Your machine has been rebooted with no problems.
3. You run one of our samples, but you get a black window instead of video.

Try This . . .

SOLUTION: CHECK CAMERA POWER & VIDEO CONNECTION

Disconnect and reconnect the cable between the video output of the camera and the PX Series frame grabber.

Check the power switch on the camera, and disconnect and reconnect the power cable.

then Try This . . .

SOLUTION: CHECK “BUS MASTERING”

All PX Series frame grabbers are “bus masters.” That means they have to take control of the PCI bus when they start a video transfer to PC memory. Some computers have PCI slots that are not capable of “bus mastering.”

Make sure the PX Series frame grabber is plugged into a slot capable of “bus mastering.” You can determine that by contacting your PC vendor or by consulting your PC documentation.

It may be possible to control “bus mastering” through your BIOS. Check your PC documentation for particulars.

error message: “Unable to locate DLL”

The error message “Unable to locate DLL” is displayed by Windows NOT by your application or by any Imagenation programs. It means that Windows is unable to locate a DLL an application has requested. When an application requests a DLL, Windows searches the current PATH for it. If the DLL cannot be located, Windows displays the “Unable to locate DLL” error message.

Try This . . .

SOLUTION: MOVE THE DLLS

Table 1 lists both of the PX Series DLLs for each Windows operating system. Find both DLLs using the SEARCH method on the Explorer. Then copy both DLLs to the appropriate Windows directory shown in the “Copy To” column of Table 1.

TABLE 1. PX SERIES DLLS PER OPERATING SYSTEM

Operating System	DLL Name	Copy To
Windows 95 / 98 / Me	WPX5_95.DLL	C:\WINDOWS
Windows 95 / 98 / Me	PXDV95.DLL	C:\WINDOWS
Windows NT / 2000 / XP	WPX5_NT.DLL	C:\WINNT
Windows NT / 2000 / XP	PXDVNT.DLL	C:\WINNT

EXPLANATION OF DLLS:

WPX5_95.DLL or WPX5_NT.DLL

This is the main PX Series DLL with all of the API commands. You will need this DLL to be able to run any PX Series program.

PXDV95.DLL or PXDVNT.DLL

This is a special DLL for use by Visual Basic programs for Displaying Video (DV).

error message: “InitLibrary failed”

This is a serious error message that is generated by one of the PX Series sample programs and means that the PX Series device driver failed to find a usable frame grabber. The sample programs are listed in Table 2.

TABLE 2. PX SERIES SAMPLE PROGRAMS

PXGDI1.EXE	PX_TRIG.EXE
PXGDI2.EXE	PXRESET.EXE
PXGDI3.EXE	PXNI.EXE

Try This . . .

SOLUTION: RESEAT THE FRAME GRABBER

Remove the PX Series frame grabber from its PCI slot, and reinstall it.

or Try This . . .

SOLUTION: INSTALL DRIVERS FROM ADMINISTRATOR ACCOUNT

This solution applies only to Windows NT, 2000, and XP. The driver package **MUST** be installed from an account with “Administrator” privileges or from the “Administrator” account.

or Try This . . .

SOLUTION: TRY A DIFFERENT PX SERIES FRAME GRABBER

If you have another PX Series frame grabber, try it. It is possible that the PX board was damaged during shipping.

or Try This . . .

SOLUTION: TRY A DIFFERENT PCI SLOT

Move the PX Series frame grabber to another PCI slot.

or Try This . . .

SOLUTION: INSTALL THE LATEST DRIVER PACKAGE

The driver package that is shipped with the PX Series frame grabber should always be the latest version. However, if you are unsure, or if you did not receive a driver package (floppy disk set), please download the latest package from the Imagination Web site at:

http://www.imagination.com/dnpages/px_files.html

Use the following procedure to delete old driver packages.

1. Run the “PX Series Uninstall” program.
2. Search your disk for PX Series files, and delete them.
3. Delete PX Series registry entries.
4. Reboot.
5. Install the new driver package.

or Try This . . .

SOLUTION: CHECK IRQ ASSIGNMENTS

IRQ assignments are made by the BIOS at boot time. There is no way to control the IRQ assigned to a PX Series frame grabber. However, there are two items that should be checked.

1. Make sure that no ISA device is using the same IRQ as a PCI device, especially a PX Series frame grabber.
2. Make sure that the PX Series frame grabber is not sharing a IRQ with another PCI device.

EXPLANATION:

The drivers for the PX Series frame grabbers are capable of sharing an IRQ with another PCI device. However, not all PCI devices are programmed to be “friendly.” If you are seeing the “InitLibrary failed” error, and none of the other solutions have worked, try to put the PX on its own interrupt or remove other PCI devices.

error message: “Allocate buffer failed”

This error is very unlikely on a Windows system but would be generated by one of the PX Series samples listed in Table 3.

TABLE 3. PX SERIES SAMPLE PROGRAMS

PXGDI1.EXE	PX_TRIG.EXE
PXGDI2.EXE	PXRESET.EXE
PXGDI3.EXE	PXNI.EXE

Try This . . .

SOLUTION: ON A WINDOWS SYSTEM, ADD MEMORY

“Allocate buffer failed” means that the sample program cannot allocate enough memory for a frame buffer. The amount needed is between 300k and 400k. If you see this message on a Windows system, it probably means there is not enough memory for a Windows system. The solution is to add memory. For example, you might see this error on a Windows 2000 system with less than 32 MB of RAM.

or Try This . . .

SOLUTION: ON A DOS SYSTEM, REMOVE TSRs

Terminate and Stay Resident (TSR) programs are DOS programs that perform background functions. They consume memory and may cause the “Allocate buffer failed” error message.

To see the TSRs and the total memory usage on a DOS system use the MEM.EXE command as follows:

```
mem /c/p
```

error message: “Allocate FG failed”

The “Allocate FG failed” error message is generated by one of the PX Series sample programs listed in Table 4.

TABLE 4. PX SERIES SAMPLE PROGRAMS

PXGDI1.EXE	PX_TRIG.EXE
PXGDI2.EXE	PXRESET.EXE
PXGDI3.EXE	PXNI.EXE

Try This . . .

SOLUTION: RUN ONE PROGRAM AT A TIME

This error means that the sample program cannot allocate a PX Series frame grabber. This situation can happen on a Windows system, because Windows is a multi-programming environment. Only one program can use a PX Series frame grabber at a time. If two programs are run at once, the second one will generate this error.

or Try This . . .

SOLUTION: ON A WINDOWS SYSTEM, ADD MEMORY

“Allocate FG failed” means that the sample program cannot allocate a frame grabber. Allocating a frame grabber requires only a small amount of memory. However, if the system is already tight on memory, this allocation may be enough to generate the error.

or Try This . . .

SOLUTION: ON A DOS SYSTEM, REMOVE TSRs

Terminate and Stay Resident (TSR) programs are DOS programs that perform background functions. They consume memory and may cause the “Allocate buffer failed” error message.

To see the TSRs and the total memory usage on a DOS system use the MEM.EXE command as follows:

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mem /c/p
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Contact Information

For additional information or free technical support on all Imagenation products, please contact CyberOptics Semiconductor.

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