

Imagination PXC200A Frame Grabber & QNX6

CyberOptics Semiconductor

Introduction

CyberOptics Semiconductor recently introduced support for QNX6 for the Imagination PXC200A frame grabber. This document explains the extent of that support. The QNX support package can be downloaded from our Web site at:

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

Contact information

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

Web site:	http://www.imagination.com
E-mail:	CSsupport@cyberoptics.com
Voice:	503.495.2200
Fax:	503.495.2201
Toll free:	800.366.9131

Working definitions

PXC SERIES FRAME GRABBERS:

The Imagination PXC200 and PXC200A frame grabbers will be collectively referred to as PXC Series frame grabbers or simply as PXC frame grabbers.

QNX6:

The term “QNX6” will be used to refer specifically to QNX 6.2 and 6.3.

DISTRIBUTION PACKAGE:

The term “Distribution package” refers to the package of libraries, samples, and documents that comprises QNX6 support for the PXC Series frame grabbers. The package can be downloaded from the Imagination Web site.

Installing the distribution package

You can download the distribution package from the Imagination Web site at:

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

The distribution package is in the form of a “tgz” file inside a self-extracting “zip” file. The file you download is named “QNX6_PXCv20.exe.” Once you download and unzip it, you should have two files: “pxc2.tgz” and “readme.txt.” The file named “readme.txt” contains detailed installation instructions.

What comprises support for QNX6

The QNX6 operating system is supported for the PXC Series frame grabbers by two static-link libraries (PXC200 API and Frame API) that have been archived into a single archive file called PXC200.A.

NOTE:

You must be logged into a QNX system as “root” in order to run a program that has been linked to these libraries.

PXC200A API LIBRARY

The PXC200A library actually consists of two sets of APIs:

- ✓ the PXC200A frame grabber API
- ✓ the PXC200A frame API

The “PXC200A frame grabber API” contains all of the functions for the frame grabber hardware. While the “PXC200A frame API” contains the functions for allocating, freeing, and manipulating frames.

The manual entitled “PXC200A Color Frame Grabber User’s Guide” is the reference for both sets of APIs and can be downloaded from the Imagination Web site at:

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

Samples

The samples contained in the distribution package are designed to get you up and running quickly. There is one sample that runs in console mode and does NOT display any video. It is intended as a quick start for people who have an embedded system and do not require video display.

CONSOLE SAMPLE

The console sample is called GRAB.C. It will show you how to open the libraries, allocate a frame grabber and a frame, and start grabbing. Since there is

no display mechanism outside of Photon, the GRAB.C sample grabs ten frames, writes them to BMP files, and terminates. It will get you going quickly. Please feel free to copy the code into your application. A make file is included.

PHOTON SAMPLE

The Photon sample was built using the QNX builder: phAB. The samples' names are "phPXC6.2." for QNX 6.2 and "phPXC6.3" for QNX 6.3. By using and investigating the sample, you can see how we achieve various results under Photon. The sample has a control box and a video display window. The control box has buttons for the following:

1. Start and stop display
2. Switch among four cameras
3. Switch to or from S-video
4. Write and read BMP files

Please feel free to use our sample code in your applications.

Conclusion

Please feel free to download the distribution package from our Web site at:

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

If you have any problems or questions, please contact us for free technical support:

Web site: <http://www.imagination.com>
E-mail: CSsupport@cyberoptics.com
Voice: 503.495.2200
Fax: 503.495.2201
Toll free: 800.366.9131