

Matrox Odyssey Xpro

Camera Interface Application Note

COHU 7812-2000

January 30, 2007

Basics about the
camera

Camera Descriptions

- Effective resolution: $1280 \times 1024 \times 8\text{-bit}$ @ 30 fps.
- Camera Link BASE interface (Single channel).
- Progressive scan.
- Internal sync.
- Internal exposure control.
- 40 MHz pixel clock rate.

Interface Mode

- Continuous (Free running)

Mode of operations as
per Matrox Imaging (in
parentheses as per
camera manufacturer)

Basics about the
interface modes

Camera Interface Briefs

Mode: Continuous

- $1280 \times 1024 \times 8\text{-bit}$ @ 30 fps or $640 \times 512 \times 8\text{-bit}$ @ 107 fps.
- Camera Link BASE interface (Single channel).
- Progressive scan.
- Matrox Odyssey Xpro receiving LDV, FDV, CLK and video signal from camera.
- DCF used: [7812-2000_1280x1024_8bitCon.DCF](#) (Full frame)
- DCF used: [7812-2000_640x512_8bitCon.DCF](#) (Partial frame)



*Matrox Odyssey Xpro main board
with Camera Link frame grabber module

Specifics about the
interface modes

Camera Interface Details

Mode: Continuous

- **Frame Rate:** Matrox Odyssey Xpro receives the continuous video from the camera at 30/107 frames per second at full/partial resolution respectively.
- **Exposure time:** Exposure time is determined by the shutter setting. Refer to the camera manual for more information.

Continued

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Specifics about the
interface modes

Camera Interface Details (cont.)

Mode: Continuous

- **Camera Command Controls:** Refer to the camera manual for more information. Set the camera command controls as follows using ONL imCamControl() or imDigControl() function or with the MIL MdigControl() function:

DCF	Command	Definition
...1280x1024_8bitCon.DCF	cD	Set camera to default mode
...640x512_8bitCon.DCF	cF0, 319 cF1, 959 cF2, 255 cF3, 767 cF4, 1	Set partial readout start and stop positions Enable partial readout mode

Cabling details for the
interface modes

Cabling Requirements

Mode: Continuous

- **Cable and Connection:** Standard Camera Link cable.

The DCFs mentioned in this application note are also attached (embedded) to this PDF file – use the Adobe Reader's View File Attachment to access the DCF files. The information furnished by Matrox Electronics System, Ltd. is believed to be accurate and reliable. Please verify all interface connections with camera documentation or manual. Contact your local sales representative or Matrox Sales office or Matrox Imaging Applications at 514-822-6061 for assistance. © Matrox Electronic Systems Ltd, 2007-2011.

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