

Matrox Meteor-II/Camera Link

Camera Interface Application Note

DALSA 1M75-SA

October 6, 2004

Basics about the
camera

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

Basics about the
interface modes

Camera Descriptions

- Effective resolution: $1024 \times 1024 \times 8\text{-bit}$ @ up to 75 fps.
- Camera Link BASE interface (Dual channel).
- Progressive scan.
- Internal sync.
- Internal or external exposure control.
- 40 MHz pixel clock rate.

Interface Mode

- Continuous (Freerunning mode)
- Asynchronous reset (Triggered mode)

Camera Interface Briefs

Mode 1: Continuous

- Up to $1024 \times 1024 \times 8\text{-bit}$ @ 74 fps.
- Camera Link BASE interface (Dual channel).
- Progressive scan.
- Matrox Meteor-II/Camera Link receiving LVAL, FVAL, CLK and video signal from camera.
- DCF used: [1M75CLC.DCF](#) (1024×1024 @ 74 fps)
- DCF used: [1M75CLCW.DCF](#) (ROI: 256×256 @ 1000 fps)

(NOTE: These DCF requires MIL/MIL-Lite 7.5 with GNL 3.2 build 5)



Mode 2: Asynchronous reset

- Up to $1024 \times 1024 \times 8\text{-bit}$.
- Camera Link BASE interface (Dual channel).
- Progressive scan.
- Matrox Meteor-II/Camera Link receiving external trigger signal.
- Matrox Meteor-II/Camera Link sending TIMER2 (CC1) signal to camera to initiate exposure.
- Matrox Meteor-II/Camera Link receiving LVAL, FVAL, CLK and video signal from camera.
- DCF used: [1M75CLT.DCF](#) (1024×1024)
- DCF used: [1M75CLTW.DCF](#) (ROI: 256×256)

(NOTE: These DCF requires MIL/MIL-Lite 7.5 with GNL 3.2 build 5)

Continued...

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Camera Interface Application Note

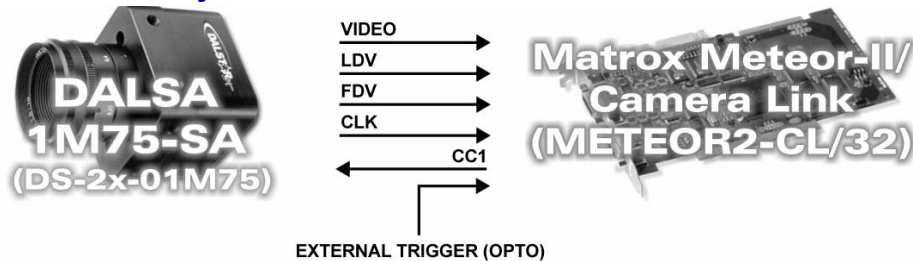
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Basics about the
interface modes

Camera Interface Briefs (cont.)

Mode 2: Asynchronous reset



Specifics about the
interface modes

Camera Interface Details

Mode 1: Continuous

- **Frame Rate:** Matrox Meteor-II/Camera Link receives the continuous video from the camera at **74/1000** frames per second (Full resolution or ROI 256 x 256 respectively).
- **Exposure time:** Exposure time is set using the DALSA PFRemote camera utility (version 0.502). Refer to the camera documentation for information on the utility's installation and usage.
- **Camera settings:** ROI is set using the DALSA PFRemote camera utility (version 0.502). Refer to the camera documentation for information on the utility's installation and usage.

DCF	Setting
1M75CLC.DCF	Default
1M75CLCW.DCF	ROI: 256 x 256

Mode 2: Asynchronous reset

- **Frame Rate:** The frame rate is determined by the frequency of the external trigger signal and the exposure time period.
- **Exposure time:** See *Mode 1: Continuous*.
- **Camera settings:** ROI is set using the DALSA PFRemote camera utility (version 0.502). Refer to the camera documentation for information on the utility's installation and usage.

DCF	Setting
1M75CLT.DCF	SYNC: EXTERNAL
1M75CLTW.DCF	ROI: 256 x 256, SYNC: EXTERNAL

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*Cabling details for the
interface modes*

Cabling Requirements

Mode 1: Continuous

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

Mode 2: Asynchronous reset

- **Cable and Connection:** Standard Camera Link.
- **External trigger:** External trigger should be connected to the OPTO TRIG input of the 9-pin connector (pins 7 and 2) on the Expanded I/O adapter bracket.

EXPANDED I/O BRACKET (9-pin connector)

				External Trigger Source	
OPTOTRIG +	07	←	SIGNAL	--	
OPTOTRIG -	02	←	GROUND	--	

The DCF(s) mentioned in this application note can be found on our FTP site ([ftp.matrox.com/pub/imaging/](ftp://ftp.matrox.com/pub/imaging/)). 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.

1055 St. Regis Blvd.
Dorval, Quebec H9P 2T4
Canada
Tel: (514) 685-2630
Fax: (514) 822-6273

MET2-CID-136

