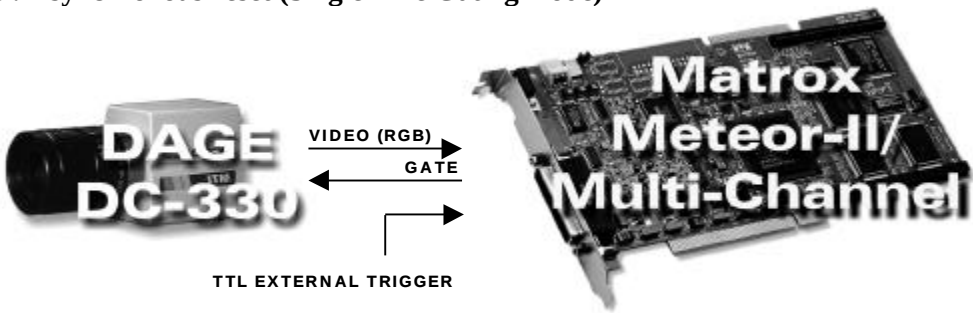
Application Note:
Interfacing non-standard cameras to Matrox Meteor-II

DAGE-MTI DC-330

August 18, 1999

Camera Descriptions	• 768 × 494 (NTSC) or 752 × 582 (PAL) × 8-bits. • Analog RGB video output. • Interlaced. • Internal sync. • Pixel Clock rate: 12.2726 MHz
Interface mode	• Asynchronous reset (Single Line Gating mode)
Camera Interface Briefs	**Mode : Asynchronous reset (Single Line Gating mode)**  • 640 × 480 × 8-bits. • Analog RGB video. • Interlaced. • Matrox Meteor-II receiving external trigger. • Matrox Meteor-II sending EXPOSURE1 (GATE) signal to camera; EXPOSURE1 (GATE) signal sent to reset pixels and initiate exposure. • Matrox Meteor-II receiving RGB video signals from camera. • DCF used: DC330ARS.DCF (short integration/exposure) • DCF used: DC330ARL.DCF (long integration/exposure)
Camera Interface Details	**Mode: Asynchronous reset** • **Frame rate:** The frame rate is determined by the frequency of the external trigger. Once this external trigger is received, the Matrox Meteor-II generates an EXPOSURE1 (GATE) pulse which in turn initiates camera exposure. • **Exposure time:** For both long and short exposure (integration), the exposure time is equal to the EXPOSURE1 (GATE) period. The default exposure time for D330SLGRL.DCF is equal to **6 seconds** (**6 frames**), while D330SLGR1.DCF is equal to **108.4 ms**. The exposure time can be modified in the DCF using Matrox Intellicam or with the MIL digitizer control function **MdigControl()**. Refer to the appropriate manual or user guide for additional information • **Maximum/minimum exposure time:** The maximum exposure time is for D330SLGR1.dcf **4.1 seconds**. The minimum exposure time for both DCFs is **800** ms.

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Cabling Requirements

Mode: Asynchronous reset

- DBHD44-TO-8BNC/O (open ended) cable required for external trigger signal, synchronization, and video output of camera.
- The connections between the 44-pin analog input connector of the Matrox Meteor-II and the 9-pin RGB and REMOTE connectors of the camera are as follows:

METEOR2-MC/2 (BNC connector) BNC Name		**DAGE DC-330 (9-pin RGB connector) Pin name**	**Pin no.**
RED	←	R/PR OUT	03
GREEN	←	G/Y OUT	04
BLUE	←	B/PS OUT	05
BLACK	←	SYNC OUT	07

METEOR2-MC/2 (BNC connector) BNC Name		**External Trigger Source**	
		Pin name	***Pin no.***
GRAY	←	-	-

METEOR2-MC/2 (44-pin connector)			**DAGE DC-330 (9-pin REMOTE connector)**	
Pin name	**Pin no.**		**Pin name**	**Pin no.**
EXP(1)	38	→	GATE IN	01
GND	03		GND	05

The DCF(s) mentioned in this application note can be found on the MIL and MIL-Lite CD, or our FTP site (ftp.matrox.com). 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.

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