

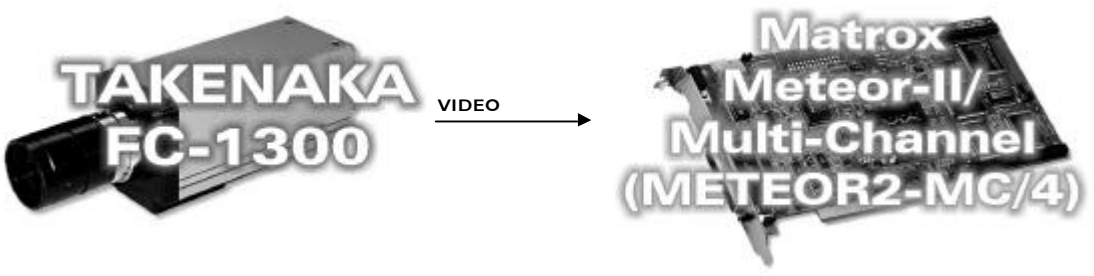
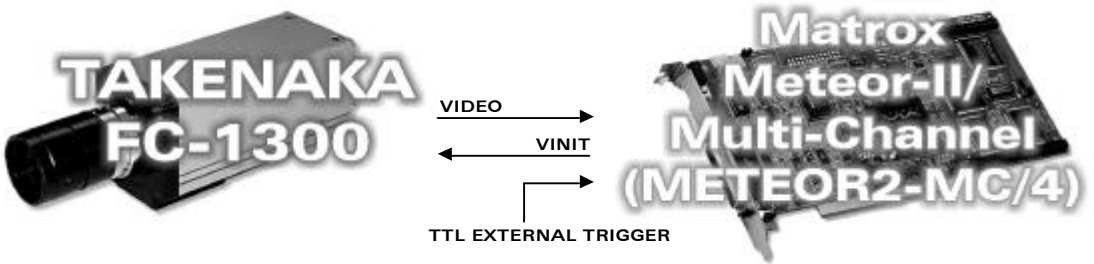
Application Note:

Interfacing non-standard cameras to Matrox Meteor-II



TAKENAKA FC-1300

March 28, 2000

Camera Descriptions	• $1300 \times 1030 \times 8\text{-bit}$ @ 12 fps • Single tap analog or RS-422 digital video output. • Progressive scan • External sync. • Internal or external exposure control. • Pixel clock: 20.034 MHz
Interface modes	• Continuous, asynchronous reset
Camera Interface Briefs	Mode 1: Continuous  • $1300 \times 1030 \times 8\text{-bit}$ @ 12 fps • Single tap analog video output. • Progressive scan • Continuous video. • Matrox Meteor-II receiving video signal from camera. • DCF used: MFC1300C.DCF Mode 2: Asynchronous reset  • $1300 \times 1030 \times 8\text{-bit}$ • Single tap analog video output. • Progressive scan • Matrox Meteor-II receiving TTL external trigger. • Matrox Meteor-II sending EXPOSURE1 (VINIT) signal to camera power supply unit; the EXPOSURE1 (VINIT) signal initiate exposure. • Matrox Meteor-II receiving video signal from camera. • DCF used: MFC1300A.DCF

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Camera Interface Details	Mode 1: Continuous • Frame rate: Matrox Meteor-II receives the continuous video from the camera at 12 frames per second. • Exposure time: Exposure time is inversely proportionate to the frame rate (no shutter) or determined by the shutter setting. Refer to the camera manual for more information. • Camera switch settings: External switch settings are as follows: <table><tr><th>Switch</th><th>Setting</th></tr><tr><td>Shutter</td><td>0</td></tr><tr><td>Mode</td><td>5</td></tr><tr><td>Up/Down</td><td>UP</td></tr></table>	Switch	Setting	Shutter	0	Mode	5	Up/Down	UP							
	Switch	Setting														
	Shutter	0														
	Mode	5														
Up/Down	UP															
Mode 2: Asynchronous Reset • Once it has received the external trigger signal, Matrox Meteor-II sends the EXPOSURE1 (VINIT) signal to the camera power supply unit (PU-97) to initiate and control the exposure period. • Frame rate: The frame rate is determined by the frequency of the external trigger signal. • Exposure time: Exposure time is dependent on the shutter switch setting as well as the width of the EXPOSURE1 (VINIT) signal (active and inactive periods). The default exposure time for this DCF is equal to 200 ms. In order to change the width and deployment time of EXPOSURE1 (VINIT) use the Exposure Settings menu tab in Matrox Intellicam. Consult the Matrox Intellicam User Guide for more information. • Camera switch settings: External switch settings are as follows: <table><tr><th>Switch</th><th>Setting</th></tr><tr><td>Shutter</td><td>0</td></tr><tr><td>Mode</td><td>5</td></tr><tr><td>Up/Down</td><td>DOWN</td></tr></table>	Switch	Setting	Shutter	0	Mode	5	Up/Down	DOWN								
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Shutter	0															
Mode	5															
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Cabling Requirements	Mode 1: Continuous • DBHD44-TO-8BNC cable required for video output of camera.															
	Mode 2: Asynchronous Reset • DBHD44-TO-8BNC/O (open ended) cable required for synchronization and video output. • Connections between the camera power supply unit (PU-97) of the camera and the 44-pin connector of the Matrox Meteor-II are as follows:															
	<table><tr><td colspan="2">TAKENAKA FC-1300 (camera power supply unit (PU-97))</td><td></td><td colspan="2">METEOR2-MC/4 (44-pin connector)</td></tr><tr><td><i>Pin name</i></td><td><i>Pin no.</i></td><td></td><td><i>Pin name</i></td><td><i>Pin no.</i></td></tr><tr><td>EXT</td><td>--</td><td>←</td><td>EXP(1)</td><td>38</td></tr></table>	TAKENAKA FC-1300 (camera power supply unit (PU-97))			METEOR2-MC/4 (44-pin connector)		<i>Pin name</i>	<i>Pin no.</i>		<i>Pin name</i>	<i>Pin no.</i>	EXT	--	←	EXP(1)	38
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EXT	--	←	EXP(1)	38												

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](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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MET2-CID-059

