

Matrox Meteor-II/Digital*

Camera Interface Application Note

FLOVEL AD-630

August 20, 2003

Basics about the
camera

Camera Descriptions

- $1636 \times 1236 \times 8\text{-bit}^1$ @ 7.5 fps.
- Color (RGB) LVDS digital video output.
- Interlaced scan.
- Internal sync.
- 18 MHz pixel clock rate.

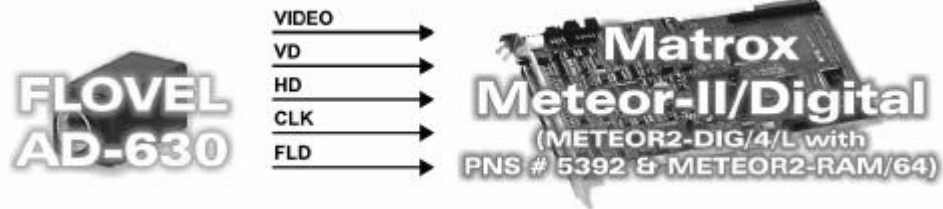
Interface Mode

- Continuous

Camera Interface Briefs

Mode: Continuous

- $1636 \times 1236 \times 8\text{-bit}$ @ 7.5 fps.
- Color (RGB) LVDS digital video.
- Interlaced scan.
- Matrox Meteor-II/Digital receiving HSYNC (HD), VSYNC (VD), FIELD ID (FLD), PIXEL CLOCK (CLK @ 18 MHz) and video from camera.
- DCF used: [AD630_1636x1236_8bitCon.DCF](#)



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

Basics about the
interface modes

Camera Interface Details

Mode: Continuous

- **Frame Rate:** Matrox Meteor-II/Digital receives the continuous video from the camera at 7.5 frames per second. **NOTE:** Use of the 64MB add-on module (METEOR2-RAM/64 sold separately) is required to capture at the full frame rate of 7.5 FPS. Since grabbing to on-board memory is required because of the digital interlaced video, the real-time double buffering scheme (as per the standard MIL "MMET2DIG.C" example) requires approximately 12 MB total ($2 \times 6 \text{ MB}$ [$3 \times 1636 \times 1236 \times 8\text{-bit}$]).
- **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:** This DCF is compatible with the default camera settings. Refer to the camera manual for additional information.

Specifics about the
interface modes

¹ Eight most significant bits per channel.

*METEOR2-DIG/4/L with PNS #5392 and
64 MB add-on module (METEOR2-RAM/64)

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Specifics about the
interface modes

Cabling details for the
interface modes

Camera Interface Details (continued)

Mode: Continuous

- **PNS:** A modified version of the Matrox Meteor-II/Digital board (specify PNS #5392 when ordering) is required for use with the FLOVEL AD-630 camera.

Cabling Requirements

Mode: Continuous

- **Cable:** DBHD100-TO-OPEN (open ended) cable required for video, synchronization and control signals.
- **Connection:** Connections between the 80-pin connectors of the camera and the 100-pin connector of the Matrox Meteor-II/Digital are as follows:

METEOR-II/DIGITAL (100-pin connector)			FLOVEL AD-630 (80-pin connector)	
Pin name	Pin no.		Pin name	Pin no.
DATA, INPUT, 0+	01	←	R2+	53
DATA, INPUT, 0-	02	←	R2-	54
DATA, INPUT, 1+	03	←	R3+	55
DATA, INPUT, 1-	04	←	R3-	56
DATA, INPUT, 2+	05	←	R4+	35
DATA, INPUT, 2-	06	←	R4-	36
DATA, INPUT, 3+	07	←	R5+	37
DATA, INPUT, 3-	08	←	R5-	38
DATA, INPUT, 4+	09	←	R6+	39
DATA, INPUT, 4-	10	←	R6-	40
DATA, INPUT, 5+	11	←	R7+	71
DATA, INPUT, 5-	12	←	R7-	72
DATA, INPUT, 6+	13	←	R8+	73
DATA, INPUT, 6-	14	←	R8-	74
DATA, INPUT, 7+	15	←	R9+	75
DATA, INPUT, 7-	16	←	R9-	76
DATA, INPUT, 8+	17	←	G2+	27
DATA, INPUT, 8-	18	←	G2-	28
DATA, INPUT, 9+	19	←	G3+	29
DATA, INPUT, 9-	20	←	G3-	30
DATA, INPUT, 10+	21	←	G4+	31
DATA, INPUT, 10-	22	←	G4-	32
DATA, INPUT, 11+	23	←	G5+	33
DATA, INPUT, 11-	24	←	G5-	34

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*METEOR2-DIG/4/L with PNS #5392 and
64 MB add-on module (METEOR2-RAM/64)

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Cabling details for the
interface modes

Cabling Requirements (continued)

Mode: Continuous

METEOR-II/DIGITAL (100-pin connector)			FLOVEL AD-630 (80-pin connector)	
Pin name	Pin no.		Pin name	Pin no.
DATA, INPUT, 12+	25	←	G6+	41
DATA, INPUT, 12-	26	←	G6-	42
DATA, INPUT, 13+	27	←	G7+	43
DATA, INPUT, 13-	28	←	G7-	44
DATA, INPUT, 14+	29	←	G8+	45
DATA, INPUT, 14-	30	←	G8-	46
DATA, INPUT, 15+	31	←	G9+	47
DATA, INPUT, 15-	32	←	G9-	48
DATA, INPUT, 16+	51	←	B2+	05
DATA, INPUT, 16-	52	←	B2-	06
DATA, INPUT, 17+	53	←	B3+	07
DATA, INPUT, 17-	54	←	B3-	08
DATA, INPUT, 18+	55	←	B4+	09
DATA, INPUT, 18-	56	←	B4-	10
DATA, INPUT, 19+	57	←	B5+	11
DATA, INPUT, 19-	58	←	B5-	12
DATA, INPUT, 20+	59	←	B6+	13
DATA, INPUT, 20-	60	←	B6-	14
DATA, INPUT, 21+	61	←	B7+	15
DATA, INPUT, 21-	62	←	B7-	16
DATA, INPUT, 22+	63	←	B8+	19
DATA, INPUT, 22-	64	←	B8-	20
DATA, INPUT, 23+	65	←	B9+	21
DATA, INPUT, 23-	66	←	B9-	22
VSYNC, INPUT, +	35	←	VD+	59
VSYNC, INPUT, -	36	←	VD-	60
HSYNC, INPUT, +	33	←	HD+	61
HSYNC, INPUT, -	34	←	HD-	62
CLOCK, INPUT, +	39	←	CLK+	63
CLOCK, INPUT, -	40	←	CLK-	64
USER, INPUT, 0+	41	←	FLD	65
Cam. Ctrl BIT 0, Out, TTL	49	←	DRAFT	66

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*Cabling details for the
interface modes*

Cabling Requirements (continued)

Mode: Continuous

METEOR-II/DIGITAL (100-pin connector)		FLOVEL AD-630 (80-pin connector)	
<i>Pin name</i>	<i>Pin no.</i>	<i>Pin name</i>	<i>Pin no.</i>
USER, INPUT, 0 -	42	←	GND 68
GND	50	--	GND 70
GND	50	--	GND 80

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64 MB add-on module (METEOR2-RAM/64)

The DCF(s) mentioned in this application note can be found on our FTP site ([ftp.matrox.com](ftp: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-140

