

M A T R O X  
G E N E S I S

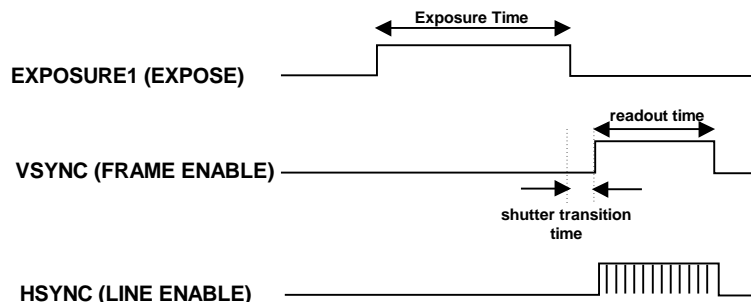
**April 9, 1999**

**XILLIX PMI 4200**

**Matrox Genesis (GEN-DIG-BRD/R)**

VIDEO  
LINE ENA.  
FRAME ENA.  
PIX STROBE  
EXPOSE

\* Matrox Genesis Main Board with Grab Module  
\*\* Matrox RS-422 Digital Data Input Board



# Application Note:

## Interfacing non-standard cameras to Matrox Genesis

Xillix PMI 4200

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<b>Cabling Requirements</b>	<b>Mode: Control (high resolution mode-software reset)</b>			
	<ul style="list-style-type: none"> <li>DBHD100-TO-OPEN cable and GEN/DIG/BRD/R board required for digital data, synchronization and control signals in RS-422 format.</li> <li>Connections between the 50-pin connector of the camera and the 100-pin connector of the GEN-DIG-BRD/R are as follows:</li> </ul>			
	<b>XILLIX PMI 4200</b>		<b>GEN-DIG-BRD/R</b>	
	<b>(50-pin connector)</b>		<b>(100-pin connector)</b>	
	<b>Pin name</b>	<b>Pin no.</b>	<b>Pin name</b>	<b>Pin no.</b>
	EXPOSE +	02	← EXPOSURE1, OUTPUT, +	95
	EXPOSE -	27	← EXPOSURE1, OUTPUT, -	96
	PIXEL STROBE +	04	→ CLOCK, INPUT, +	39
	PIXEL STROBE -	29	→ CLOCK, INPUT, -	40
	FRAME ENABLE +	06	→ VSYNC, INPUT, +	35
	FRAME ENABLE -	31	→ VSYNC, INPUT, -	36
	LINE ENABLE +	07	→ HSYNC, INPUT, +	33
	LINE ENABLE -	32	→ HSYNC, INPUT, -	34
	GND	08	→ GROUND	37
	GND	33	→ GROUND	38
	MODE CONTROL 3 +	09	← USER, OUTPUT, 0 +	91
	MODE CONTROL 3 -	34	← USER, OUTPUT, 0 -	92
	MODE CONTROL 1 +	11	← USER, OUTPUT, 1 +	93
	MODE CONTROL 1 -	36	← USER, OUTPUT, 1 -	94
	DATA 12 (MSB) +	13	→ DATA, INPUT, 11+	23
	DATA 12 -	38	→ DATA, INPUT, 11-	24
	DATA 11 +	14	→ DATA, INPUT, 10+	21
	DATA 11 -	39	→ DATA, INPUT, 10-	22
	DATA 10 +	15	→ DATA, INPUT, 9+	19
	DATA 10 -	40	→ DATA, INPUT, 9-	20
	DATA 9 +	16	→ DATA, INPUT, 8+	17
	DATA 9 -	41	→ DATA, INPUT, 8-	18
	DATA 8 +	17	→ DATA, INPUT, 7+	15
	DATA 8 -	42	→ DATA, INPUT, 7-	16
	DATA 7 +	18	→ DATA, INPUT, 6+	13
	DATA 7 -	43	→ DATA, INPUT, 6-	14
	DATA 6 +	19	→ DATA, INPUT, 5+	11
	DATA 6 -	44	→ DATA, INPUT, 5-	12
	DATA 5 +	20	→ DATA, INPUT, 4+	09
	DATA 5 -	45	→ DATA, INPUT, 4-	10
	continued			

# Application Note:

## Interfacing non-standard cameras to Matrox Genesis

Xillix PMI 4200

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Cabling Requirements (cont.)	XILLIX PMI 4200 (50-pin connector)			GEN-DIG-BRD/R (100-pin connector)	
	Pin name	Pin no.		Pin name	Pin no.
	DATA 4 +	21	→	DATA, INPUT, 3+	07
	DATA 4 -	46	→	DATA, INPUT, 3-	08
	DATA 3 +	22	→	DATA, INPUT, 2+	05
	DATA 3 -	47	→	DATA, INPUT, 2-	06
	DATA 2 +	23	→	DATA, INPUT, 1+	03
	DATA 2 -	48	→	DATA, INPUT, 1-	04
	DATA 1 (LSB) +	24	→	DATA, INPUT, 0+	01
	DATA 1 (LSB) -	49	→	DATA, INPUT, 0-	02
	GND	25	→	GROUND	37

The DCF(s) mentioned in this application note can be found on the MIL and Native Library 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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