EDT PMC Pinout

Quick Reference

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Contents

Overview

This document is intended as a quick reference guide for EDT connector pinout information for PMC boards. It does not explain each pin function. For additional information on a specific board, see the associated user's guide at www.edt.com > Technical > Documentation.

PMC Boards

EDT Board	Board Type	Bitfile	Table Number	Page Number
PMC DVK	AIA	aiag.bit	1-3	7
PMC DV C-Link/SC	Camera Link	pdvcamlk.bit	4	10
PMC CD-20	16-bit parallel RS422	pcd_src.bit	5	11
PMC CD-60	16-bit parallel LVDS	ssd.bit ssd2.bit ssd4.bit	6	12

The PMC CD, PMC DVK, and PMC C-Link/Single Channel (SC) boards are configurable DMA interfaces that can be adapted to different environments by making changes to the firmware. These boards are similar to their PCI counterparts; differences include the form factor, bus connector, and the PCI CD connector pinout.

- The PMC CD has a 68-pin connector, while the PCI CD has an 80-pin connector. For complete information on the PCI/PMC CD, see the *PCI CD User's Guide,* EDT part number 008-00965, available at www.edt.com.

- The PMC DVK and the PCI DVK both have a 68-pin connector. The PMC DVK implements a digital camera interface using parallel differential IO. For complete information on the PCI/PMC DVK, see the *PCI DV Family User's Guide,* EDT part number 008-00966, available at www.edt.com.

- The PMC C-Link/SC has one 26-pin connector, while the PCI C-Link has two 26-pin connectors. The PMC C-Link implements a camera interface following the Camera Link standard for digital cameras and frame grabbers. For complete information on PCI/PMC DV C-Link/SC, see the *PCI DV Family User's Guide,* EDT part number 008-00966, available at www.edt.com.

For more information on PMC boards, see the IEEE P1386.1 document *Draft Standard Physical and Environmental Layers for PCI Mezzanine Cards* available from:

IEEE Standards Department
345 East 47th Street
New York, NY 10017
USA

Installation

Install the PMC board in any VME or compact PCI host, according to the instructions for your host.

If your host doesn't have the appropriate spacers, use the spacers and screws provided with the EDT PMC board, as shown in Figure 1.
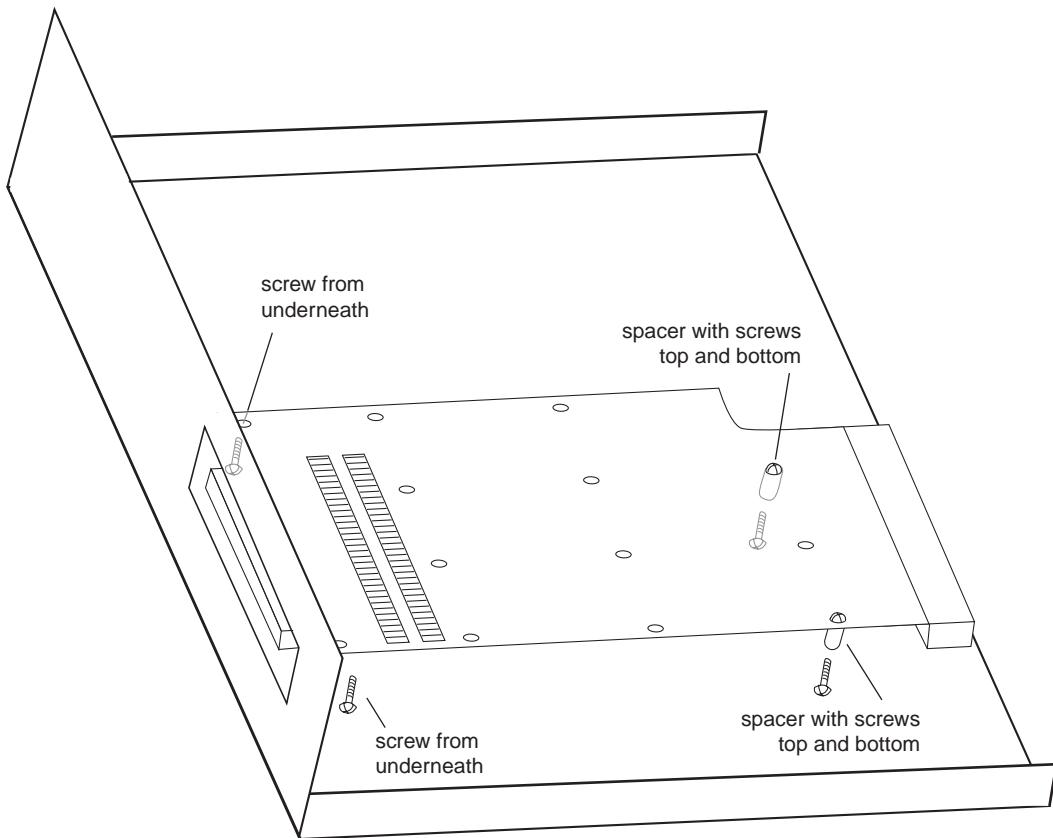

Figure 1. Installing the PMC Board

To shield the PMC board from electromagnetic interference, the board is shipped with a conductive O-ring around the outside of the bezel to which the 68-pin (PMC CD, PMC DVK) or MDR-26 (PMC DV C-Link/SC) connector is attached. When installed, this O-ring is not visible from outside the host. Be careful not to damage it when installing the board.

Connector Pinouts

PMC DVK Pin	PMC DVK Signal	AIA Signal	PMC DVK Pin	PMC DVK Signal	AIA Signal
1	Spare	Spare	35	Spare	Spare
2	VD0 +	MSB +	36	VD0 –	MSB –
3	VD1 +	MSB1 +	37	VD1 –	MSB1 –
4	VD2 +	MSB2 +	38	VD2 –	MSB2 –
5	VD3 +	MSB3 +	39	VD3 –	MSB3 –
6	VD4 +	MSB4 +	40	VD4 –	MSB4 –
7	VD5 +	MSB5 +	41	VD5 –	MSB5 –
8	VD6 +	MSB6 +	42	VD6 –	MSB6 –
9	VD7 +	MSB7 +	43	VD7 –	MSB7 –
10	VD8 +	MSB8 +	44	VD8 –	MSB8 –
11	VD9 +	MSB9 +	45	VD9 –	MSB9 –
12	Spare	Spare	46	Spare	Spare
13	VD10 +	MSB10 +	47	VD10 –	MSB10 –
14	VD11 +	MSB11 +	48	VD11 –	MSB11 –
15	VD12 +	MSB12 +	49	VD12 –	MSB12 –
16	VD13 +	MSB13 +	50	VD13 –	MSB13 –
17	Spare17 +	Not used	51	Spare17 –	Not used
18	Spare18 +	Not used	52	Spare18 –	Not used
19	VD14 +	MSB14 +	53	VD14 –	MSB14 –
20	VD15 +	MSB15 +	54	VD15 –	MSB15 –
21	Spare16 +	Reserved	55	Spare16 –	Reserved
22	SCNTLO +	Serial Control Out +	56	SCNTLO –	Serial Control Out –
23	SCNTLI +	Serial Control In +	57	SCNTLI –	Serial Control In –
24	FLDID +	Field ID +	58	FLDID –	Field ID –
25	FRME +	Frame Enable +	59	FRME –	Frame Enable –
26	LINE +	Line Enable +	60	LINE –	Line Enable –
27	ID0 +	Channel ID 0 +	61	ID0 –	Channel ID 0 –
28	ID1 +	Channel ID 1 +	62	ID1 –	Channel ID 1 –
29	PSTRB +	Pixel Strobe +	63	PSTRB –	Pixel Strobe –
30	EXPOSE +	Mode Control 0 +	64	EXPOSE –	Mode Control 0 –
31	MC0 +	Mode Control 1 +	65	MC0 –	Mode Control 1 –
32	MC1 +	Mode Control 2 +	66	MC1 –	Mode Control 2 –
33	MC2 +	Mode Control 3 +	67	MC2 –	Mode Control 3 –
34	Ground	Ground	68	Ground	Ground

Table 1. PMC DVK for Single-channel Grayscale Cameras (aiag.bit)

Shading denotes out to camera.

PMC DVK Pin	PMC DVK Signal	AIA Signal	PMC DVK Pin	PMC DVK Signal	AIA Signal
1	Spare	Spare	35	Spare	Spare
2	VDA0 +	AMSB +	36	VDA0 –	AMSB –
3	VDA1 +	AMSB1 +	37	VDA1 –	AMSB1 –
4	VDA2 +	AMSB2 +	38	VDA2 –	AMSB2 –
5	VDA3 +	AMSB3 +	39	VDA3 –	AMSB3 –
6	VDA4 +	AMSB4 +	40	VDA4 –	AMSB4 –
7	VDA5 +	AMSB5 +	41	VDA5 –	AMSB5 –
8	VDA6 +	AMSB6 +	42	VDA6 –	AMSB6 –
9	VDA7 +	AMSB7 +	43	VDA7 –	AMSB7 –
10	VDB0 +	BMSB +	44	VDB0 –	BMSB –
11	VDB1 +	BMSB1 +	45	VDB1 –	BMSB1 –
12	Spare	Spare	46	Spare	Spare
13	VDB2 +	BMSB2 +	47	VDB2 –	BMSB2 –
14	VDB3 +	BMSB3 +	48	VDB3 –	BMSB3 –
15	VDB4 +	BMSB4 +	49	VDB4 –	BMSB4 –
16	VDB5 +	BMSB5 +	50	VDB5 –	BMSB5 –
17	Spare17 +	Not used	51	Spare17 –	Not used
18	Spare18 +	Not used	52	Spare18 –	Not used
19	VDB6 +	BMSB6 +	53	VDB6 –	BMSB6 –
20	VDB7 +	BMSB7 +	54	VDB7 –	BMSB7 –
21	VDA8 +	AMSB8 +	55	VDA8 –	AMSB8 –
22	SCNTLO +	Serial Control Out +	56	SCNTLO –	Serial Control Out –
23	SCNTLI +	Serial Control In +	57	SCNTLI –	Serial Control In –
24	FLDID +	Field ID +	58	FLDID –	Field ID –
25	FRME +	Frame Enable +	59	FRME –	Frame Enable –
26	LINE +	Line Enable +	60	LINE –	Line Enable –
27	ID0 +	Channel ID 0 +	61	ID0 –	Channel ID 0 –
28	ID1 +	Channel ID 1 +	62	ID1 –	Channel ID 1 –
29	PSTRB +	Pixel Strobe +	63	PSTRB –	Pixel Strobe –
30	EXPOSE +	EXPOSE 0 +	64	EXPOSE –	EXPOSE –
31	VDA9 +	AMSB9 +	65	VDA9 –	AMSB9 –
32	VDB8 +	BMSB8 +	66	VDB8 –	BMSB8 –
33	VDB9 +	BMSB9 +	67	VDB9 –	BMSB9 –
34	Ground	Ground	68	Ground	Ground

Table 2. PMC DVK for Dual-channel Grayscale Cameras (aiag.bit)

Shading denotes out to camera.

PMC DVK Pin	PMC DVK Signal	AIA Signal	’MC DVK Pin	PMC DVK Signal	AIA Signal
1	Spare	Spare	35	Spare	Spare
2	VDR0 +	RedMSB0 +	36	VDR0 –	RedMSB0 –
3	VDR1 +	Red MSB1 +	37	VDR1 –	RedMSB1 –
4	VDR2 +	Red MSB2 +	38	VDR2 –	Red MSB2 –
5	VDR3 +	Red MSB3 +	39	VDR3 –	Red MSB3 –
6	VDR4 +	Red MSB4 +	40	VDR4 –	Red MSB4 –
7	VDR5 +	Red MSB5 +	41	VDR5 –	Red MSB5 –
8	VDR6 +	Red MSB6 +	42	VDR6 –	Red MSB6 –
9	VDR7 +	Red MSB7 +	43	VDR7 –	Red MSB7 –
10	VDG0 +	GrnMSB0 +	44	VDG0 –	GrnMSB0 –
11	VDG1 +	GrnMSB1 +	45	VDG1 –	GrnMSB1 –
12	Spare	Spare	46	Spare	Spare
13	VDG2 +	GrnMSB2 +	47	VDG2 –	GrnMSB2 –
14	VDG3 +	GrnMSB3 +	48	VDG3 –	GrnMSB3 –
15	VDG4 +	GrnMSB4 +	49	VDG4 –	GrnMSB4 –
16	VDG5 +	GrnMSB5 +	50	VDG5 –	GrnMSB5 –
17		not used	51		not used
18	VDB4 +	BluMSB4 +	52	VDB4 –	BluMSB4 –
19	VDB6 +	GrnMSB6 +	53	VDB6 –	GrnMSB6 –
20	VDB7 +	GrnMSB7 +	54	VDB7 –	GrnMSB7 –
21	VDB0 +	BluMSB0 +	55	VDB0 –	BluMSB0 –
22	SCNTLO +	Serial Control Out +	56	SCNTLO –	Serial Control Out –
23	SCNTLI +	Serial Control In +	57	SCNTLI –	Serial Control In –
24	VDB5 +	BluMSB5 +	58	VDB5 –	BluMSB5 –
25	FRME +	Frame Enable +	59	FRME –	Frame Enable –
26	LINE +	Line Enable +	60	LINE –	Line Enable –
27	VDB6 +	BluMSB6 +	61	VDB6 –	BluMSB6 –
28	VDB7 +	BluMSB7 +	62	VDB7 –	BluMSB7 –
29	PSTRB +	Pixel Strobe +	63	PSTRB –	Pixel Strobe –
30	EXPOSE +	EXPOSE +	64	EXPOSE –	EXPOSE –
31	VDB1 +	BluMSB1 +	65	VDB1 –	BluMSB1 –
32	VDB2 +	BluMSB2 +	66	VDB2 –	BluMSB2 –
33	VDB3 +	BluMSB3 +	67	VDB3 –	BluMSB3 –
34	Ground	Ground	68	Ground	Ground

Table 3. PMC DVK for Single-channel Color Cameras (aiag.bit)

Shading denotes out to camera.

The PMC DV C-Link/SC connects to an MDR-26 pin connector (Camera Link standard).Table describes the pinout for the PMC DV C-Link/SC.

Base Configuration (with Camera Control and Serial Communication)		
Camera Connector	Frame Grabber Connector	Channel Link Signal
1	1	Inner Shield
14	14	Inner Shield
2	25	X0–
15	12	X0+
3	24	X1–
16	11	X1+
4	23	X2–
17	10	X2+
5	22	Xclk–
18	9	Xclk+
6	21	X3–
19	8	X3+
7	20	SerTC+
20	7	SerTC–
8	19	SerTFG–
21	6	SerTFG+
9	18	CC1–
22	5	CC1+
10	17	CC2+
23	4	CC2–
11	16	CC3–
24	3	CC3+
12	15	CC4+
25	2	CC4–
13	13	Inner Shield
26	26	Inner Shield

Table 4. PMC DV C-Link/SC (pdvcamlk.bit)

AMP	Signal	AMP	Signal
1	TXT+	35	TXT–
2	DAT0+	36	DAT0–
3	DAT1+	37	DAT1–
4	DAT2+	38	DAT2–
5	DAT3+	39	DAT3–
6	DAT4+	40	DAT4–
7	DAT5+	41	DAT5–
8	DAT6+	42	DAT6–
9	DAT7+	43	DAT7–
10	DAT8+	44	DAT8–
11	DAT9+	45	DAT9–
12	STAT3+	46	STAT3–
13	DAT10+	47	DAT10–
14	DAT11+	48	DAT11–
15	DAT12+	49	DAT12–
16	DAT13+	50	DAT13–
17	FUNCT1+	51	FUNCT1–
18	FUNCT2+	52	FUNCT2–
19	DAT14+	53	DAT14–
20	DAT15+	54	DAT15–
21	SPARE0+	55	SPARE0–
22	STAT0+	56	STAT0–
23	FUNCT0+	57	FUNCT0–
24	Reserved	58	Reserved
25	DNR+	59	DNR–
26	IDV+	60	IDV–
27	STAT1+	61	STAT1–
28	STAT2+	62	STAT2–
29	RXT+	63	RXT–
30	FUNCT3+	64	FUNCT3–
31	SENDT+	65	SENDT–
32	ODV+	66	ODV–
33	BNR+	67	BNR–
34	Ground	68	Ground

Table 5. PMC CD-20 (pcd_src.bit)

AMP	Signal	AMP	Signal
1	Reserved	35	Reserved
2	CH1D0+	36	CH1D0–
3	CH1D1+	37	CH1D1–
4	CH1D2+	38	CH1D2–
5	CH1D3+	39	CH1D3–
6	CH2D0+	40	CH2D0–
7	CH2D1+	41	CH2D1–
8	CH2D2+	42	CH2D2–
9	CH2D3+	43	CH2D3–
10	CH3D0+	44	CH3D0–
11	CH3D1+	45	CH3D1–
12	Reserved	46	Reserved
13	CH3D2+	47	CH3D2–
14	CH3D3+	48	CH3D3–
15	CH4D0+	49	CH4D0–
16	CH4D1+	50	CH4D1–
17	Reserved	51	Reserved
18	Reserved	52	Reserved
19	CH4D2+	53	CH4D2–
20	CH4D3+	54	CH4D3–
21	Reserved	55	Reserved
22	Reserved	56	Reserved
23	CH2CLK+	57	CH2CLK–
24	CH3CLK+	58	CH3CLK–
25	Reserved	59	Reserved
26	Reserved	60	Reserved
27	Reserved	61	Reserved
28	Reserved	62	Reserved
29	CH1CLK+	63	CH1CLK–
30	CH4CLK+	64	CH4CLK–
31	Reserved	65	Reserved
32	Reserved	66	Reserved
33	Reserved	67	Reserved
34	Ground	68	Ground

Table 6. PMC CD-60 (ssd.bit, ssd2.bit, ssd4.bit)