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Find the *Aaeon PCM-3521* at our website: ***Click HERE***

Notice

This guide is designed for experienced users to setup the system in the shortest time.

Safety Precautions



Always completely disconnect the power cord from your board whenever you are working on it. Do not make connections while the power is on, because a sudden rush of power can damage sensitive electronic components.



Always ground yourself to remove any static charge before touching the board. Modern electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag when they are not in the chassis



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A Message to the Customer

Fist of all, thank you for purchasing PCM-3521 PC/104 VGA Module. This Quick Installation Guide will help you on the process of the installation. Please read it thoroughly before you start to install it. The product comes with a sheet of warranty for two years assurances except for improper use. Therefore, we strongly suggest you to read and refer to the Quick Installation Guide before any installation. You may visit AAEON website for the latest version of the instruction. Please refer to http://www.aaeon.com/

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Product Warranty

AAEON Customer Services

All products in AAEON are designed as the strictest specifications to ensure that the products will own the reliable performance in the typical industrial environments. Whether your purchase from AAEON is made to the purpose of the laboratory or the factory facility, you can be assured that every purchase in AAEON will provide the reliability and stability of operation.

Your satisfaction is our primary concern. Here is a guide for AAEON's customer services. Ensure you get the full benefits of our services, please follow the instructions below step by step.

Technical Support

We require you to get the maximum performance from your products. If you run into technical difficulties, we'll be here always for you. For the most frequently asked questions, you can easily find solutions in your product documentation. We suggest strongly that you can read it before asking for a customer service over the phone. If you still cannot find the answer, gather all questions you can think of and have the product at hand before giving a call to your dealer. All dealers of AAEON are well-trained and ready to provide you as many supports as we can. Based on the customer service we've encountered until now, most of problems are minor and able to be easily solved over the phone. In addition, free-charged technical

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support is available from AAEON engineers in the office time. We are always pleased to give advice regarding to any installation and operation for AAEON products.

Introduction

The PCM-3521 is a PC/104 form factor Super VGA Controller for CRT and LCD displays. It supports CRT color monitor and LCD display, monochrome, Single scan, Dual-scan, and TFT panels. It can serve as a connector to create compact video solution for embedded applications.

Features

- PC/104 Interface
- C&T F65545 VGA Chip for Non-Lead-Free or Topro TP6508IQG for Lead-free
- 104KB Video RAM
- Supports CRT and TTL MONO/DSTN/TFT LCD

Ordering Information

- PCM-3521B1

  PC/104 Board VGA Module with C&T 65545

- TF-PCM-3521B1-01

  PC/104 Board VGA Module with TP6508IQG

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Packing List

- VGA Graphic Adapter
- Quick Installation Guide
- Utility CD

If any of these items is missing or damaged, please contact your dealer. Please have the serial number from your PCM-3521 adapter ready when you call.

Note: Keep all packaging materials that accompany your adapter in the event you need to return the product.

Configuring Your Adapter

This section explains how to configure your adapter for use with your computer system.

WARNING: *Incorrect setting or use of the adapter may result in damage to the computer system or the graphics adapter itself. Carefully read through this manual before installing the adapter in your system. Your VGA adapter must use a 16-bit expansion slot.*

Acknowledgments

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- Windows 3.1 is a trademark of Microsoft Corp.
- IBM is a trademark of International Business Machines

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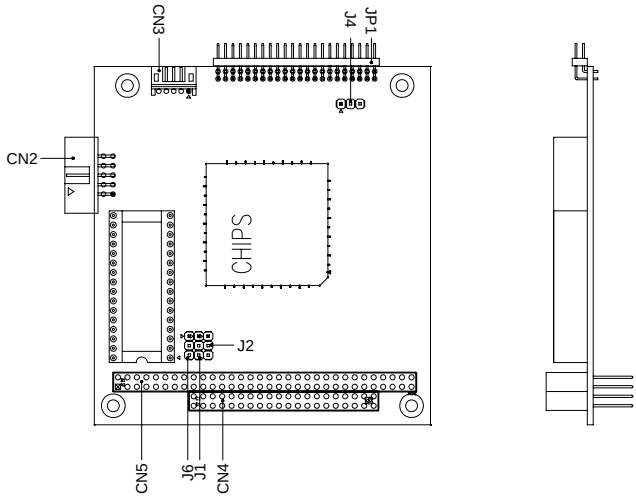
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Specifications

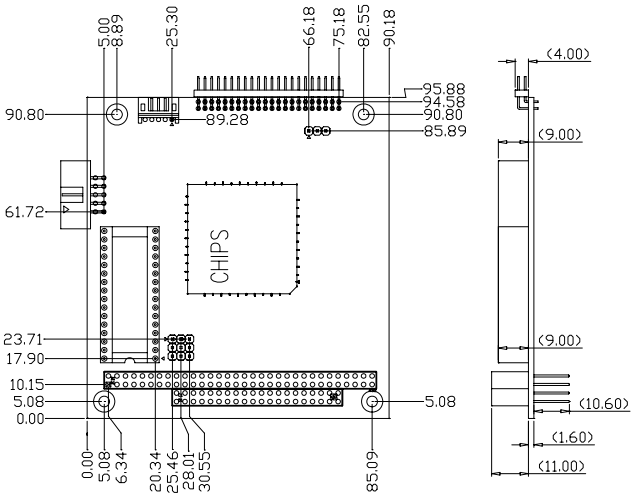
- Form Factor PC/104
- VGA Chip C&T 65545 or Topro TP6508IQG
- LCD Interface Supports 12/18/24-bit LCD
- Other Supports LCD & CRT simultaneous display; True-color and Hi-color display capability with LCD and CRT up to 640 x 480 resolution
- Operating Temperature 32˚F~140˚F (0˚C~60˚C)

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Location of Jumpers and Connectors



Mechanical Drawing



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Jumper Setting (J1) (Factory use only)

J1	Short
A	1,2 (Default)
B	2,3

Jumper Setting (J2) (Factory use only)

J2	Short
A	1,2 (Default)
B	2,3

Panel Selection (J4) (Factory use only)

J4	Short
A	1,2 (Default)
B	2,3

Panel Connector Pin Assignment (CON1)

Pin	Signal	Pin	Signal
1	+12V	2	+12V
3	GND	4	GND
5	VCC	6	VCC
7	DENAVEE	8	GND
9	P0	10	P1
11	P2	12	P3

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13	P4	14	P5
15	P6	16	P7
17	P8	18	P9
19	P10	20	P11
21	P12	22	P13
23	P14	24	P15
25	P16	26	P17
27	P18	28	P19
29	P20	30	P21
31	P22	32	P23
33	GND	34	GND
35	SHFCLK	36	FLM
37	DE	38	LP
39	GND	40	ENABLK
41	NC	42	NC
43	NC	44	NC

CRT Connector (CON2)

Pin	Signal	Pin	Signal
1	R output	2	GND
3	G output	4	AGND
5	B output	6	AGND
7	VS	8	AGND
9	HS	10	GND

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Power Connector (CON3)

Pin	Signal
1	ENAVEE
2	GND
3	+12V
4	GND
5	VEE

PC/104 Bus Connectors Pin Assignment

Pin	Signal	Pin	Signal
B1	GND	A1	IOCHCHK
B2	RESET DRV	A2	SD7
B3	+5V DC	A3	SD6
B4	IRQ9	A4	SD5
B5	-5V DC	A5	SD4
B6	DRQ2	A6	SD3
B7	-12V DC	A7	SD2
B8	QWS	A8	SD1
B9	+12V DC	A9	SD0
B10	GND	A10	IOCHDRY
B11	SMEMW	A11	AEN
B12	SMEMR	A12	SA19
B13	IOW	A13	SA18
B14	IOR	A14	SA17
B15	DACK3	A15	SA16
B16	DRQ3	A16	SA15

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B17	DACK1	A17	SA14
B18	DRQ1	A18	SA13
B19	REFRESH	A19	SA12
B20	CLK	A20	SA11
B21	IRQ7	A21	SA10
B22	IRQ6	A22	SA9
B23	IRQ5	A23	SA8
B24	IRQ4	A24	SA7
B25	IRQ3	A25	SA6
B26	DACK2	A26	SA5
B27	T/C	A27	SA4
B28	BALE	A28	SA3
B29	+5V DC	A29	SA2
B30	OSC	A30	SA1
B31	GND	A31	SA0
B32	GND	A32	0V

Pin	Signal	Pin	Signal
D1	GND	C1	GND
D2	MEM CS16	C2	SBHE
D3	I/O CS16	C3	LA23
D4	IRQ10	C4	LA22
D5	IRQ11	C5	LA21
D6	IRQ12	C6	LA20
D7	IRQ13	C7	LA19
D8	IRQ14	C8	LA18
D9	DACK0	C9	LA17

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D10	DRQ0	C10	MEMR
D11	DACK5	C11	MEMW
D12	DRQ5	C12	SD8
D13	DACK6	C13	SD9
D14	DRQ6	C14	SD10
D15	DACK7	C15	SD11
D16	DRQ7	C16	SD12
D17	+5V DC	C17	SD13
D18	MASTER	C18	SD14
D19	GND	C19	SD15
D20	GND	C20	GND

Video Support Modes: VGA Standard

Mode No. (HEX)	Display Mode	Colors	Text Display	Font Size	Pixel Resolution	Max mclk/ Dot clk	Horizont Freq. (Khz)	Vertical Freq. (Hz)	Video Memory
0+,1+	Text	16	40 x 25	9x16	360x400	50/28.322	31.5	70	256KB
0+,1+	Text	16	40 x 25	8x14	320x350	56/25.175	31.5	70	256KB
0+,1+	Text	16	40 x 25	8x8	320x200	56/25.175	31.5	70	256KB
2+,3+	Text	16	80 x 25	9x16	720x400	56/28.322	31.5	70	256KB
2+,3+	Text	16	80 x 25	8x14	640x350	56/25.175	31.5	70	256KB
2+,3+	Text	16	80 x 25	8x8	640x200	56/25.175	31.5	70	256KB
4	Graphics	4	40 x 25	8x8	320x200	56/25.175	31.5	70	256KB
5	Graphics	4	40 x 25	8x8	320x200	56/25.175	31.5	70	256KB
6	Graphics	2	80 x 25	8x8	640x200	56/25.175	31.5	70	256KB
7+	Text	Mono	80 x 25	9x16	720x400	56/25.322	31.5	70	256KB
7+	Text	Mono	80 x 25	9x14	720x350	56/25.322	31.5	70	256KB
7+	Text	Mono	80 x 25	9x8	720x350	56/25.322	31.5	70	256KB

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Video Support Modes: Extended Resolution

Mode No. (HEX)	Display Mode	Colors	Text Display	Font Size	Pixel Resolution	Max mclk/ Dot clk	Horizont Freq. (Khz)	Vertical Freq. (Hz)	Video Memory
20	Note 3	16	80x30	8x16	640x480	56/25.175	31.5	60	512KB
22	Note 3	16	100x37	8x16	800x680	65/40.000	37.5	60	512KB
24	Note 3	16	128x48	8x16	1024x768	65/65.000	48.5	60	512KB
24I						65/44.900	35.5	43	512KB
30	Note 1	256	80x30	8x16	640x480	56/25.175	31.5	60	512KB
32	Note 1	256	100x37	8x16	800x680	56/40.000	37.5	60	512KB
34	Note 1	256	128x48	8x16	1024x768	65/65.000	48.5	60	1 MB
34I						65/44.900	35.5	43	1 MB
40	Note 4	32K	80x30	8x16	640x480	65/50.350	31.5	60	1 MB
41	Note 5	64K	80x30	8x16	640x480	65/50.350	31.5	60	1 MB
60	Text	16	132x25	8x16	1056x400	65/40.000	30.5	68	256KB
61	Text	16	132x50	8x16	1056x400	65/40.000	30.5	68	256KB
72/75I						65/44.900	35.5	43	512KB
78	Note 2	16	80x25	8x16	640x400	56/25.175	31.5	70	1 MB

Note 1: 8-bit linear

Note 2: Packed Pixel

Note 3: 4-bit linear

Note 4: 15-bit liner

Note: The “I” in the Mode No. column indicates "Interlaced". Max MCLK refers to the maximum clock rate required for proper mode operation.

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Software Utilities

This section describes operation and installation of the following software utilities supplied on the Display Driver CD.

.FP .CT .SM .SETCOL

NOTE: Changes or modifications not expressly approved by the device provider may void the warranty.

The FP, CT, SM utility programs

FP, CT, and SM are switch display commands. Use these commands as shown below to configure display options.

CT <Enter>: Switches the PCM-3521 display to CRT only.
FP <Enter>: Switches the PCM-3521 display to Flat- Panel only.
SM <Enter>: Switches the PCM-3521 display to both CRT and Flat-Panel simultaneously

Using the SETCOL Utility Program

1. Place the display driver diskette in drive A (or B)
2. From the correct prompt type SETUP and <Enter>.
3. Press any key to display a list of supported applications.
4. Use the arrow keys to select utilities. Press <Enter> to install the utility.
5. Press ESC followed by Y to exit to DOS.

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Software Drivers

Supported Drivers List (C&T F65545)

Windows 3.1

Lotus/Symphony

Word 5.0

WordPerfect 5.0

AutoCAD Release 12

VESA version 1.2

Word 5.5

WordPerfect 5.1

Supported Drivers List (Topro TP6508IQG)

Windows 98

DOS

Install the Windows 3.1 driver

1. Select the Main Menu in the Program Manager
2. From the FILE menu select RUN
3. Type A:\WINSET and then press <Enter>.
4. When installation is complete, changes in appearance can be made from the control panel.

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Install the Windows 3.1 driver from the DOS prompt

1. Place the Driver CD-ROM into your CD-ROM Drive.
2. From the correct prompt type SETUP <Enter>.
3. Press any key to get the application list.
4. Select Windows 3.1 and press <Enter>.
5. Type install in the Windows sub-directory.
6. After the installation is complete, press ESC followed by Y to exit DOS.

Other Drivers

1. Place the Driver CD-ROM into your CD-ROM Drive.
2. From the correct prompt type SETUP <Enter>.
3. Press any key to get the application list.
4. Use arrow keys to select the driver and press <Enter>.
5. Install according to SETUP program instructions.

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For TF-PCM-3521B1-01 (TF-PCM-3521B1-01 专用)

Below Table for China RoHS Requirements
产品中有毒有害物质或元素名称及含量

AAEON Main Board/ Daughter Board/ Backplane

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板及其电子组件	×	○	○	○	○	○
外部信号连接器及线材	×	○	○	○	○	○

O：表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006 标准规定的限量要求以下。

X：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T 11363-2006 标准规定的限量要求。

备注：此产品所标示之环保使用期限，系指在一般正常使用状况下。

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For PCM-3521B1 (PCM-3521B1 专用)

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产品中有毒有害物质或元素名称及含量

AAEON Main Board/ Daughter Board/ Backplane

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板及其电子组件	×	×	×	×	×	×
外部信号连接器及线材	×	×	×	×	×	×

O：表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006 标准规定的限量要求以下。

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