PCM-3708

PC/104 Plus ATI Mobility VGA Card

Notice:

This guide is designed for experienced users to setup the system within the shortest time. For detailed information, please always refer to the electronic user's manual.

Safety Precautions

Warning! *Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.*

Caution! *Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.*

PCM-3708

PCM-3708 can provide both Dual view and Simulscan (dual display) capabilities.

PCM-3708 Simulscan peripheral setting

1. CRT & Panel (Default onboard VGA BIOS)

2. CRT & TV(Replaced with the TV-coded VGA BIOS)

• When utilizing the Dual View feature on PCM-3708, the system(BIOS) allows you to select a master and slave monitor for each VGA peripheral. However when using the simulscan feature there is no need to set VGA monitors as a Master or Slave. DO NOT SET YOUR VGA MONITORS AS MASTER OR SLAVE SETTING DURING SIMULSCAN OPERATION OR PROBLEMS WILL OCCUR.

• When installing PCM-3708 onto a SBC such as AAEON SBC-659, SBC-558, PCM-6896, and PCM-6898, please install the ATI VGA Driver that comes with the package. In order to avoid malfunctions, you may need to disable the existing on board VGA device. For example, the VGA device could be disable in the "Device Manager" of the "System Properties" in "Control Panel"of Windows 95/98SE.
Please note that "Triple View" function is not supported on PCM-3708.

• ATI M1 VGA chipset offers 8M of video RAM which is sufficient during single view operation. However during dual view operations the video RAM has to be shared, so during Dual View operation, resolution fields on your VGA monitors must be adjusted to have the optimal performance.

A Message to the Customer

AAEON Customer Services

Each and every AAEON product is built to the most exacting specifications to ensure reliable performance in the harsh and demanding conditions typical of industrial environments. Whether your new AAEON equipment is destined for the laboratory or the factory floor, you can be assured that your product will provide the reliability and ease of operation for which the name AAEON has come to be known.

Your satisfaction is our primary concern. Here is a guide to AAEON's customer services. To ensure you receive the full benefit of our services, please follow the instructions below carefully.

Technical Support

We want you to attain the maximum performance from AAEON's products. So if you run into technical difficulties, we are here to help. For the most frequently asked questions, you can easily find answers in your product documentation. These answers are normally a lot more detailed than the ones we can give over the phone.

So please consult this manual first. If you still cannot find the answer, gather all the information or questions that apply to your problem, and with the product close at hand, call your dealer. Our dealers are well trained and ready to give you the support you need to get the most from your AAEON products. In fact, most problems reported are minor and are able to be easily solved over the phone.

In addition, free technical support is available from AAEON engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products.

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Product Warranty

AAEON warrants to you, the original purchaser, that each of its products will be free from defects in materials and workmanship for two years from the date of shipment.

This warranty does not apply to any products which have been repaired or altered by persons other than repair personnel authorized by AAEON, or which have been subject to misuse, abuse, accident or improper installation. AAEON assumes no liability under the terms of this warranty as a consequence of such events.

Because of AAEON's high quality-control standards and rigorous testing, most of our customers never need to use our repair service. If an AAEON product is defective, it will be repaired or replaced at no charge during the warranty period. For out-of-warranty repairs, you will be billed according to the cost of replacement materials, service time, and freight. Please consult your dealer for more details.

If you think you have a defective product, follow these steps:

1. Collect all the information about the problem encountered. (For example, CPU type and speed, AAEON products used, other hardware and software used, etc.) Note anything abnormal and list any on-screen messages you get when the problem occurs.

2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.

3. If your product is diagnosed as defective, obtain an RMA (return material authorization) number from your dealer. This allows us to process your return more quickly.

4. Carefully pack the defective product, a fully-completed Repair and Replacement Order Card and a photocopy proof of purchase date (such as your sales receipt) in a shippable container. A product returned without proof of the purchase date is not eligible for warranty service.

5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

Packing list

Before you begin installing your card, please make sure that the following materials have been shipped:

• 1 PCM-3708 ATI Mobility VGA Card

• 1 Quick Installation Guide(P/N:200737080)

• 1 Support CD contains the followings:

  -- User's Manual (this manual in PDF file)

  -- VGA driver and utilities

• 1 128K FLASH for TV-coded VGA BIOS(P/N:14S6237081)

• 1 TV-OUT and S-Terminal Cable (P/N:1700080180)

• 1 D-SUB 15-pin VGA connector(P/N:1701160153)

• 1 bag of screws and miscellaneous parts(P/N:9657000300)

If any of these items are missing or damaged, contact your distributor or sales representative immediately.

Notice

Dear Customer,

Thank you for purchasing the PCM-3708 board. This Quick Installation Guide is designed to help you to get the most out of the PCM-3708, please read it thoroughly before you install and use the board. The product that you have purchased comes with an two-year limited warranty, but AAEON will not be responsible for misuse of the product. Therefore, we strongly urge you to first read the quick installation guide before using the product.

To receive the latest version of the user manual, please visit our Web site at:

Http:\\WWW.AAEON.COM.TW

Features

PCM-3708

Features

- 8M Video RAM

- Chipset: ATI Mobility M1

- Support 18/24/36/48-bit TTL Panel

- TV-Output

- 2 Channel LVDS

- 128K VGA BIOS

- One PC/104+ connector for expansion

Installing PC/104+ Modules

The mainboard's PC/104 + connectors give you the flexibility to attach PC/104 + expansion modules. These modules perform the functions of traditional plug-in expansion cards, but save space and valuable slots.

Installing these modules on the mainboard is quick and simple. The following steps show how to mount the PC/104 + modules:

1. Remove the mainboard from your system paying particular attention to the safety instructions already mentioned.

2. Make any jumper or link changes required to the mainboard now. Once the PC/104 + module is mounted you may have difficulty in accessing these.

3. Normal PC/104 + modules have male connectors and mount directly onto the mainboard. However, to ensure better bus matching, the connectors on the mainboard and the PC/104+ module are both female. For this reason, you may need to use the "male-male" adapter included with the mainboard in order to properly connect your PC/104 + module. (Refer to the diagram on the following page.)

4. Mount the PC/104 + module onto the mainboard by pressing the module firmly but carefully onto the mounting connectors.

5. Secure the PC/104 + module onto the mainboard using the four mounting spacers and screws.

Installing PC 104 + Module
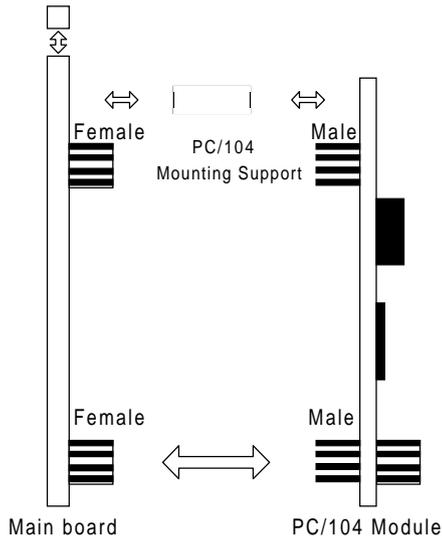
PC/104 & PC/104 Plus Module Mounting Diagram
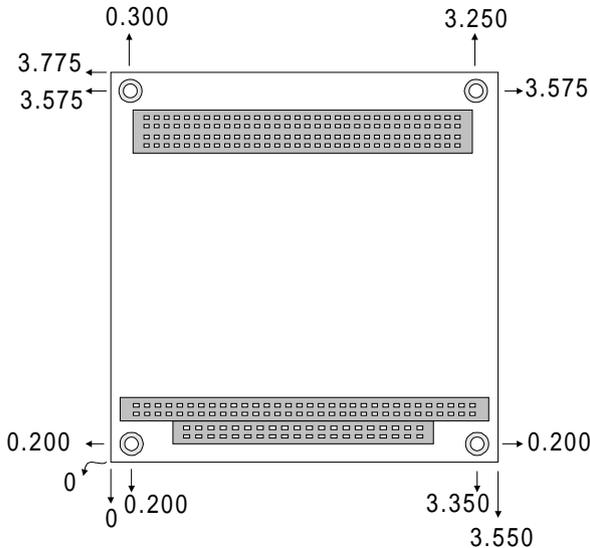
PC/104 & PC/104 Plus module dimenstions (inches ±5%)

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PCM-3708 Dimensions
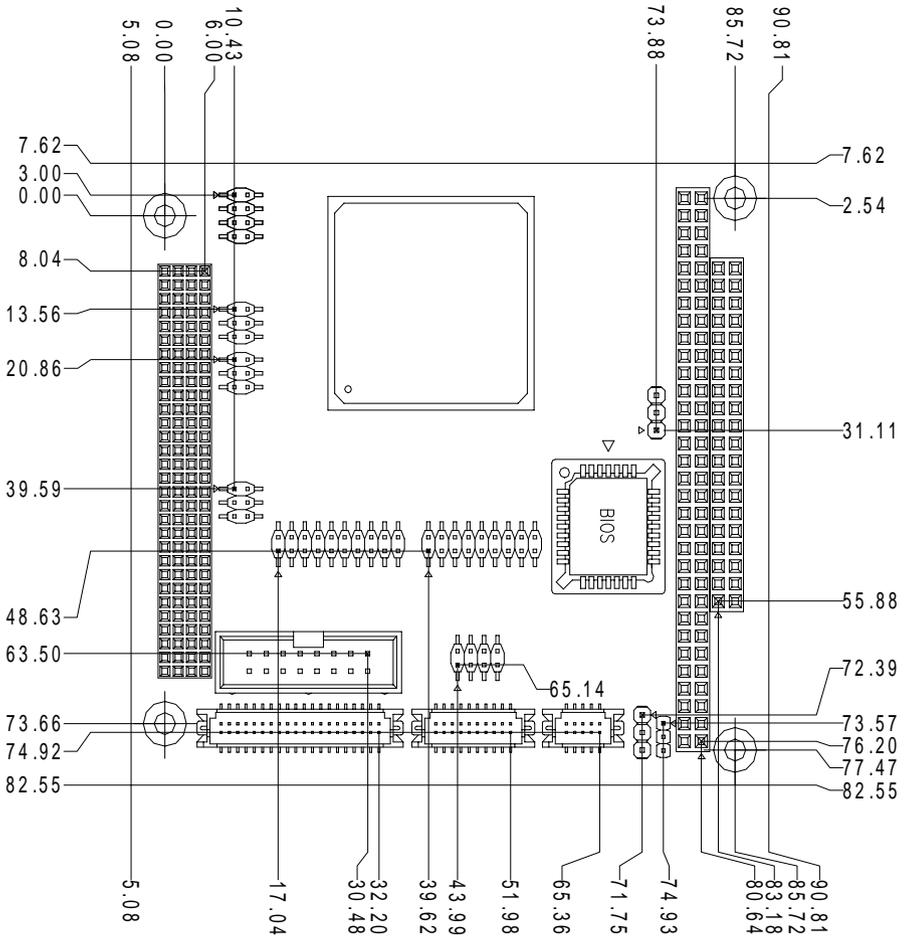
PCM-3708 Connector Locations
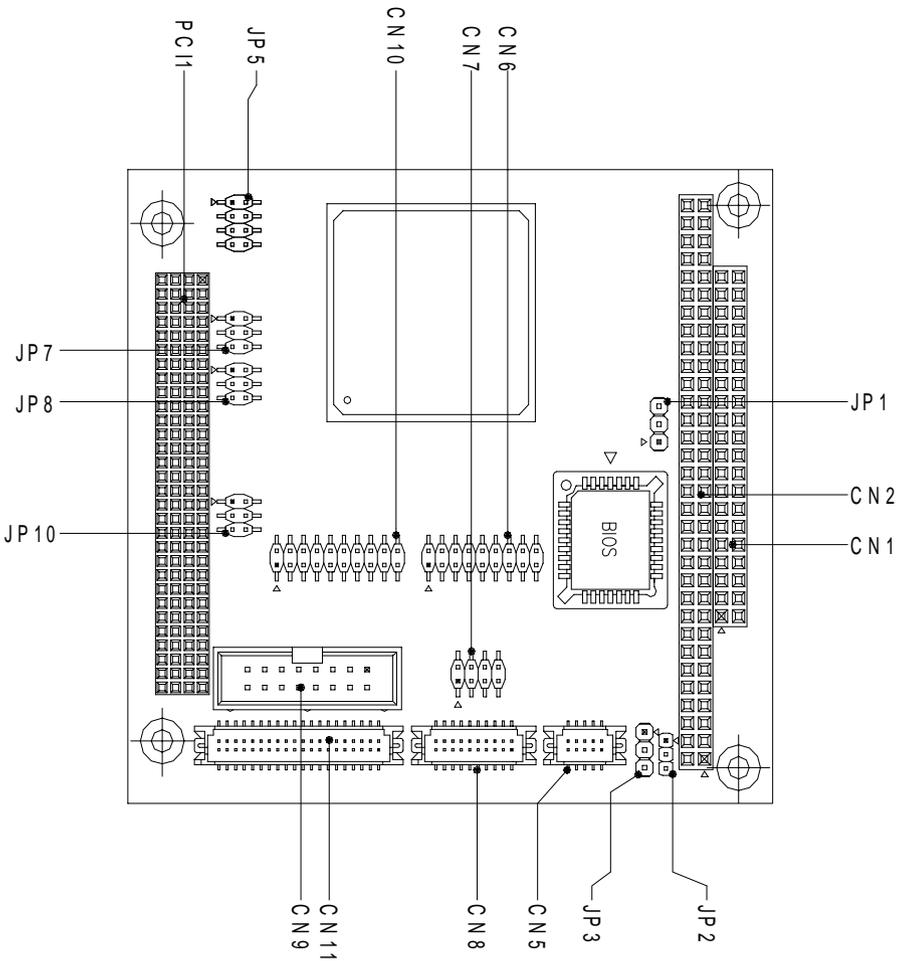
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Jumpers & Connectors for PCM-3708

Name	Function
JP1	Voltage Setting
JP2	Shift Clock Setting
JP3	Panel Voltage Setting
JP5	Interrupt Setting
JP7	PCI Request Setting
JP8	PCI Grant Setting
JP10	LCD Panel Type Setting
CN5	TTL LCD Connector
CN6	Channel 2 LVDS
CN7	TV Out
CN8	TTL LCD Connector
CN9	CRT Connector
CN10	Channel 1 LVDS
CN11	TTL LCD Connector

JP1   Voltage Setting

(JP1)

CPU Board 3.3V	Regulator 3.3V
JP1 •—• ○ 1 2 3	○ •—• 1 2 3

JP2   Shift Clock Setting

(JP2)

+Shift Clock	-Shift Clock
JP2 •—• ○ 1 2 3	○ •—• 1 2 3

JP3   Panel Voltage Setting

(JP3)

5V	3.3V
JP3 •—• ○ 1 2 3	○ •—• 1 2 3

JP5 INT Setting

INT # A
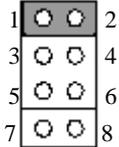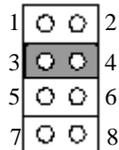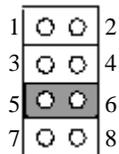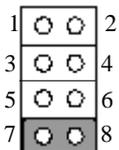
1	○ ○	2
3	○ ○	4
5	○ ○	6
7	○ ○	8

INT # B

1	○ ○	2
3	○ ○	4
5	○ ○	6
7	○ ○	8

INT # C

1	○ ○	2
3	○ ○	4
5	○ ○	6
7	○ ○	8

INT # D

1	○ ○	2
3	○ ○	4
5	○ ○	6
7	○ ○	8

JP7 PCI Request Setting

PREQ # 0

```
1 | O  O | 2
3 | O  O | 4
5 | O  O | 6
```

PREQ # 1

```
1 | O  O | 2
3 | O  O | 4
5 | O  O | 6
```

PREQ # 2

```
1 | O  O | 2
3 | O  O | 4
5 | O  O | 6
```

JP8 PCI Grant Setting

PGNT # 0

```
1 [ O   O ] 2
3 [ ♡   ♡ ] 4
5 [ O   O ] 6
```

PGNT # 1

```
1 [ O   O ] 2
3 [ ♡   ♡ ] 4
5 [ O   O ] 6
```

PGNT # 2

```
1 [ O   O ] 2
3 [ ♡   ♡ ] 4
5 [ O   O ] 6
```
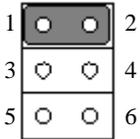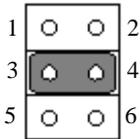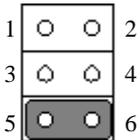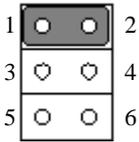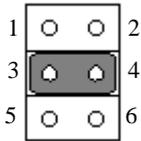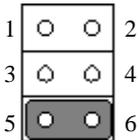
JP10 LCD Panel Type Setting

By placing jumper caps on JP10 you may incorporate the LCD
panel of your choice.

(800 x 600) One Channel LVDS 6-6-6

```
1 [ O   O ] 2
3 | ○   ○ | 4
5 | O   O | 6
```
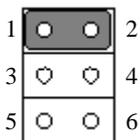
(800 x 600) One Channel LVDS 8-8-8 & 18/24 -Bit TTL LCD

```
1 | O   O | 2
3 [ ◊   ◊ ] 4
5 | O   O | 6
```
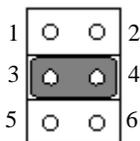
(1024 x 768) One Channel LVDS 8-8-8 & 18/24 -Bit TTL LCD

```
1 | O   O | 2
3 | ○   ○ | 4
5 [ ●   ● ] 6
```
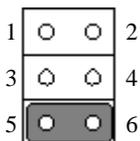
JP10 LCD Panel Type Setting

Panel Disabled

```
1 | O   O | 2
3 | O   O | 4
5 | O   O | 6
```
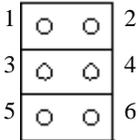
(1024 x 768) Two Channel LVDS 6-6-6

```
1 | ■   ■ | 2
3 | O   O | 4
5 | ■   ■ | 6
```
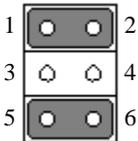
(1024 x 768) One Channel LVDS 6-6-6

```
1 | ■   ■ | 2
3 | ■   ■ | 4
5 | O   O | 6
```
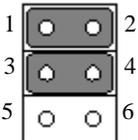
(1024 x 768) Two Channel LVDS 8-8-8 & 36/48 -Bit TTL LCD

```
1 | O   O | 2
3 | ■   ■ | 4
5 | ■   ■ | 6
```
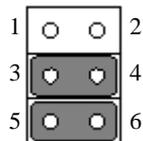
(1280 x 1024) Two Channel LVDS 8-8-8 & 48-Bit TTL LCD

```
1  [ o   o ]  2
3  [ o   o ]  4
5  [ o   o ]  6
```
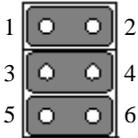
CN10   Channel 1 LVDS

PIN	SIGNAL	PIN	SIGNAL
1	TXOUT1+	2	TXOUT1-
3	GND	4	GND
5	TXCLK+	6	TXCLK-
7	GND	8	VCC
9	VCC	10	VCC
11	TXOUT2+	12	TXOUT2-
13	GND	14	GND
15	TXOUT0+	16	TXOUT0-
17	TXOUT3+	18	TXOUT3-
19	ENABKL	20	NC

CN6 Channel 2 LVDS

PIN	SIGNAL	PIN	SIGNAL
1	TXOUT1+	2	TXOUT1-
3	GND	4	GND
5	TXCLK+	6	TXCLK-
7	GND	8	VCC
9	VCC	10	VCC
11	TXOUT2+	12	TXOUT2-
13	GND	14	GND
15	TXOUT0+	16	TXOUT0-
17	TXOUT3+	18	TXOUT3-

CN7 TV-out

PIN	SIGNAL	PIN	SIGNAL
1	Y/R	2	COMP/B
3	GND	4	GND
5	C/G	6	SYNC
7	GND	8	NC

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CN9 CRT Connector

PIN	SIGNAL	PIN	SIGNAL
1	RED	9	+5V
2	GREEN	10	GND
3	BLUE	11	NC
4	NC	12	SDA
5	GND	13	HSY
6	GND	14	VSY
7	GND	15	SCL
8	GND	16	CHASSIS GND

18 Bit TTL LCD Connector CN11

PIN	SIGNAL	PIN	SIGNAL
1	5V	2	5V
3	GND	4	GND
5	3.3V	6	3.3V
7	ENABKL	8	GND
9	NC	10	NC
11	BLUE0	12	BLUE1
13	BLUE2	14	BLUE3
15	BLUE4	16	BLUE5
17	NC	18	NC
19	GREEN0	20	GREEN1
21	GREEN2	22	GREEN3
23	GREEN4	24	GREEN5
25	NC	26	NC
27	RED0	28	RED1
29	RED2	30	RED3
31	RED4	32	RED5
33	GND	34	GND
35	SHFCLK	36	FLM
37	M	38	LP
39	NC	40	ENAVEE

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24 Bit TTL LCD Connector CN11

PIN	SIGNAL	PIN	SIGNAL
1	+5V	2	+5V
3	GND	4	GND
5	+3.3V	6	+3.3V
7	ENABKL	8	GND
9	BLUE0	10	BLUE1
11	BLUE2	12	BLUE3
13	BLUE4	14	BLUE5
15	BLUE6	16	BLUE7
17	GREEN0	18	GREEN1
19	GREEN2	20	GREEN3
21	GREEN4	22	GREEN5
23	GREEN6	24	GREEN7
25	RED0	26	RED1
27	RED2	28	RED3
29	RED4	30	RED5
31	RED6	32	RED7
33	GND	34	GND
35	SHCLK	36	FLM
37	M	38	LP
39	NC	40	ENAVEE

36Bit TTL LCD Connector CN11

PIN	SIGNAL	PIN	SIGNAL
1	+5V	2	+5V
3	GND	4	GND
5	+3.3V	6	+3.3V
7	ENABKL	8	GND
9	NC	10	NC
11	EVEN BLUE0	12	EVEN BLUE1
13	EVEN BLUE2	14	EVEN BLUE3
15	EVEN BLUE4	16	EVEN BLUE5
17	NC	18	NC
19	EVEN GREEN0	20	EVEN GREEN1
21	EVEN GREEN2	22	EVEN GREEN3
23	EVEN GREEN4	24	EVEN GREEN5
25	NC	26	NC
27	EVEN RED0	28	EVEN RED1
29	EVEN RED2	30	EVEN RED3
31	EVEN RED4	32	EVEN RED5
33	GND	34	GND
35	SHCLK	36	FLM
37	M	38	LP
39	NC	40	ENAVEE

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36Bit TTL LCD Connector CN8

PIN	SIGNAL	PIN	SIGNAL
1	GND	2	GND
3	ODD BLUE0	4	ODD BLUE1
5	ODD BLUE2	6	ODD BLUE3
7	ODD BLUE4	8	ODD BLUE5
9	ODD GREEN0	10	ODD GREEN1
11	ODD GREEN2	12	ODD GREEN3
13	ODD GREEN4	14	ODD GREEN5
15	ODD RED0	16	ODD RED1
17	ODD RED2	18	ODD RED3
19	ODD RED4	20	ODD RED5

48 Bit TTL LCD Connector CN5

PIN	SIGNAL	PIN	SIGNAL
1	GND	2	GND
3	ODD BLUE0	4	ODD BLUE1
5	ODD GREEN0	6	ODD GREEN1
7	ODD RED0	8	ODD RED1
9	GND	10	GND

48 Bit TTL LCD Connector CN8

PIN	SIGNAL	PIN	SIGNAL
1	GND	2	GND
3	ODD BLUE2	4	ODD BLUE3
5	ODD BLUE4	6	ODD BLUE5
7	ODD BLUE6	8	ODD BLUE7
9	ODD GREEN2	10	ODD GREEN3
11	ODD GREEN4	12	ODD GREEN5
13	ODD GREEN6	14	ODD GREEN7
15	ODD RED2	16	ODD RED3
17	ODD RED4	18	ODD RED5
19	ODD RED6	20	ODD RED7

48 Bit TTL LCD Connector CN11

PIN	SIGNAL	PIN	SIGNAL
1	5V	2	5V
3	GND	4	GND
5	3.3V	6	3.3V
7	ENABKL	8	GND
9	EVEN BLUE0	10	EVEN BLUE1
11	EVEN BLUE2	12	EVEN BLUE3
13	EVEN BLUE4	14	EVEN BLUE5
15	EVEN BLUE6	16	EVEN BLUE7
17	EVEN GREEN0	18	EVEN GREEN1
19	EVEN GREEN2	20	EVEN GREEN3
21	EVEN GREEN4	22	EVEN GREEN5
23	EVEN GREEN6	24	EVEN GREEN7
25	EVEN RED0	26	EVEN RED1
27	EVEN RED2	28	EVEN RED3
29	EVEN RED4	30	EVEN RED5
31	EVEN RED6	32	EVEN RED7
33	GND	34	GND
35	SHFCLK	36	FLM
37	M	38	LP
39	NC	40	ENAVEE

Driver Installation For PCM-3708

This section describes the operation and installation of the display drivers supplied on the *Supporting CD-ROM* that was shipped with your product.

The onboard VGA adapter is fully IBM VGA compatible. This controller offers a large set of extended functions and higher resolutions. If you intend to use your VGA adapter in standard VGA modes only, you do not need to install any of these drivers. Since your VGA adapter is fully compatible, it does not require any special drivers to operate in standard modes.

The purpose of the enclosed software drivers is to take advantage of the extended features of the VGA Flat Panel/CRT controller.

Hardware configuration

Some of the high-resolution drivers provided in this package will work only in certain system configurations. If a driver does not display correctly, try the following:

1. Change the display controller to CRT-only mode, rather than flat panel or simultaneous display mode. Some high-resolution drivers will display correctly only in CRT mode.

2. If a high-resolution mode is not supported on your system, try using a lower-resolution mode. For example, 1024 x 768 mode will not work on some systems, but 800 x 600 mode is supported on most.

VGA Driver Installation for Windows OS

=>Insert the **PCM-3708 CD Diskette** into the CD ROM Drive.
=>Select **My Computer** ICON on your desktop
=>Select **CD-ROM** drive
=>Find the **Rage Mobility** or **VGA** file, double click
=>Find the **Setup ICON**, double click
=>Click on **Next**
=>Click on **Yes**
=>Select the **Express** option
=>Shut down your computer and restart the system

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