PC Laptop Guidelines

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Introduction

PLEASE READ THESE GUIDELINES WHEN PURCHASING A NEW LAPTOP COMPUTER OR DETERMINING IF YOUR LAPTOP IS COMPATIBILE WITH MAGMA CARDBUS-TO-PCI EXPANSION SYSTEMS.

This document is intended to assist the portable computer user in <u>selecting</u> and <u>qualifying</u> a PC Laptop for use with MAGMA CardBus-to-PCI Expansion Systems.

Due to the rapidly changing portable computer market, MAGMA is unable to test every laptop that is available from each laptop manufacturer. We will update this guide as frequently as possible, but we cannot purchase every PC Laptop on the market for testing purposes. Our experience up until now has shown that PC Laptop manufacturers are not willing to send test units to us, therefore we depend on feedback from customers to let us know what configurations they have used successfully.

If you would like to try a PC Laptop that is not mentioned in this document, as always, we will do our best to support you and we appreciate any feedback that you have to offer.

Qualified Laptops

PLEASE USE THE FOLLOWING LIST OF LAPTOPS AS A GUIDELINE TO FOLLOW WHEN PURCHASING A LAPTOP COMPUTER FOR USE WITH A MAGMA CARDBUS-TO-PCI EXPANSION SYSTEM.

We realize that many of the laptops listed here are no longer available; however this list can offer you an idea of the types of computers that have traditionally worked with our expansion chassis.

Compaq:

Armada M700[1] ,Armada E500[1], Armada 7400[2], Evo N160[2], Evo N410c[2], Presario 1200[2], Presario 1210[2], Presario 1800[2], Presario 2700[2]

Dell

Latitude LS, Latitude Cpi A[2], Latitude Cpi R[2], Latitude Cpt[2], Latitude C400[2], Latitude C500[2], Latitude C600[2], Latitude C800[1], Latitude C810[2], Latitude C840[2], Latitude L400[2], Inspiron 2100[1], Inspiron 3800[2], Inspiron 4000[1], Inspiron 4100[2], Inspiron 5000[2], Inspiron 7000[2], Inspiron 7500[1], Inspiron 8000[2], Inspiron 8100[2], Inspiron 8200[2]

Fujitsu

Lifebook C340[2]

Gateway

Solo 2550[2], Solo 5100[2], Solo Pro 9300[1]

Hewlett Packard

OmniBook 6000[1], OmniBook XE4500[2], Pavilion n517[1], Pavilion m5495[2]

IBM

ThinkPad 240[2], ThinkPad 770[2], ThinkPad 600e[1], ThinkPad A21P[2], ThinkPad A22P[2], ThinkPad A22M[2], ThinkPad T20[2], ThinkPad T21[1], ThinkPad T22[1]

Mitac

M722

Panasonic

CF47

Toshiba

Satellite Pro 2100[2], Satellite 2435[2], Satellite 2805[1], Satellite 3000[1], Satellite 4600[1]Tecra 8100[1]

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[1]Qualified by MAGMA
[2]Qualified by MAGMA users

NOTE
Depending on your hardware and software configuration, some laptops may handle high-performance applications (like audio and video) better than other laptops. All of the above laptops have been confirmed to work with MAGMA expansion systems, but please be aware that some laptops will performance better than other laptops.

Known Incompatibilities

Ricoh CardBus Controllers

MAGMA does not recommend using laptops that use a **Ricoh** CardBus controller.
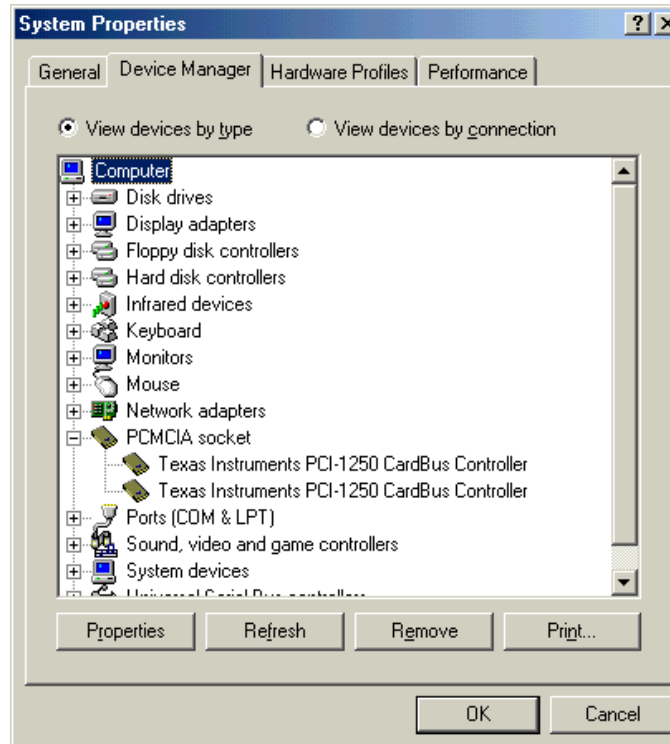
Unfortunately, the Sony Vaio and a few other computer manufacturers use a **Ricoh** CardBus controller. We have found that some low-bandwidth applications will work, but some applications will not work at all. If a certain application does work, we expect performance problems.

How to Verify if Your CardBus Controller is Compatible

Windows 98SE or Windows ME (Millennium)

Verify your CardBus Controller under Windows 98SE or Windows ME by following these instructions:

Go to ⊞Start → Settings → Control Panel → System → Device Manager (make sure 'View devices by type' is chosen) → PCMCIA socket → Your CardBus Controller is now displayed. See **FIGURE 1** below.
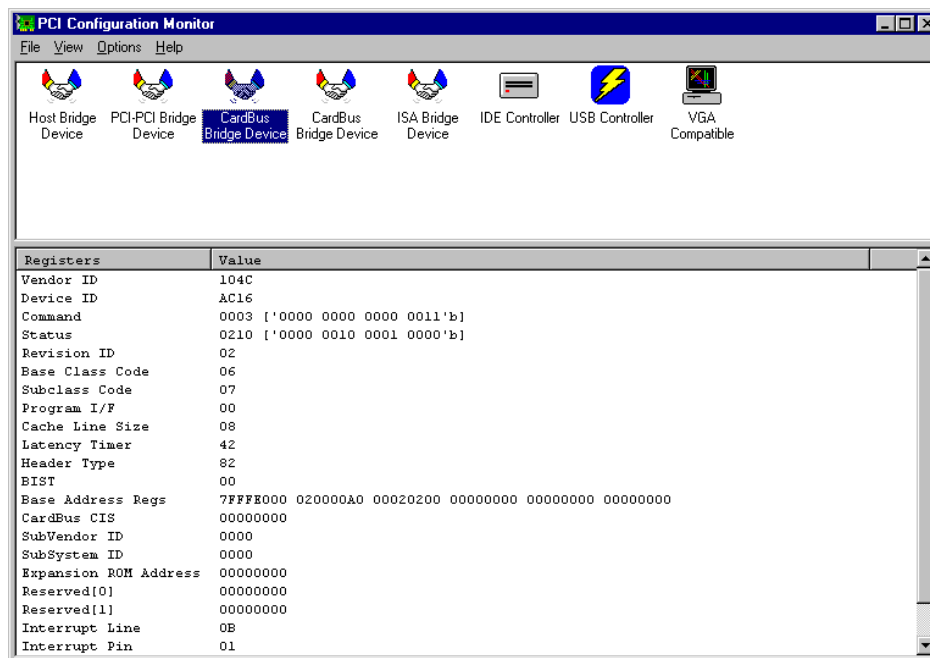

FIGURE 1

> **NOTE**
>
> If your PC Laptop uses a Ricoh CardBus Controller, you may experience performance problems. See "Known Incompatibilities" for more information.

Windows NT 4.0

Verify your CardBus Controller under Windows NT by following these instructions:

1. Download the PCI Monitor Program from MAGMA"s web site.
    Go to http://www.magma.com/support/support_utils.htm and click on the file labeled **PCIMON.ZIP**

2. Unzip the program to a folder on your computer's hard drive

3. Using **Windows Explorer**, browse to the location that you unzipped *PCIMON.ZIP*. Double-click on the file called **PCIMON.EXE**. .

4. A window similar to **FIGURE 2** below should appear.

FIGURE 2

5. Click once on one of the Icons labeled 'CardBus Bridge Device"

6. Read what the Vendor ID value is and use the **TABLE 1** below to determine who is the manufacturer of the CardBus Controller used in your PC Laptop.

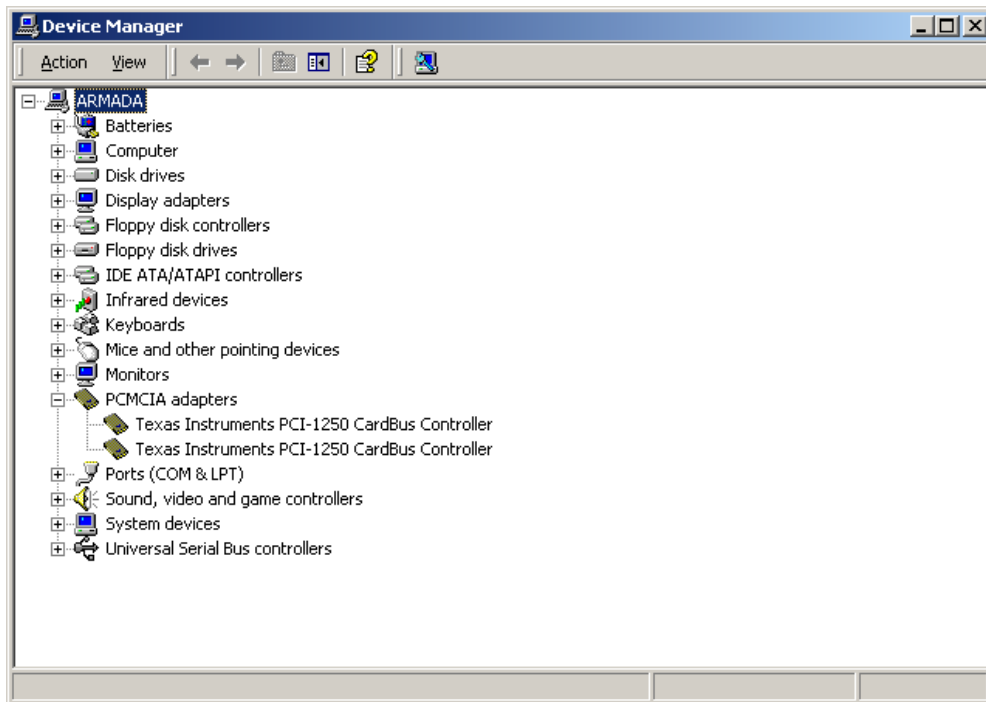| Vendor ID	Manufacturer
104C	Texas Instruments
1180	Ricoh Co Ltd
1217	O2 Micro Inc
1179	Toshiba – Topic 100
1033	NEX Electronics Hong Kong
11C3	NEC Corp
A200	NEC Corp
1023	Trident Microsystems
1013	Cirrus Logic

TABLE 1

NOTE

If your PC Laptop uses a CardBus Controller manufactured by Ricoh, you may experience performance problems. See "Known Incompatibilities" for more information.

Windows 2000 and Windows XP

Verify your CardBus Controller under Windows 2000 by following these instructions:

Go to ⊞Start → Settings → Control Panel → System → Device Manager (make sure 'View devices by type' is chosen) → PCMCIA socket → Your CardBus Controller is now displayed. See **FIGURE 3** below.

FIGURE 3

> **NOTE**
> If your PCI Laptop uses a Ricoh CardBus Controller, you may experience performance problems. See "Known Incompatibilities" for more information.

> **WARNING**
> Under Windows 2000, MAGMA CardBus-to-PCI Expansion Systems are not compatible with PCI Cards that use Windows Legacy Drivers.

Attention Windows 2000 and Windows XP Driver Writers

All drivers to be used with MAGMA CardBus-to-PCI Expansion Systems must be Plug-n-Play Windows 2000 drivers and NOT Legacy drivers.

In general terms, this means that the Windows 2000 driver for your PCI card must be a **WDM** (Windows Driver Model) driver written for Windows 2000 or Windows XP, and not just a Windows NT driver that has been tested to run with Windows 2000 or XP. The driver must have the new initial function entry point `AddDevice()`, it must handle Power Management IRP's as well as Plug-N-Play IRP's.

> **WARNING**
> If the same `driver.sys` file works with Windows NT 4.0 as well as Windows 2000, then the driver absolutely will not work with MAGMAs current CardBus-to-PCI Expansion product line.

Antoher way to determine whether or not a Windows 2000 driver will work: If it calls `HalGetBusData()` or `HalGetInterruptVector()` to determine it's resources, then the driver will NOT work with Windows 2000 and MAGMA CardBus-to-PCI Expansion Products.

General Guidelines

If you want to use a PC Laptop that is not mentioned in this document and does not have a Ricoh CardBus Controller, contact the MAGMA Sales Department and ask about our *Trident Rewards Program*.

The sheer number of PCI cards and device drivers available makes it impossible for MAGMA to fully test and certify all available PCI cards for use in the CardBus PCI Expansion System. Our best advice to you in this regard is to insist on full PCI Specification compliance from your card and system vendors. Cards and systems should be at least PCI Specification Revision 2.0 compliant with 2.1 compliance or better recommended. Compliance in your system motherboard, PCI cards and console firmware (or BIOS) is your best assurance that everything will install and operate smoothly. MAGMA will attempt to assist you to the best of our ability.

If you have a question regarding compatibility, please contact the Magma Sales Department.

If you are a PC Laptop manufacturer and would like to test your PC Laptop with a MAGMA CardBus-to-PCI Expansion System, please send an email to sales@magma.com or call (858) 530-2511

How to Contact MAGMA

Address: 9918 Via Pasar, San Diego, CA 92126
Telephone: 800.285.8990 or 858.530.2511
Email: sales@magma.com and support@magma.com
Web: www.magma.com

Hours: Monday through Friday 8:00am to 5:00pm Pacific Time