Asus 3DP-V500TX User Manual

1
2
3
Table Of Contents
4
5
6
7
8
9
10
11
12
13
14
15
16
17

18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

-

-

-

Quick Links

3DP-V500TX

R

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/ISUS

Table of Contents

Next Page

1
2
3
4
5

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Summary of Contents for Asus 3DP-V500TX

info@asus.com.tw Technical Support: Fax: 886-2-895-9254 BBS: 886-2-896-4667 Email: tsd@asus.com.tw WWW: http://www.asus.com.tw/ Gopher: gopher.asus.com.tw FTP: ftp.asus.com.tw/pub/ASUS ASUS COMPUTER INTERNATIONAL Marketing Info:...

Page 4: Table Of Contents

Page 5

Page 6

Canadian Department of Communications Statement This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Cana- dian Department of Communications. ASUS 3DP-V500TX...

Page 7: Introduction

PCI bandwidth requirements. Based on the powerful ASUS 3DP-V500TX plus Delta combination, this boards provides the ultimate 3D system performance for the power user. The ASUS 3DP-V500TX provides greatly enhanced hardware support for texture mapping and sig- nificant performance improvements.

Page 8: Hardware Installation

II. HARDWARE INSTALLATION Parts of the ASUS Card 256x16x16 VRAM (8MB) (Front&Back) IBM Palette DAC Monitor output ALI VGA Chip Glint Delta Chip Glint 500TX Chip 1Mx16x4 DRAM (8MB) (Front&Back) Jumper Settings VGA En/Dis 1 2 3 1 2 3...

Page 9: Introduction

Static Electricity Precautions 1. ASUS 3DP-V500TX boards are supplied with disposable grounding wrist straps. Follow the supplied instructions. 2. Alternatively, before handling any components or touching anything inside the system unit, discharge your body static electric charge by holding onto a grounding surface.

Page 10: Installing The Asus 3Dp-V500Tx Board

II. HARDWARE INSTALLATION Installing the ASUS 3DP-V500TX Board Installing the ASUS 3DP-V500TX board in your system is simple, so please follow the instructions carefully. To install the board: 1. Switch off your system and all peripheral devices. 2. Follow the static precautions described above.

Page 11: Software Installation

• ASUS 3DP-V500TX Board. Before installing the software, power down the machine and install the ASUS 3DP- V500TX as the hardware installation instructions. Boot the machine using the non- VGA boot option (new display drivers cannot be installed when the machine has been booted with the VGA boot option).

Page 12: Nt 4.0 (Intel Based Workstation)

The machine will now shutdown. On restart again choose the non-VGA boot op- tion. It will restart using the ASUS 3DP-V500TX Board as the display device. This can be checked by opening the "Display" applet again and pressing the "Change Display Type..."...

Page 13: Utilities & Drivers

For double buffering to be available, the chosen resolution and pixel depth must fit into 2MB. This restriction applies to ASUS 3DP-V500TX boards. The resolution tables below define which pixel depth and resolution combinations provide a double buffering capability.

Page 14

3D windows must use BitBlt double buffering (assuming there is sufficient VRAM to support another com- plete screen sized buffer). If the first window closes, the next 3D window

created will use color space double buffering. ASUS 3DP-V500TX...

Page 15: Dual-Headed Displays

IV. UTILITIES & DRIVERS Dual-Headed Displays This Release supports dual-headed displays using two ASUS 3DP-V500TX boards. The configurations for each board must be identical. In particular they must have the same amount of VRAM to run dual-headed simply plug in a second board. The driver will automatically detect the presence of the second board and run dual-headed.

Page 16: Registry Variables

DMA buffers allocated at boot time. Ideally, you would like enough DMA buffers to cater for all of the OpenGL contexts, however each of these buffers will use up system memory. For more information, see the notes on the GlintDMA.NumberOfBuffers and GlintDMA.SizeOfBuffer registry variables. ASUS 3DP-V500TX...

Page 17 Disable MipMapping This variable is only relevant to the GLINT ASUS 3DP-V500TX . Checking this tick box will prevent OpenGL from allowing mip-map texture filtering to be enabled. This option will override mip-map filtering settings of an OpenGL application, forc- ing the allowed filtering to be either GL_LINEAR or GL_NEAREST.

Page 18: Opengl Environment Variables

Considerations specific to ASUS 3DP-V500TX Board For the ASUS 3DP-V500TX, texture data is stored in the local buffer memory on the graphics card. The memory available for textures is therefore constrained by the local buffer memory available. It is also constrained by the amount of local buffer memory already consumed for the depth buffer, stencil buffer, etc., which varies...

Page 19: Performance Monitoring

16 entry RGBA (8-bits per component) lookup-table. An OpenGL palette texture extension has been defined by Microsoft which is supported by OpenGL ICD from release 1.0.11. The ASUS 3DP-V500TX supports 1, 2 & 4bit texel depths.

Page 20: Examinable Performance Counters

Type the command: lodctr glntctrs.ini • The performance monitoring is now set for use. If at any time it is necessary to rerun the lodctr utility then the following command should first be run to uninstall GLINT performance monitoring capability: unlodctr glint ASUS 3DP-V500TX...

Page 21: Using Perfmon For Performance Monitoring

If the "…" button is used then a standard network dialog will be displayed. Choose the remote machine in the usual way. • You are now connected to the GLINT machine. Continue in the same way as for the local procedure described above. ASUS 3DP-V500TX...

Page 22: Event Logging

Look for events with the Source type glint. Double click on these events to read the event message. If no glint events are logged then everything is working perfectly. In this case inter- rupts are working, all DMA buffers have been allocated and the PCI bus is cache coherent. ASUS 3DP-V500TX...

Page 23: Restrictions

Continue modifying the address until the black areas of the screen do not appear. Normally, this will work after the first one or two addresses. Note, this procedure is required very rarely. Generally, the user will never be re- quired to perform these steps. ASUS 3DP-V500TX...

Page 24: Display Driver

The problem is with the readback of the Depth Buffer, not its clearing. If this variable is set then this disables the use of ASUS proprietary fast clear mechanism that allows the depth(Z) buffer to be cleared up to 16 times more quickly than normal.

Page 25 GDI are mutually exclusive. This is because GDI does not have the ability to render to the back buffer. ASUS have therefore chosen to set the default for double buffering, so as to

be in line with the Microsoft imple- mentation.

Page 26: Problems And Solutions

Heidi does not handle window expose events, this is not a limitation of our driver but instead the application's. A user can manually force a redraw of all windows by pressing '1' ASUS 3DP-V500TX...

Page 27: Registry & Dma Variables

This provides backward compatibility with driver releases before version 1.6 where the clock timing was forced to 2 clocks for a page access and 5 clocks for a non-page access. You must reboot to change. ASUS 3DP-V500TX...

Page 28: Dma Control Variables

GLINT can load one while the 3D application prepares the other. Setting this variable to zero disables DMA and forces FIFOs to be used. This latter feature is generally used only for comparing performance of DMA and non-DMA operation (without needing a reboot). ASUS 3DP-V500TX...

Page 29: Double Buffering Control

(which affects the whole screen) is executed. This is not created at installation by default which is the same as setting it to 0, meaning that the lock is in force. You must reboot for changes in this variable to take effect. ASUS 3DP-V500TX...

Page 30: Opengl Environment

UseSoftwareCursor: If defined and set to 1 a software cursor is used instead of the normal hardware cursor. This variable is not created by default. A system reboot is necessary for changes in this variable to take effect. ASUS 3DP-V500TX...

Page 31 In particular, this may apply to older 486 machines. If this vari- able is defined and set to 1 then the base addresses assigned by the PCI BIOS to the GLINT chips are used instead of those assigned by the operating system. ASUS 3DP-V500TX...

Page 32 ASUS drivers support OpenGL overlays are provided in 32bpp truecolor display modes. In standard truecolor modes each 32bit pixel is split into 8 bits of red, green, blue and alpha.