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## Appendix E. S3 Trio64V+ Super VGA Driver Installation

Some application programs require custom software, known as device drivers, to take full advantage of the S3 video controller installed in your Industrial Computer. Device drivers are special programs that enable your operating system and application programs to use the advanced capabilities of the video controller. The operating system loads these programs after the hardware is configured. Many applications come with drivers that are compatible with the S3 video controller.

**Note:** Your system unit has an S3 Trio64V+ video controller. Use only the SVGA device drivers supplied with this system unit (or a later version) as earlier versions might not work properly.

Device drivers are supplied on diskettes. You must install the device drivers onto your hard disk. The instructions for installing or copying the device drivers are provided in this appendix. Technical notes and device driver features (if applicable) are included in README files located in the directories containing the drivers.

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### Default Resolutions

If your system unit comes with *preinstalled* software, your S3 Trio64V+ drivers are already installed. Your system unit video resolution has been set to 640 x 480 x 64K colors. You can change the monitor resolution using procedures in this book.

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### Operating Systems

If your system unit does not have preinstalled software, the diskettes that come with the 7587 Industrial Computer contain the following device drivers:

- Operating systems
  - OS/2® and OS/2 Warp
  - Microsoft® Windows® 3.1
  - Microsoft Windows 95
  - Microsoft Windows NT®
- DOS-only applications
  - AutoDesk ADI (protected mode)
  - MicroStation PC (protected mode) Version 4.0
  - MicroStation PC (protected mode) Version 5.0

These drivers provide support for greater speed, higher resolution, and more available colors. The AutoDesk ADI driver also provides additional features when used with the AutoCAD program.

Your DOS, Windows, OS/2, or application software documentation contains explanations of terms and instructions about how to perform common operations. Refer to the documentation, if necessary, as you perform the steps outlined in the remainder of this appendix.

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## Selecting a Monitor Using the Configuration/Setup Utility Program

Selecting the correct monitor in the Configuration/Setup Utility program allows your system unit to set the monitor to its maximum vertical refresh rate, which provides an image with minimum flicker.

Do the following to access the Configuration/Setup Utility program and to select a video monitor type.

1. Turn on your system unit. If your system unit is on when you start this procedure, you must shut down the operating system, and press Ctrl+Alt+Del to restart the system unit.
2. While the POST memory test is counting, the Configuration/Setup Utility program symbol appears in the upper-right corner of the display screen. Press F1 while the memory is still counting to access the Configuration/Setup Utility program main screen.
3. Select **Devices and I/O Ports**.
4. Select **Video Setup**.
5. Select **Video Display Type**.
6. Select your monitor type from this list.

### Notes:

- a. If your monitor is not shown in the list, select the **Custom** option and select the maximum refresh rate the monitor supports for each resolution. Do not select a refresh rate that is too high for your monitor. Doing so produces an unreadable image and could damage the monitor.
  - b. If a display data channel (DDC) monitor is attached to the PC, it will be selected automatically in the Configuration/Setup Utility program.
7. Save the settings and restart your system unit.

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## Installing Windows 3.1 Video Drivers

Use the following for the *initial installation* of Trio64V+ drivers for Windows 3.1. Also, use this procedure to *reinstall* Trio64V+ drivers for Windows 3.1 or to change resolutions for Window 3.1 after the driver has been installed.

To install Windows 3.1 video drivers, do the following.

1. Exit from Windows.
2. Enter **CDIWINDOWS** to change to the WINDOWS directory.
3. Enter **SETUP**.
4. The screen shows the current Windows configuration. Move the highlight bar to the **Display** entry, and press Enter. (*Display* here actually means a monitor mode or video mode provided by a video driver.)
5. You see a list of modes (drivers) from which you can choose. Move the highlight bar to **Other (Requires disk provided by a hardware manufacturer)**, and press Enter.
6. Insert the *S3 Trio64V+ Windows Drivers* diskette in drive A, and press Enter.
7. Select the desired resolution, and press Enter. Refer to the information that comes with your monitor to determine which resolutions your monitor supports.
8. Press Enter to complete the changes.
9. If you get a message that the driver is already installed, press Esc to replace the driver.

10. If you are prompted to insert a diskette, enter **A:\**.
11. When Setup is complete, the DOS prompt appears. Enter **Win** to start Windows. The new video driver is now installed and is controlling your monitor.
12. Repeat this procedure for other resolutions, if desired.

## Alternative Method for Changing Resolutions

You can use the following procedure to change the monitor resolutions.

1. In the Program Manager, select **Main**.
2. In the Main group, select **Windows Setup**.
3. In the Windows Setup window, select **Options**.
4. In the Options menu, select **Change System Settings**.
5. In the Change System Settings window, select **Display**.
6. Select the down arrow at the **Display** field, and select the desired resolution for the S3 Trio64V+ graphics accelerator.

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## Updating the Windows 3.1 Video Driver

Do the following.

1. Select the VGA driver to control your monitor during the update procedure. This ensures the video driver you are updating is not the same one currently controlling your monitor. Do the following.
  - a. In the Program Manager, select **Main**.
  - b. In the Main group, select **Windows Setup**.
  - c. In the Windows Setup window, select **Options**.
  - d. In the Options menu, select **Change System Settings**.
  - e. In the Change System Settings window, select **Display**.
  - f. Select the down arrow at the **Display** field.
  - g. In the pull-down menu, select the VGA driver, and select **OK**.
  - h. Select **Current** to use the currently installed VGA driver.
  - i. Restart Windows.
  - j. The VGA driver is now controlling your monitor.
2. Delete the existing S3 video driver file to prevent the pull-down menu from becoming filled with multiple versions of the same file. Do the following.
  - a. Open a DOS window.
  - b. In the **WINDOWS\SYSTEMS** subdirectory, find a file named **OEMx.INF**, where *x* is a number. If there is more than one of these files, use a text editor to view the files, and verify which one is the S3 video driver file (near the beginning of the file, you will read "S3 Trio64V+ Windows Drivers Disk").
  - c. Delete the S3 video driver file.
3. Proceed with the installation instructions in "Installing Windows 3.1 Video Drivers" on page E-2.

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## Installing Windows 95 Video Drivers

Use this procedure for the *initial installation* of Trio64V+ drivers for Windows 95. Also use this procedure to *reinstall* Trio64V+ drivers for Windows 95 and to change resolutions for Windows 95 after the drivers are installed.

To install the Windows 95 drivers, do the following.

1. Start Windows 95.
2. Select **Settings**.
3. Select **Control Panel**.
4. Double click on the **Display** icon. The Display Properties window appears.  
You also can click the right mouse button anywhere on the desktop, and select the Properties option from the pop-up menu.
5. Click on the **Settings** folder.
6. Click on the **Change Display Type...** button. The Change Display Type... window appears.
7. Under Adapter Type, click on the **Change...** button.
8. Click on the **Have Disk...** button.
9. Change directories to A:\ and click on the **OK** button.
10. Select **S3.INF** and click on the **OK** button.
11. Select **S3 Trio64V+ PCI driver** from the list, and click on the **OK** button. If a message stating that one or more driver files are older than the files on the system unit, click on **no**.
12. Click on the **Close** button.
13. Select the appropriate resolution using the Desktop Area and Color Palette options.
14. Click on the **Apply** button. A Systems Settings Change box appears.
15. Click on **Yes** to restart your system unit.

The Windows 95 Trio64V+ driver installation is now complete.

## Alternative Method for Changing Resolutions

To change the resolution after the drivers are installed, do the following.

1. Start Windows 95.
2. Select **Settings**.
3. Select **Control Panel**.
4. Double click on the **Display** icon. The Display Properties window appears.  
You also can click the right mouse button anywhere on the desktop and select the Properties option from the pop-up menu.
5. Click on the **Settings** folder.
6. Select the appropriate resolution using the Desktop Area and Color Palette options.
7. Click on the **Apply** button. A Systems Settings Change box appears.
8. Click on **Yes** to restart your system unit.

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## Installing Windows NT Video Drivers

Use this procedure for the *initial installation* of Trio64V+ drivers for Windows NT. See step 11 on page E-5 to change resolutions, at a later time, after the drivers have been installed.

1. Start Windows NT.
2. Double-click on the **Control Panel** icon in the Main folder.
3. Double-click on the **Display** icon.
4. Select **Change Display Type...**
5. Select **Change....** on the Display Type screen under the Adapter Type section.
6. Insert the S3 Trio 32/64/64V+ Win NT Display Driver diskette into drive A.
7. Select **S3 Video Driver Update Vx.xx** from the list, and click on **Install**. Click on **Yes** to change the system configuration.
8. If a message appears stating that the driver is already installed, select **New**.
9. Click on **Continue** if prompted for the driver disk a second time.
10. Restart Windows NT when prompted.
11. After Windows NT restarts, select the desired resolution by means of the Display utility program located under the Control Panel in the Main folder. The screen appearance can be changed using the Color Palette, Desktop Area, Refresh Frequency, and Font Size settings.

The Display utility will start automatically the first time the new S3 video driver is loaded.

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## Installing OS/2 and OS/2 Warp Video Drivers

Use this procedure for the *initial installation* of Trio64V+ drivers for OS/2 and OS/2 Warp and to change resolutions after the driver is installed. To change resolutions after the driver has been installed, start at step 16 on page E-6.

1. Start OS/2, if it is not already running.
2. Double-click on the **OS/2 System** icon.
3. Double-click on the **Command Prompts** icon.
4. Double-click on the **OS/2 Window** icon.
5. Insert the S3 Trio 32/64/64V+ OS/2 Display Driver diskette in drive A.
6. At the command prompt in the OS/2 window, enter **A:.**
7. At the command prompt, enter **SETUP A: C:.**

### Notes:

- a. If OS/2 is not installed on drive C, replace the **C** with the drive letter where OS/2 is installed. For example, if OS/2 is installed on drive D, enter **SETUP A: D:.**
  - b. For the CID (Configuration, Installation, and Distribution) method of installation, use the optional CID parameter. For example, enter **SETUP A: C: CID.**
8. Wait until the Setup program is finished installing the drivers. This can take several minutes. When the Display Driver Install Completed screen is displayed, remove the diskette from drive A.
  9. Restart OS/2 by turning the system unit off and then on, or by pressing Ctrl+Alt+Del.
  10. Run the Display Driver Install program by doing the following.

- a. Double-click on the **OS/2 System** icon.
  - b. Double-click on the **System Setup** folder.
  - c. Double-click on the **Display** icon to start the program.
11. Click on the **Primary Display** icon, and click on **OK**.
  12. Select the S3 Trio 32/64/64V+ driver with the version number that corresponds to the number on the diskette, and click on **OK**. For example, if the version number on the diskette is V2.70-02, select **S3 Trio 32/64/64V+ (32 Bit) Version 2.70-02**.  
**Note:** If a message appears that indicates the target file is newer than the source file, select **yes** to overwrite the target file.
  13. On the Monitor Configuration/Setup Utility screen, select **Install Using Default for Monitor Type**, and click on **OK**.
  14. When the Source Directory screen appears, insert the S3 Trio 32/64/64V+ OS/2 Display Driver diskette into drive A, and click on **Install...**
  15. Wait until the installation is complete; then remove the diskette and restart OS/2 by turning the system unit off and then on, or by pressing Ctrl+Alt+Del.
  16. When OS/2 has restarted, to select the type of monitor, do the following.
    - a. Double-click on the **OS/2 System** icon.
    - b. Double-click on the **System Setup** folder.
    - c. Double-click on the **System** icon.
    - d. Go to the second page of the Screen tab.  
**Note:** If you have a DDC monitor installed, the second page will not be visible, because the DDC monitor is selected automatically.
    - e. Select the type of monitor you have from the list in the Display name pull-down menu.
  17. Go to the first page of the Screen tab and select the desired resolution, color depth, and monitor refresh. You should select the highest refresh rate supported by the monitor, to minimize flicker.
  18. When you are finished selecting the resolution, color depth, and refresh rate, double-click on the upper-left corner of the System Settings window to close it.
  19. Select **Yes** if a screen appears indicating that the system needs to run the SVGA utility program.
  20. Restart OS/2 by shutting down the system unit and pressing Ctrl+Alt+Del. The new resolution, color depth, and refresh rate will be active.
  21. To change the resolution again, perform steps 17 through 20. If you are changing monitors and resolutions, perform steps 16 through 20.

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## Installing Video Drivers for CAD Panacea

Refer to the instructions for installing the device drivers for CAD Panacea in the ADI1.TXT file on the CAD Panacea Drivers diskette.

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## Installing Video Drivers for MicroStation PC

Video drivers are provided to support MicroStation PC Version 4.0 and MicroStation PC Version 5.0, both in DOS 386 protected mode. Do the following to install the drivers.

1. Open a DOS window.
2. Insert the DOS Utilities and Microstation Drivers diskette into drive A.
3. Change to drive A by entering **A:**.
4. Enter **CD\MICROSTA** to change to the MicroStation drivers directory.
5. Enter **INSTALL**.
6. Follow the instructions on the screen until the installation is complete.
7. Change to the directory on the hard disk drive where the drivers are installed.
8. Enter **PSCONFIG** to run the PSCONFIG program to select the new device driver.
9. Start MicroStation and do the following to complete the configuration.
  - a. Select **Display Adapters**.
  - b. Select **Vendor Supplied Driver**.
  - c. Select the driver for S3 accelerators.
  - d. Select **No Second Adapter**.
  - e. Select Swap Screen Status **Y** or **N**.
  - f. Select **Exit and Save**.
10. Restart the MicroStation PC program to activate the drivers.

**Note:** The first time you start the MicroStation PC program and activate the drivers, you are asked to select a video resolution. Make sure the resolution you select is supported by your monitor. If you want to use a different resolution at a later time, you must first delete the MGL?S3.CFG file in the USTAT40\DRIVERS directory. The ? in the file name is a version number.

