



## **Diamond Viper Windows 95 Display Drivers**

### **Release Notes:**

This is version 2.24 of the Windows 95 driver for the Viper Series. This is an accelerated driver. This driver currently supports the following Diamond Viper display adapters:

Viper Pro PCI & VLB  
Viper SE PCI & VLB  
Viper PCI & VLB

### ***Driver Installation Procedure***

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#### **If you are Installing Windows 95 for the first time.**

1. If you have a PCI-bus Display Adapter the Plug&Play manager will recognize the Weitek Chipset and during installation you may be asked to select the drivers for your display card (If not asked then choose VGA and refer to the next Procedure). There is usually a list of several driver installation options, including buttons for "**Default**", "**Standard VGA**" etc.
2. Choose the "**Manufacturer Supplied Drivers**" option in the window and then the **Have Disk** button. Insert the diskette containing the **Drivers** (e.g. the diskette in A: drive) and enter the location of the driver diskette e.g. **A:\** (if the diskette is in that drive)
3. Choose the appropriate option that matches the description of the card in your system and click on **OK**.

The drivers will be installed and you will be returned to the main **Settings** window where you can select your preferred resolution and color depth. After you have selected a mode you will be asked if System can be restarted. Restart the system and enjoy !

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#### **If Windows95 is already installed with VGA (or other, or previous version) display drivers**

1. The Help File WTKCPLX.HLP has now been expanded to provide driver information and support in installing the Driver. To run the file open the Folder for the Driver\Directory the file is located in and double-click on the Help File and follow the instructions detailed in "**Driver Installation**".

or,

1. Open the **Control Panel** folder and choose the **Display** Icon **or**, Using the mouse, right-click on an empty space in the main Desktop Window and choose **Properties**.

**N.B.** If, upon entering the Display Setting dialog, a window should appear claiming that the detected Display Adapter configuration is in error, do not click **OK** instead click on **Cancel** and proceed to step 2.

**2. Change Display Type.** Normally Windows will ask that the card be re-detected using the "Add New Hardware" wizard. By selecting Cancel you can avoid this unnecessary and lengthy process.

**3.** Click on the **Settings** tab and then click on the button **Change Display Type**.

**4.** You should first select the **Monitor** Model to match your system if this is already done skip to the next step.

**5.** Click on the **Change** button in the **Adapter Type** window and then the **Have Disk** button.

Insert the diskette containing the **Drivers** (e.g. the diskette in **A:** drive) and enter the location of the driver diskette e.g. **A:\** (if the diskette is in that drive)

**6.** Choose the appropriate option that matches the description of the card in your system and Click on **OK**.

The drivers will be installed and you will be returned to the main **Settings** window where you can select your preferred resolution and color depth. After you have selected a mode you will be asked if System can be restarted. Please answer No if you have a VESA Bus card, and proceed immediately to the Device Manager window to select the resources configuration of the card.

## Card Compatibility

### **Diamond Viper/Pro/SE PCI :**

The latest driver now provides a fix for the long-standing problem of motherboards with PCI Burst-Write mode support. The "**Support Burst PCI**" option in the Control Panel Extension's **Card Options** window allows support for the P9100 on newer PCI motherboards which do not have options for disabling burst write from the BIOS. This feature is enabled by default on installation. This feature is enabled via the **SYSTEM.INI** file entry :

```
[display]
BurstModeFix=1
```

### **Diamond Viper VLB :**

The latest driver now provides Plug&Play support for setting the Base **Memory Address** for the Linear Window. This is now set automatically by during installation, however it may be changed from within the Device Manager (System in Control Panel) window. Select the resources configuration of the card.

### **All Cards :**

During the initial installation process (and before the system has restarted with the new drivers) the amount of memory on the card is unknown and so the range of available modes is deliberately reduced by the driver to avoid mistakes. Not all the resolutions available to your card will be selectable. During first-time installation you must select one of the available modes, and allow the system to restart before your higher resolutions and color depths will become available.

## Driver Usage Notes

### Using the Weitek CPLX utility :

After system restarts with the new drivers, and the next time you open the Display Properties window from Control Panel (or by right-clicking over an empty spot on the Desktop and selecting Properties), you can enter the utility by choosing the window tab titled **WeitekPower**.

This is the Display Properties Control Panel Extension (CPLX) for supporting the Display Drivers. Using this utility you can select a preferred **Refresh Rate**, **Monitor Sync** and adjust **Monitor Alignment**, dynamically changing the Size and/or the Position of the visible screen. Additionally you can change the default settings of your card to improve performance in certain application types, or enable the special features of your card.

Context Sensitive help is supplied through-out this utility. You can get pop-up help on any control, or setting, by right-clicking with the mouse on that item. Additionally Windows95 also provides a Help Tool, the **?** button at the top right of the window. Click this button and then select the control that you wish to learn more about.

If unsure you can use "**Use Adapter Defaults**" which usually selects **60Hz**, the driver default refresh rate.

If you have already installed a Monitor Type in the System Properties then you can choose "**Auto-Detect best match**", which will use the Adapter Capabilities, Monitor Capabilities and possibly DDC (supported cards only) to determine the optimum Refresh Rate setting.

Note, that Auto-Detect will try to use Refresh Rates up to 120Hz if it sees the specification of the Installed Monitor can support that high, at the selected Resolution.

You can use "**Apply To All Modes**" to unilaterally enforce a particular refresh rate however this **is not recommended** and can easily result in choosing a refresh rate that is either too low for the smaller resolutions or too high possibly exceeding the Monitor's max. bandwidth.

Additionally you can associate a particular refresh rate, sync-polarity and monitor alignment with a mode using the option : "**Apply To This Mode**". Every time you return to the resolution/color-depth it will restore the preference you saved.

Note, that the Refresh Rate Preference and Monitor Adjustment is saved separately for each mode (resolution and color-depth) and does not carry over to any other modes since the modes are **all** stored individually by Windows, your preferences are also stored individually together with the mode.

### Enhancements to driver release 2.24 :

An additional control is added to allow options for the **Video Power** including enable/disable and selecting the quality, performance and style of the video playback. Some early versions of the chips require to be run at a slower speed so there is a default Clock Speed with options for higher spec. parts. If artifacts or disturbances to the video playback are discernible try scaling back to a lower clock speed.

**DirectDraw** : The driver now provides Hardware Video Acceleration for P9100 cards with the P9130 chip (**VideoPower**) in 16bpp, 24bpp and 32bpp modes. The driver will accelerate video in any application using DirectDraw e.g. Microsoft DirectVideo, ActiveMovie and XingMPEG Player 3.0.

**Resolutions/Refresh Rates** : Additionally checks are made on the installed Monitor's maximum horizontal scan rate in order to determine acceptable resolutions/refresh-rates. It is important that you select the correct monitor type before using "Auto-Optimal" setting from the Control Panel. Failure to do so may result in defaulting to 60Hz. Numerous new modes are included for cards/monitors that can support them, Refresh Rates of 60, 66, 70, 72, 74, 75, 80, 90, 100, 120 Hz are available in many resolutions.

## **Known Issues :**

**Windows95 VDD-bug** : On VLB and some early PCI systems the BIOS setup needs to have Shadow BIOS for the VGA Adapter region (**C0000~C7FFF**) set to **Write Protect**, if available. This problem is noticeable if you open a DOS session Full-Screen then press <ALT><ENTER> to return to Windows and again <ALT><ENTER> to return to DOS Full-Screen. If the system then locks-up or gives a Blue Screen fatal-error message this means that the Card's VGA BIOS has been overwritten and you must either enable **Shadow Write Protect**, or altogether disable **Video ROM-BIOS Shadowing**. This problem is caused by the Windows95 VDD and cannot be corrected in future drivers.

**Windows95 PnP-bug** : Changing cards or moving the location of a PCI-slot Card can result in a detection error. Windows may report an Adapter Configuration Error and require re-detection using the Hardware Wizard. This is a problem in Windows itself, to avoid wasting time in re-detection we recommend you press **Cancel**, when asked to re-detect, and then manually reselect the Display Card using **Change Display Type**.

**Winstone 96/97**: You may encounter errors running Winstone on some systems.

## **Contacting DIAMOND**

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