Trademark Acknowledgments

3Dlabs is the world wide trading name of 3Dlabs Inc. Ltd.
Glint is a registered trademark of 3Dlabs
Permedia is a registered trademark of 3Dlabs
OpenGL is a trademark of Silicon Graphics Inc.
MultiSync is a trademark of NEC Home Electronics (USA) Inc.
Windows 95, Windows NT are trademarks of Microsoft Corporation
Microsoft is a trademark of Microsoft Corporation.
AutoCAD, Autoshade and ADI are trademarks of Autodesk, Inc.
WordPerfect is a trademark of WordPerfect Corporation.
IBM, IBM PC, PC/AT, PS/2 and OS/2 are trademarks of International
Business Machines Corp.
Lotus 1-2-3 is a trademark of Lotus Development Corporation
All other brand and product names are trademarks or registered trademarks of their respective companies.

FCC Notice:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference.
2. this device must accept any interference received, including interference that may cause undesired operation.

Notice:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Warning:

Shielded interface cables must be used in order to comply with emission limits.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CSA Notice:

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 Canadian Department of Communications.

Contents

INSTALLATION

Hardware Setup

1. Installation should be conducted in a static safe environment.
2. Turn off your computer and unplug the mains power cord.
3. Turn off the power to all peripheral devices, such as your printer and external modems.
4. Disconnect all cables attached to the rear of the computer.
5. Remove the computer cover.
6. Insert the **LEGEND** video accelerator card into any unused PCI bus slot on your system motherboard.
7. Replace the computer cover.
8. Connect the monitor to the **LEGEND** video accelerator card, and set the switch on the back of the monitor to the *ANALOG* position (if applicable).
9. Reconnect all other cables to your computer.

Software Installation

Your **LEGEND** video accelerator card may have extended graphics drivers available for AutoCAD, Microsoft Windows NT, Microsoft Windows 95, Microsoft Windows for Workgroups 3.xx, and IBM OS/2 Warp.

Additional drivers and updates may be downloaded from the Legend BBS or WEB page.

BBS (Australia)	: 08-277 6322
BBS (International)	: 618-277 6322
Internet	: www.legend.com.au
	: www.computercraft.com.au/legend

Microsoft Windows 95 Drivers

Before installing the video driver, make sure your Windows95 operating system is installed in **VGA** mode and is functioning correctly.

Installation procedure

To install display drivers, follow the procedures below:

1. Click on Start
2. Click on Settings
3. Click on Control Panel
4. Double Click on Display
5. Click on Settings
6. Click on Change Display Type
7. Click Change button for the Adaptor Type
8. Click on Have Disk
9. Insert the **LEGEND** disk labelled ***DISK1*** into the A: or B: drive.
10. In the field headed Copy Manufactures Files From, type a:win95 (if you are installing from B: drive type b:win95) and Click OK.
11. The **LEGEND** video driver will then be displayed, click OK.
12. The necessary files will be copied to your systems hard disk, when files have been copied click Close
13. Click Apply to exit the Display Properties Window.
14. Click Yes to restart Windows 95. Windows 95 will then restart to effect the changes made.

Note: Windows 95 configures the display adaptor's refresh rate AUTOMATICALLY according to the capabilities of the monitor that Windows 95 has been set to.

Microsoft Windows NT4 Drivers

Installation procedure

To install display drivers, follow the procedures below:

1. Click on Start
2. Click on Settings
3. Click on Control Panel
4. Double Click on Display
5. Click on Settings
6. Click on Display Type
7. Click Change
8. Insert the LEGEND driver disk 1 into the A: or B: drive
9. Click on Have Disk
10. Type a:\winnt4 (or b:\winnt4 if you are using your B: drive) and click OK.
11. Select the LEGEND display adaptor
12. Close all programs and Restart

XING : MPEG Software

Before installing the Xing MPEG player software ensure your **LEGEND** driver is installed and is functioning correctly.

Installation procedure

To install the Xing MPEG player software, follow the procedures below:

Windows 95

1. Click Start, Settings, and then Control Panel.
2. Start the "Add/Remove Programs" applet program.
3. Click Install button.
4. Insert XING Disk in the appropriate floppy drive.
5. Click Next button to search installation program.
6. The installation program will search and find the setup program located ; A:\SETUP
7. Click Finish button to start setup program.
8. Xing files will now copy to your system.

LEGEND 64MI+

INTRODUCTION

Features

The LEGEND 64Mi+ video accelerator has been designed for users of Windows 95, Windows NT4 and CAD applications. The LEGEND 64MI+ card incorporates hardware features such as bit-block-transfer, hardware cursor and line-draw capabilities that accelerate the performance of Windows and windowing programs by more than 30 times that of standard VGA.

The LEGEND 64MI+ features include:

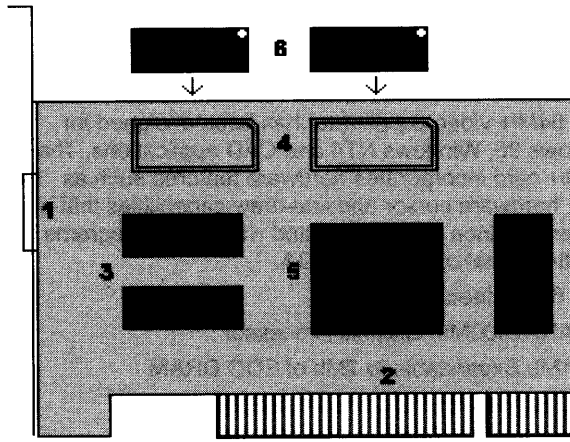
- ARK2000Mi+ Graphic Processor
- 1Mb Expandable to 2Mb of EDO DRAM
- Designed for PCI 2.x compatable systems
- Resolutions up to 1600x1200 256 Colours
- True colour graphics providing up to 1024x768x64K colours and 800x600x16M colours.

Installing Windows 95 LEGEND/ARK Tools

Installing the LEGEND/ARK Tools will enable the manual adjustment of refresh rate and screen position.

1. Insert the LEGEND 64MI+ Disk 1 into the 3.5' floppy drive.
2. Select Run from the Start menu. Type "A:\Win95\SETUP.EXE" in the space provided. (if you are installing from B: drive type B:\Win95\SETUP.EXE)
3. Select "Next" to install the Ark Tools, select "Next" to confirm the destination directory. If you wish to view the Read Me file select "yes" when prompted, otherwise select "No".
4. Once LEGEND/ARK Tools is installed, you will be prompted to install the display drivers using the standard Windows 95 display driver installation procedure. If you have already installed the LEGEND display driver select "No".
5. Click Yes to restart Windows 95. Windows 95 will then restart to effect the changes made.

LEGEND 64Mi+ Layout



1. DB-15 VGA Connector
2. PCI Connector
3. 1 Mb Display RAM
4. Upgrade RAM Sockets
5. ARK2000Mi+ Graphics Accelerator
6. 1Mb Upgrade RAM

Supported Graphics Modes and Maximum Refresh Rates

Resolution	256 Colours	64K Colours	16.7M Colours
640x480	90Hz	90Hz	72Hz*
800x600	90Hz	75Hz	75Hz*
1024x768	75Hz	75Hz*	
1280x1024	75Hz*		
1600x1200	43i*		

*Requires 2Mbytes

LEGEND 64Mi TV Tuner

INTRODUCTION

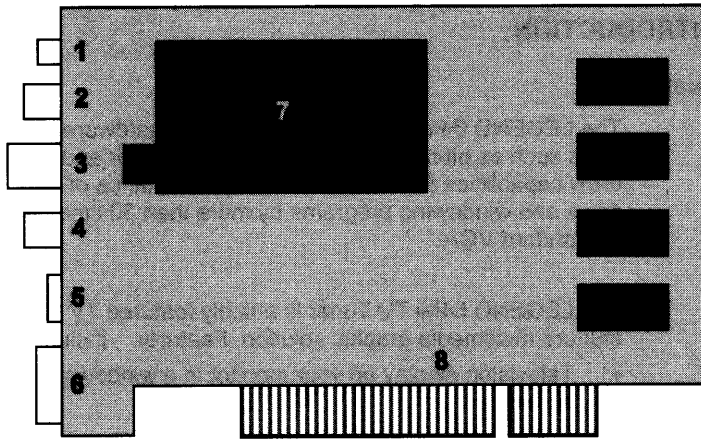
Features

The LEGEND 64Mi TV Tuner incorporates hardware features such as bit-block-transfer hardware cursor and line-draw capabilities that accelerate the performance of Windows and windowing programs by more than 30 times that of standard VGA.

The LEGEND 64Mi TV Tuner is a richly featured TV tuner, capture multimedia graphic solution. Features include

- Television display on your monitor in a windows or full screen
- Still and motion video capture and playback
- Input from TV, VCR or camera
- Output to Composite Video (RCA) and S-Video
- 2Mbytes of EDO DRAM
- 32-Bit PCI Local Bus
- Extended graphics resolutions up to 1280x1024x256 (NI)
- True colour graphics providing up to 1024x768x64K colours and 800x600x16M colours.
- Designed for Windows 95

LEGEND 64Mi TV Tuner Layout



1. Audio Line Output
2. Composite Video Input (RCA)
3. RF TV Antenna Input
4. Composite Video Output (RCA)
5. S-Video Output (Mini Din 4)
6. DB-15 VGA Connector
7. TV Tuner module
8. PCI Slot

Connecting LEGEND 64Mi TV Tuner to your TV Antenna

Connect the supplied Antenna cable to the Antenna Out port on the LEGEND 64Mi TV Tuner to your Antenna (RF) socket.

Connecting LEGEND 64Mi TV Tuner to your sound card

Connect a mini-stereo cable (optional included) to the line output (Audio Out) on the LEGEND 64Mi TV Tuner to the Line Input of your sound card.

Connecting LEGEND 64Mi TV Tuner to your TV

Connect the optional RCA-RCA cable to the Video Out port on the LEGEND 64Mi TV Tuner to your Input RCA TV socket. Connect the optional S-Video cable to the S-Video port on the LEGEND 64Mi TV Tuner to your Input S-Video TV socket.

Connecting LEGEND 64Mi TV Tuner to your VCR, Camera

Connect the optional RCA-RCA cable to the Video In port on the LEGEND 64Mi TV Tuner to your RCA output on the VCR or Video Camera.

Installing Windows 95 LEGEND/ARK Tools

Installing the LEGEND/ARK Tools will enable the TV Output functions of the LEGEND 64MiTV Tuner

1. Insert the LEGEND 64MiTV Tuner Disk 1 into the 3.5' floppy drive.
2. Select Run from the Start menu. Type A:\Win95\SETUP.EXE" in the space provided. (if you are installing from B: drive type "B:\Win95\SETUP.EXE").
3. Select "Next" to install the Ark Tools, select "Next" to confirm the destination directory. If you wish to view the Read Me file select "yes" when prompted, otherwise select "No".
4. Once LEGEND/ARK Tools is installed, you will be prompted to install the display drivers using the standard Windows 95 display driver installation procedure. If you have already installed the LEGEND display driver select "No".
5. Click Yes to restart Windows 95. Windows 95 will then restart to effect the changes made.

Installing Windows 95 TV Remote Control & Drivers

Important:

The LEGEND 64Mi TV Tuner Windows 95 display drivers and the ARK Tools must be installed prior to installing the TV Remote Control & TV drivers. The LEGEND 64Mi TV Tuner requires DirectX support. If you do not have DirectX you can download the DirectX installation program from the Microsoft Web Site.

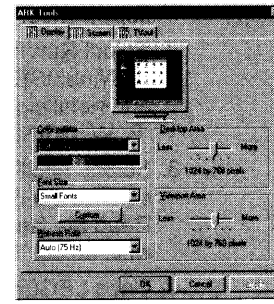
Steps

1. Insert the LEGEND 64Mi TV Tuner Disk 2 into the 3.5' floppy drive.
2. Click the Start button, select "Run".
3. Type in the path to the Legend 64Mi TV Tuner Capture Setup program (e.g. a:\setup) and select "OK".
4. Select "Next" to continue installation.
5. Select "Next" after reading the additional information.
6. The Remote Control Icon will appear on your desktop. You are now ready to enjoy television on your PC.

Using Windows 95 LEGEND/ARK Tools

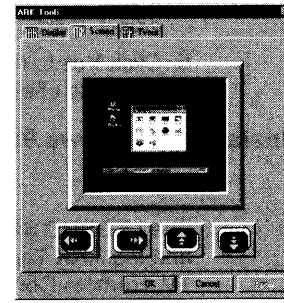
The LEGEND/ARK Tools is a control panel application to set the display properties of your LEGEND 64MI TV Tuner graphics card. It can be found in the Windows Control Panel.

Display Page



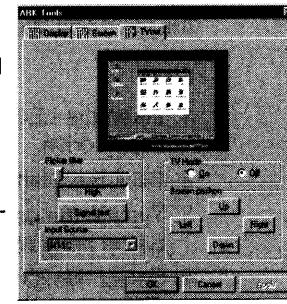
These options changes the resolution, colour depth, and refresh rates in Windows 95. When selecting resolutions and refresh rates be sure you select a setting that your monitor supports. If you are unsure of your monitor's capability, check the monitor's manual. If you set a resolution that is not supported by your monitor, ARK Tools will return your original settings in 15 seconds.

Screen Page



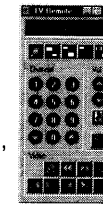
These options changes the position of the display image on the monitor. Use the up, down, left, or right arrow keys to move the image.

TV Out Page



These options are for operation with an external television ie. TV output. Enable TV output by selecting TV Mode ON and then selecting the Source Type PAL or NTSC (ie. PAL/B,G for Australia) To enable the TV Output feature, the graphics card must be set to 640 x 480 or 800 x 600 with a Refresh Rate of 50Hz for PAL type (Europe, Australia, New Zealand, South Africa) TVs. This is due to a limitation of the television, not the LEGEND 64MI TV Tuner. If an external television is not used select TV Mode OFF.

Using Windows 95 TV Remote Control



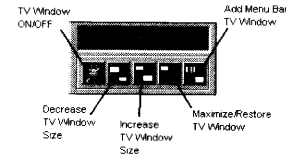
The LEGEND/ARK TV Remote Control is an applet that will allow you to control all aspects of the LEGEND 64MI TV Tuner card. You can select different Video Input Devices, control volume and channel, and even capture video to your hard disk.

Understanding the TV Remote Control

The TV Remote Control is broken down into four main sections: TV Window Control, Channel Selection, Volume Control, and Digital Video Control.

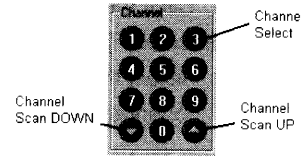
TV Window Control

These buttons allow you to control various aspects of the TV Window. These including ON/OFF, Enlarge/Decrease TV Window Size, Enable/Disable Title bars.



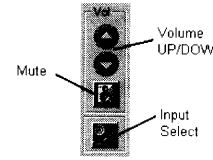
Channel Selection

These buttons allow you to select the channel you are viewing in one of two ways. You can press the number of the channel you want by using the number buttons (i.e. 1 then 2 for channel 12) or you can scan up or down the channels by pressing the up/down arrow buttons.



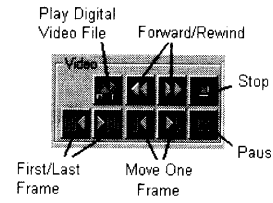
Volume Control

These buttons allow you to control the volume of your LEGEND 64MI TV Tuner. You can also mute the sound coming from the TV. The forth button in this panel allows you to control the input to the LEGEND 64MI TV Tuner.



Digital Video Control

These buttons allow you to control the digital video features of the LEGEND 64MI TV Tuner. You can capture video or single frames from any of the video inputs attached to the LEGEND 64MI TV Tuner. For instructions on capturing video, see the How to Capture Video section.



First Time Operation

1. Open the LEGEND/ARK Tools by selecting Start/Control Panel/ARK Tools
2. Select Display
3. Set the Refresh Rate to 60Hz / 50Hz PAL TV
4. Set the Desktop Area to 640 x 480
5. Set the Colour Palette to High Colour 16bit
6. Select OK
7. Open the TV Remote by double clicking on the TV Remote Icon on you Windows 95 desktop.
8. Click the power button to open the TV window.
9. Move to the new TV Windows and Select TV
10. Select Input Source : Television
11. Select Input Format : PAL BG (Australia)

Watching TV

1. Open the TV Remote by double clicking on the TV Remote Icon on you Windows 95 desktop.
2. Click the power button to open the TV window.
3. Select TV by pressing the input select button.
4. Select the channel you want by using the channel section buttons.

Watching a Video Tape (VCR)

Using the Remote Control

1. Open the TV Remote by double clicking on the TV Remote Icon on you Windows 95 desktop.
2. Click the power button to open the TV window.
3. Select VCR by pressing the input select button.

Note : VCR : It is recommended that your VCR is selected to Channel 1 (refer to your VCR User Manual)

Note : Cable TV : The output RF frequency varies between different Cable TV systems, refer to your supplier for RF frequency/Channel selection.

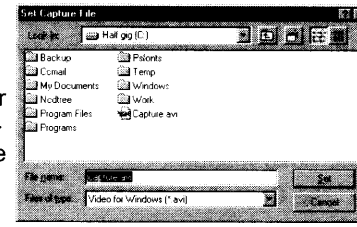
Video Capture Setup

Before you can begin capturing video, you need to setup the video capture section of the Remote Control software.

Specify capture file

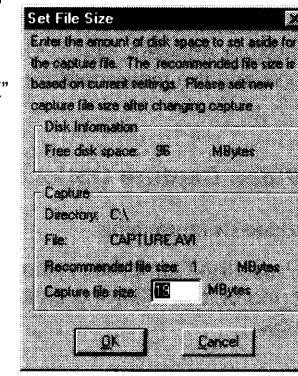
The installation specifies the following capture file and places it in the root directory: capture.avi.

To specify a different file name or file location do the following: Select Specify capture file under the File menu of the TV Window.



Set capture file size

To determine the optimum file size for the capture file, use the following formulas:



Formula for Video Capture Size:

(time)x(frame rate)x(video colour depth)x("X" resolution x "Y" resolution)

eg. 15sec. x 15fps x 1 *(8bit colour)* x 160 x 120 = 4.32 Mbytes

Formula for Audio Capture Size:

(time)x(sample rate)x(# of channels)x(8-bit/ 16-bit)

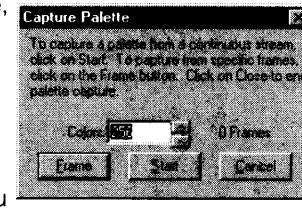
eg. 15sec. x 11000 *(11kHz)* x 2 x 1 *(8bit)* = 0.32 Mbytes

If you are saving both audio and video, add the two values together to determine the correct file size.

Set capture palette

To achieve the highest quality video when capturing in the 256 colour mode, it is necessary to select a capture palette.

This step is not necessary if you are using either 64k colours or 16m colours. To capture a palette, select Capture palette from the Video menu of the TV Window. You can either let the application capture the palette or you can manually capture the palette.



Note:

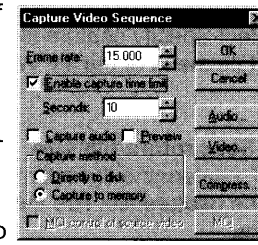
You must capture at least one frame from the current video stream or the Remote Control capture utility will use the system default (grey scale) palette.

Capturing Video

Once the capture setup is complete, follow the steps below to capture the video sequence you want.

Steps

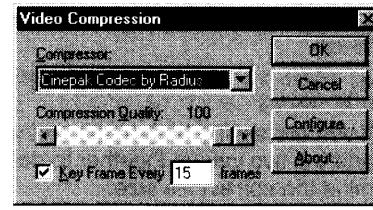
1. Select Video under the Capture menu of the video window.
2. The Capture Video Sequence menu will appear.
3. Set the frame rate, capture time, and select if you want to record audio. Once you have made these choices, select OK.
4. When the sequence of video you want to capture appears, select OK in this dialog box and the video capture will begin.



Video Capture Options

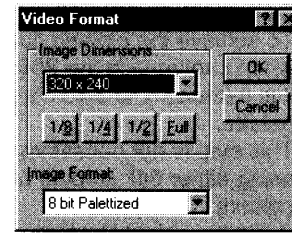
Video Compression

Press the Compress button to bring up the following dialog box.



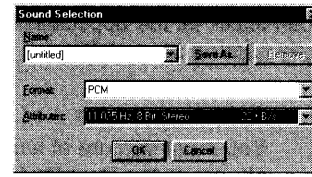
Video Format

Press the Video button to bring up the following dialog box. The Image Dimension needs to be set to the same size as the Viewing Dimension



Audio Compression

Press the Audio button to bring up the following dialog box.



Note:

The video capture window must be the same size as the video window.

Playing Digital Video

The LEGEND 64MI software supports the playing of avi files from your hard disk. If an MPEG-1 decompression utility is installed, the LEGEND 64MI software will play those also.

Steps

1. Open a digital video file by selecting Open from the File pull down menu.

2. Click the play button on the Remote Control. 

3. You can fast forward and rewind using these buttons: 

4. You can jump to the beginning or end of the video clip by pressing these buttons: 

5. You can move one frame at a time by pressing these buttons:

Supported Modes

Graphics Modes

Refresh Rates (Hz)

Resolution	256 Colours	64K Colours	16.7M Colours
640x480	90Hz	90Hz	72Hz
800x600	90Hz	75Hz	75Hz
1024x768	75Hz	75Hz	
1280x1024	75Hz		
1600x1200	43i		

TV Output Modes (All Colour Depths)

Resolution	NTSC (60Hz) (N. America, Asia)	PAL (50Hz) (Europe, Aust., N.Z.)
TV Mode	✓	✓
640x480	✓	✓
800x600		✓

Note: TV Output modes support 60Hz refresh rates for NTSC and 50Hz refresh rates for PAL

LEGEND 64Mi Input Modes

Resolution	256 Colour	64k Colour
TV Mode	NTSC/PAL rate	NTSC/PAL rate
640x480	60Hz/50Hz	60Hz/50Hz
800x600	60Hz/50Hz	60Hz/50Hz

Note: PC/TV modes supported at listed refresh rates and lower

LEGEND 64MI TV Trouble Shooting

TV Output Related Problems

I turn on the TV setting in ARK Tools and no video is displayed on the TV

Make sure your monitor cable has been securely attached to both the LEGEND 64MI TV Tuner and the television.

What I see on the computer monitor is not what I see on the TV.

Computer monitors have the ability to display greater amounts of information than do television sets. For Windows based applications, setting a lower screen resolution in ARK Tools can solve this problem. If you have an NTSC TV, use the TV Mode. For PAL TVs use either the TV Mode or 640x480.

DOS based applications control their resolution, so ARK Tools can not size them to fit the screen. ARK Tools does have the ability to position the screen so you can control which portion of it is not displayed.

The Video is scrambled on the TV

There are two possible causes for this problem. First make sure that the television standard supported by your TV (NTSC - US, PAL - Europe) is the one supported by the LEGEND 64MI TV Tuner. Use ARK Tools' Input Source menu on the TV Out page to verify which standard is supported by your LEGEND 64MI TV Tuner.

The second setting to check is resolution and refresh rate. It is possible, though unlikely, that an improper resolution or refresh rate has been set. NTSC televisions support resolutions up to 640x480 with a refresh rate of 60Hz while PAL televisions support resolutions up to 800x600 with a refresh rate of 50Hz. Use ARK Tools to correct the settings.

My DOS Game doesn't work on the TV

The LEGEND 64MI TV Tuner supports games which support the VESA (Video Electronics Standards Association) 1.2 or higher. Games that don't support the VESA standard can not be played on the TV.

The video on the TV flickers/The text on the TV looks blurry

Adjusting the Flicker filter setting in ARK Tools can change the amount of video flicker on the TV screen. The less flicker there is on the TV the more blurry the text will become.

Video Capture/Playback Problems

I play back a file that I just captured and all I see is a white screen.

The capture file size was too small for the video information you are trying to capture. To correct this problem, increase the size of the video capture file by following the steps outlined in the **Set capture file size** section of this manual.

I open the capture window and receive the message:

ARKTN32.DLL cannot start.

DirectX 2 (or later) must be (re)installed. The latest version of DirectX is available from the Microsoft Web Site.

I open a file that I just captured and I receive the message "Error 296".

Your system has not allocated the required rescources to the LEGEND 64MiTV Tuner .

Ensure that you have no other applications running that could interrupt the capture process.

Refer to your motherboard manual to ensure your system BIOS has allocated IRQ (Interrupt Request) 11 to the LEGEND 64MiTV Tuner and that no other devices (sound cards, network cards, SCSI adaptors) are using that resource.

INTRODUCTION

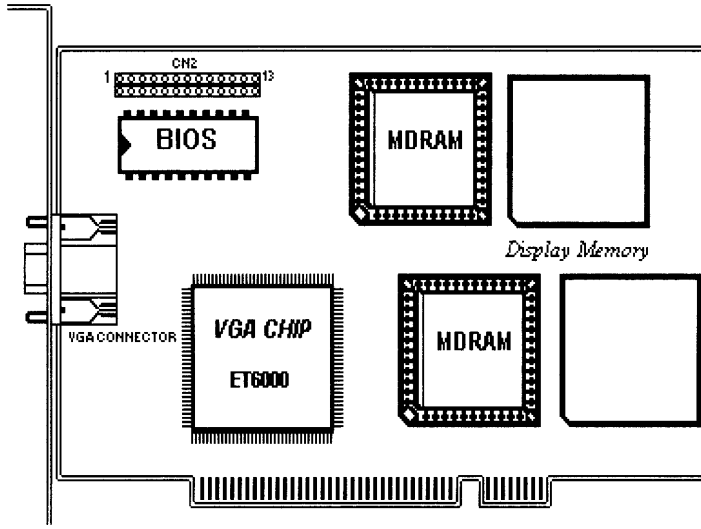
Features

Powered by Tseng Labs ET6000, the MultiMedia **LEGEND 128T6** VGA card is designed for users of Microsoft Windows 95, Windows 3.11 and CAD applications. Combines high-performance Integrated MDRAM-based Graphics and full-motion video playback including MPEG-1. It provides an increase in system performance for Windows and DOS applications,as well as graphics intensive desktop publishing, CAD and digital video software applications.

Features include:

- Tseng Labs ET6000 128bits GUI & Multimedia Accelerator
- Designed for PCI 2.X Compatible Systems
- 1000Mbytes/sec Peak Memory Bandwidth
- S/W MPEG playback support
- Display memory 2.25Mb MDRAM Expandable 4.5Mb
- Provide 1024 x 768 65K colours
- Provide up to 90HZ high refresh rate
- VESA VBE, DPMS, DDC Support
- VESA Standard Feature Connector Support

BOARD LAYOUT



VGA Chip
Tseng Labs ET6000 VGA Chip

VGA Connector
15-pin connector for VGA monitor cable to plug in.

Feature Connector
It is VESA standard Feature Connector

Display Memory
Standard installation 2.25Mb MDRAM

Resolutions, Colours & Refresh Rates

LEGEND 128T6

2.25 Mb MDRAM Installed

Resolution	256 Colours	64K Colours	16.7M Colours
640 x 480	90Hz	90Hz	90Hz
800 x 600	90Hz	90Hz	90Hz
1024 x 768	75Hz	75Hz	
1280 x 1024	75Hz		
1600 x 1200	43Hz		

4.5 Mb MDRAM Installed

Resolution	256 Colours	64K Colours	16.7M Colours
640 x 480	90Hz	90Hz	90Hz
800 x 600	90Hz	90Hz	90Hz
1024 x 768	75Hz	75Hz	70Hz
1280 x 1024	75Hz	60Hz	
1600 x 1200	43Hz		

INTRODUCTION

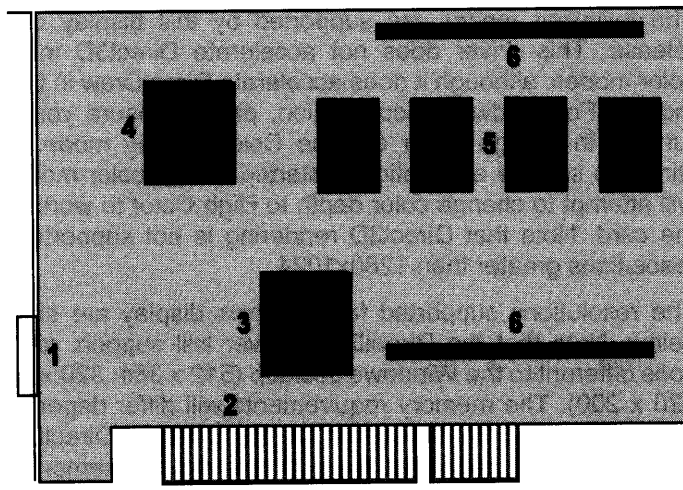
Features

Powered by 3DLabs Permedia and Glint Delta processors, the **LEGEND 3D Delta** VGA card is designed for users of Microsoft Windows NT and Windows 95 operating systems with support for OpenGL, Heidi and Direct3D. The **LEGEND 3D Delta** has been designed to deliver unprecedented levels of affordable 3D and multimedia acceleration to meet the needs of the pervasive market in desktop and home based 3D and multimedia acceleration.

Features include:

- Permedia 2D/3D Graphics and Glint Delta 3D Geometry processors
- Designed for PCI 2.x Interface
- 30M pixels/sec -textured, bilinear filtered with true per pixel perspective
- 600K polygons/sec -textured, bilinear filtered with true per pixel perspective
- 2D Windows acceleration - 400 Mb/sec bandwidth
- Accelerated Video playback -30fps 320-200YUV to 800x600x16bit
- 4Mb SGRAM upgradable to 8Mb SGRAM total
- VESA VBE, DPMS, DDC Support

BOARD LAYOUT



VGA Connector
1. 15-pin connector for VGA monitor cable to plug in.

PCI Connector
2. PCI 2.x compliant connector

Video Processors
3. Permedia 2D/3D Graphic Processor
4. Glint Delta 3D Geometry Pipeline Processor

Memory
5. Standard installation 4Mb SGRAM

Memory Expansion
6. Mezzanine connectors for additional installation of 4Mb SGRAM

Resolutions, Colours & Refresh Rates

The following modes are supported by this display driver release. This driver does not accelerate Direct3D in 256 color modes, although it does accelerate DirectDraw in these modes. For hardware acceleration, please ensure you are running in a High Color or True Color display mode. If a Direct3D sample application is started in 256 color mode, it will attempt to change color depth to High Color to work with the card. Note that Direct3D rendering is not supported at resolutions greater than 1280x1024.

The resolutions supported for Windows display are shown below. Note that the DirectDraw driver will support resolutions different to the Windows desktop (512 x 384, 320 x 240, 320 x 200). The memory requirements will differ depending upon the applications you run. If the Direct3D/DirectDraw applications complain that there is not enough memory, try reducing screen resolution.
For most modes, all refresh rates between 60Hz and 100Hz are supported by the driver, although the actual maximum resolution and refresh rate that you can achieve will depend on your monitor setting.

Refresh Rates and Colours

4Mb SGRAM Installed

Resolution	256	64K	16.7M
640 x 480*	100Hz	100Hz	100Hz
800 x 600*	100Hz	100Hz	100Hz
1024 x 768	100Hz	100Hz	90Hz
1280 x 1024	100Hz	100Hz	
1600 x 1200	100Hz		

8Mb SGRAM Installed

Resolution	256	64K	16.7M
640 x 480*	100Hz	100Hz	100Hz
800 x 600*	100Hz	100Hz	100Hz
1024 x 768*	100Hz	100Hz	90Hz
1280 x 1024	100Hz	100Hz	60Hz
1600 x 1200	100Hz		

*Available as a 3D Mode (with Z-buffer).

Switch Settings

Memory Configuration

The LEGEND 3D Delta video accelerator is configured with 4Mb of SGRAM. The following changes in settings are required for the memory daughter board installation.

Memory	Switch 4	Switch 5	
4Mb Total	ON	OFF	(Default)
6Mb Total	OFF	ON	
8Mb Total	ON	ON	

VGA Legacy Address Enable

Some systems may require a VGA but require it to not use the VGA legacy memory and IO address ranges. This function can be configured by setting dip Switch 1 as follows :

Function	Switch 1	
VGA Legacy Address Enabled	ON	(Default)
VGA Legacy Address Disabled	OFF	

VGA Enable

Some non-Intel platforms or if a secondary VGA is fitted in a system the VGA function may be disabled.

Function	Switch 2	
VGA Enabled	ON	(Default)
VGA Disabled	OFF	

PCI Type

The PCI standard is selectable between PCI 2.0 and PCI 2.1

Function	Switch 3	
PCI 2.0	ON	
PCI 2.1	OFF	(Default)

BIOS Write Enable

To enable update of the BIOS configure Switch Setting 6. The ROM Load utility and detailed instructions will be supplied with the updated BIOS code.

Function	Switch 6	
BIOS Write ENABLED	ON	(Default)
BIOS Write DISABLED	OFF	

Trouble Shooting

There is No Video

- Make sure the card is seated properly in its expansion slot and the monitor cable is securely fastened to the card.
- Make sure your monitor cable has the proper pin-out configuration. It should be able to work with a standard IBM VGA DB-15 analog graphics adaptor. Check to see if your monitor is getting power. You should double-check the electrical cable and the power switch.
- Check if there is another display adaptor in your system or if your system has built-in video on the motherboard. You should remove or disable it. Your dealer or system user guide may be able to assist you.
- Disable any VIDEO ROM BIOS caching in your PC's CMOS setup. You may find the option located in the Advanced CMOS Setup.

The System Hangs

- Try moving the card to a different slot.
- Check if there is another display adaptor in your system or if your system has built-in video on the motherboard. You should remove or disable it. Your dealer or system user guide may be able to assist you.
- Try booting from a standard DOS disk. Sometimes Terminate and Stay Resident (TSR) programs get loaded into memory. Because TSR programs require various interrupts to function, some of them may conflict with our card. To temporarily avoid loading them, boot from a bootable DOS diskette. If the card works after booting from a DOS disk, chances are a TSR caused the problem.

Computer Monitor Related Problems

The screen flickers

In order to alleviate a flicker problem, you must increase the vertical frequency for the resolutions that you are using. Do not use a frequency that exceeds your monitor specification.

The video on the monitor looks scrambled

Most likely your monitor does not support the frequency that you chose. In order to alleviate this problem, you must select an alternate frequency that your monitor supports.

The screen display is small

Use a lower vertical refresh rate. The vertical refresh rate may be set too high for the monitor to support it. The monitor may be compensating for the high frequency rate by reducing the screen size.

Note: If you do not know what vertical frequency your monitor can handle, contact your monitor manufacturer or look up in the monitor's user manual for more detailed information.

ARK Tools will not change refresh rate

If your monitor type is set to a Windows 95 standard monitor type Windows 95 will not allow ARK Tools to change your refresh rate. Change your monitor type listed in the Windows 95 display properties to match your monitor model.

My monitor is not listed in the Windows 95 display properties sheet

In order to set up the video card with your monitor you will need the vertical and horizontal frequencies along with the polarity settings for each resolution. Once you have this information, use ARK Tools and configure your monitor.

Note:If you do not know what vertical frequency that your monitor can handle, contact your monitor manufacturer or refer to the monitor's user manual for more detailed information.

Warranty

TERMS AND CONDITIONS FOR USE OF PRODUCT

The purchase and use of the product is subject to Legend's conditions of sale of which the following is an extract. Read the following terms and conditions prior to using the product. Use of the product indicates your acceptance of these terms and conditions. If you do not agree with them you should immediately return the product to the place of purchase and your money will be refunded.

Legend warrants its products against defects in material and workmanship for a period of 5 years.
During the warranty period Legend will repair or replace (at its option)at no charge any components that prove to be defective, provided the defective component is returned (shipping prepaid and properly packed) to Legend. Proof of purchase date must accompany any request for warranty service.

This warranty does not apply if, in the reasonable opinion of Legend, the Product has been damaged by accident, misuse, neglect or subject to modifications other than those prescribed by Legend.

This warranty is in lieu of all other express or implied warranties, statement or representations, except those warranties implied by statute, the restriction or modification of which would be void pursuant to that statute.

In the event that a Product should prove defective, the users sole remedy shall be the repair or replacement of the defective components as stated above. Legend will not be liable for any direct or indirect damages including but not limited to any lost profits or other incidental or consequential damages arising from use of its Products. Some statutes do not allow the exclusion or limitation of incidental or consequential damages for breach of warranty implied by those statues so the above limitation may not apply.

You acknowledge that you have read these terms and conditions, understand them and agree to be bound by them. You further agree that the terms and conditions represent the complete and exclusive statement of the agreement between Legend and you which supersedes and proposal or prior agreement, oral or written, and any other communications between Legend and you relating to the subject matter of these terms and conditions.