

# Marvel G400-TV

Next generation all-in-one plus hardware video editing

Hardware-MJPEG  
video capture & editing

Extensive TV tuning  
with digital VCR

Versatile, high-quality  
DVD functionality

Innovative DualHead  
Display\* with  
superior TV output

Fast, photo-realistic 3D  
gaming with  
Environment-Mapped  
Bump Mapping

Explosive 2D performance

MJPEG to MPEG2  
conversion

Easy-to-use Avid Cinema  
video editing software



Introducing the **Marvel G400-TV**. The most comprehensive and innovative all-in-one graphics and video editing solution. Capture and create dynamic videos with special effects, titles and soundtracks. Get full resolution, full frame rate capture and playback with hardware MJPEG compression/decompression. The intuitive video editing software and external connector box ensure the easiest and most enjoyable movie making experience. A fully programmable TV tuner with digital VCR brings you to the cutting-edge of PC/TV convergence.

True DirectX Environment-Mapped Bump Mapping delivers the ultimate in explosive photo-realistic gaming action. And the unique DualHead Display feature supports two independent displays\* with one graphics card and offers several different operating modes. So you can do things like instantly preview video editing projects in full-screen on your TV, enjoy high-quality independent full-screen DVD playback and much more.

The **Marvel G400-TV** completely redefines next generation all-in-one graphics and video editing.

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# Next generation all-in-one

## Easy, high-quality hardware video capture & editing

A true video editing solution, the **Marvel G400-TV** creates a synergy of high-quality video, time/space-saving features and ease-of-use. Designed with hardware MJPEG compression/ decompression, video capture and playback are assured the highest quality at full resolution and full frame rate. So maximum image quality is sustained when capturing, playing back or saving video to and from your PC, VCR or TV. The special cutlist feature saves editing time and precious hard disk space while you add special effects, titles and sound to video footage with Avid Cinema's intuitive video editing software. Spend less time setting up and more time on your video masterpieces thanks to the intuitive installation poster and Marvel Connector box for easy audio, video and TV connections. Over and above the Marvel G400-TV's exceptional video editing capabilities is the unique DualHead Display feature, which supports an RGB monitor and a television display with one card. You can now edit video on your primary monitor and then watch full-screen previews of your projects on your TV.



Preview video editing projects instantly with DualHead Display's simultaneous TV output

- Uses hardware-MJPEG compression/decompression for full resolution, full frame rate capture and playback
- Add special effects, titles and sound with easy-to-use Avid Cinema video editing software
- Marvel Connector box allows for easy audio, video and TV connection
- Simultaneous full-screen TV preview with DualHead Display
- Save time and hard disk space with the *cutlist* feature
- Includes Matrox LSX MPEG2 transcoder for converting MJPEG video files to MPEG2 format

## Extensive TV tuning functionality on the PC

The **Marvel G400-TV** brings a new world of digital television to your fingertips. Go far beyond regular television and VCR functionality with Matrox's fully programmable PC-VCR Remote software. With this virtual remote control you can peruse TV program choices with features like multi-channel preview. Record favorite shows on your hard drive and/or capture frames while maintaining the highest-level picture quality. Or allow the word search function to bring you directly to the programs you want to see on that channel. DualHead Display allows you to simultaneously work in applications on your primary monitor while watching programs on your big-screen TV.



Fully programmable PC-VCR Remote

- Watch or monitor TV programs on your PC
- PC-VCR Remote allows for multi-channel preview, keyword search, recording to your hard drive, and a programmable digital VCR for taping shows at a specific time and date
- Support for closed captioning and teletext
- Multi-task with DualHead Display

## Superior TV output

TV output gets an image quality refresh thanks to DualHead Display. Since the refresh on the PC monitor is no longer locked to that of your television, you can now maintain independent refresh rates, resolutions and color depths simultaneously on the primary RGB monitor and the television display. This results in an entirely flicker-free viewing experience. The difference in visual quality will dramatically change your PC-to-TV experience.

- Delivers high quality TV output, 704 x 480 at 30 fps in North America (NTSC)
- DualHead Display supports independent refresh rates, resolutions and color depths simultaneously on your TV and computer monitor
- The only solution to support Windows multi-display with a TV



Optimal refresh rates for flicker-free displays on the primary monitor and TV display

# plus hardware video editing

## Versatile DVD functionality



Multi-task on your primary monitor while watching full-screen DVD movies on your TV

**Marvel G400-TV** presents new ways to view DVD movies while delivering the best DVD image quality on the market. The Matrox Software DVD player interface is easy-to-use and feature-filled. By simply connecting your TV to your system, DualHead Display powers two displays allowing multiple users to use the same computer at once. The DVDMax mode lets you watch content-heavy DVD movies full-screen on your TV while maintaining a fully accessible Windows desktop on the primary monitor. For web sites and interactive CD ROMs that contain MPEG2 or other compatible video files; DVDMax can detect the video and display it automatically full-screen on your TV.

- Includes feature-filled Matrox Software DVD Player
- DualHead DVDMax feature supports full-screen TV output leaving a fully accessible desktop on the primary display

## Fast, photo-realistic 3D gaming



**Environment-Mapped Bump Mapping**  
*Wild Metal Country, Gremlin Interactive*

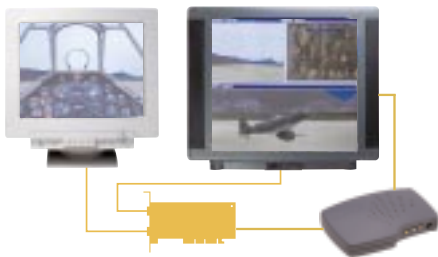
Other games to support Environment-Mapped Bump Mapping

- Carmageddon III from SCI/Torus
- Slave Zero from Accolade
- Messiah from Interplay/Shiny
- Drakan from Psygnosis/Surreal
- And many more!

The **Marvel G400-TV** flexes its 3D muscle to power the fastest and most compelling 3D games. A 256-bit DualBus graphics chip, 3D Rendering Array Processor and fast AGP interface deliver chart-topping frame rates. Visual quality improves dramatically with Vibrant Color Quality<sup>2</sup>, and displays are clear and flicker-free thanks to the 300 MHz UltraSharp DAC. 3D photo-realism takes on new meaning with breathtaking true DirectX Environment-Mapped Bump Mapping.

- Environment-Mapped Bump Mapping for maximum 3D realism
- 32-bit rendering, 32-bit texturing and 32-bit Z-buffering with Vibrant Color Quality<sup>2</sup>
- 300 MHz UltraSharp DAC
- DualHead Display supports flicker-free 3D gaming out-to-TV and multi-display gaming
- Supports fast 3D game play at resolutions up to 2048 x 1536 and 60+ fps
- Other cutting-edge 3D features include stencil buffering, trilinear filtering, alpha blending, anti-aliased vectors, vertex and table fogging, specular highlights, and more

## Revolutionary DualHead Display



**DualHead Multi-Display**  
*Combat Flight Sim, Microsoft*

Other games to support DualHead Multi-Display mode

- War Monkeys from Silicon Dreams
- Star Trek: Armada from Activision
- Flight Sim 2000 from Microsoft
- Wild Metal Country from Gremlin/DMA Design
- And many more!

The **Marvel G400-TV's** DualHead Display brings you miles ahead of traditional graphics solutions. Not only does one AGP card support your choice of either a TV or Flat Panel\* as the second independent display, it introduces revolutionary new display modes and productivity-enhancing software utilities that will change the way you use your computer.

- Unique **DualHead DVDMax** outputs full-screen video on the secondary TV or Flat Panel display while maintaining a fully accessible desktop on the primary RGB display
- Superior **DualHead TV output** supports independent resolutions, refresh rates and color depths, ensuring the highest quality flicker-free output on both the primary and secondary display
- Practical **DualHead Multi-Display** extends the Windows desktop across the two displays for easy viewing of multiple applications
- And more!

\* Requires a separate Flat Panel upgrade





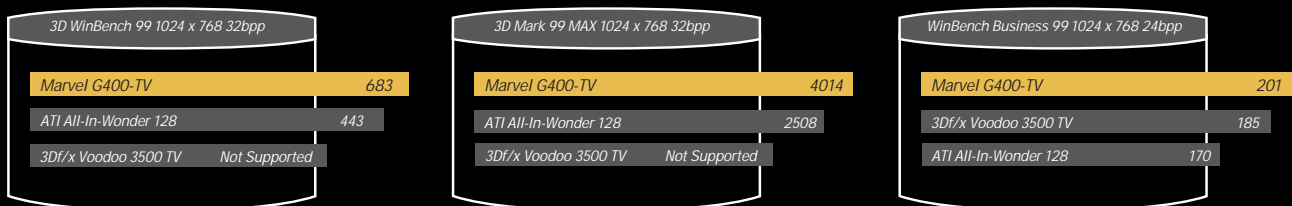
## The most comprehensive all-in-one graphics solution

- Hardware MJPEG video capture & editing
- Explosive 2D, 3D and video performance
- Advanced, photo-realistic image quality
- True Environment-Mapped Bump Mapping
- Fully programmable TV tuner
- Digital VCR functionality
- DualHead Display support for two displays with one card (second display must be a TV or Flat Panel\*)
- Unique DualHead DVDMax support
- Superior DualHead TV output support
- Practical DualHead Multi-Display support
- Unique DualHead Zoom feature
- External audio/video/TV connector box
- Video frame capture
- Support for ultra-high resolutions, refresh rates and color depths
- Avid Cinema video editing software
- PhotoExpress image editing software
- Matrox DVD software player
- PC-VCR Remote software
- LSX MPEG2 transcoder - Matrox Edition
- Tonic Trouble 3D game
- Wild Metal Country 3D game
- And more...

## Technical Specifications

- 16 MB fast SGRAM memory
- Matrox G400 256-bit DualBus graphics chip
- AGP 4X/2X device
- 300 MHz UltraSharp DAC
- Vibrant Color Quality<sup>2</sup> 32-bit color, rendering and Z-buffer
- 3D resolution up to 2048 x 1536 in 32-bit color
- 2D resolution up to 2048 x 1536 in true 24-bit color
- 1600 x 1200 resolution at 100 MHz

## Dramatically faster 3D / 2D acceleration



## System requirements:

	Minimum	Recommended
<i>Windows* 95 or 98 required</i>		
<i>AGP enabled system: 233 MHz and higher</i>		
<i>350 MHz or higher recommended for optimal DVD playback</i>		
System Memory	32 MB	32 MB+
CD-ROM drive	YES	DVD-ROM
Sound Card	YES	YES
Free hard disk space	300 MB	2 GB
Video equipment		VCR & Video camera

## Support for 3D APIs

- Direct3D
- OpenGL (ICD included)

## Software bundle



The tests were performed without independent verification by Ziff-Davis. Ziff-Davis makes no representations or warranties as to the result of the tests. WinBench, 3D WinBench and WinMark are trademarks of Ziff-Davis Inc. in the US and other countries. Tests conducted on a 500MHz Pentium III system with 128MB of 100MHz SDRAM. Performance figures compiled using Ziff Davis 3D WinBench 99 run at 1024 x 768 x 16-bpp triple-buffered with 16-bit Z at 85Hz refresh under DirectX 6.1, Ziff Davis WinBench 99 Business run at 1600 x 1200 x 24-bpp with a 75Hz refresh rate and Futuremark's 3D Mark 99 Max (www.3dmark.com) running at 1024x768 resolution, 32bit color, 16bit z-buffer, triple-buffered at 85Hz. The Matrox Marvel G400-TV was configured with 16MB of SGRAM and used driver revision 5.21.019. The ATI All-in-Wonder 128 was configured with 16MB of SDRAM and used driver revision 4.11.6110. The 3Df/x Voodoo 3500 TV configured with 16MB of SDRAM and used driver revision 4.11.01.0202.

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Matrox reserves the right to change specifications without notice. Features are for retail products unless otherwise noted.  
\* Supports a TV and a Flat Panel monitor as the secondary display. Support for Flat Panel available as a separate upgrade module.

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