XGI Product Brochure Volari™ V5 Series Processors

The Mainstream Graphics Processor for All Multimedia Application

Overview

If you're seeking a smooth, powerful graphics solution for your PC, but don't require bleeding-edge performance, Volari V5 is the perfect partner. The hot new V5 churns out enough juice to deliver a boat load of 3D fun and excitement that will keep your eyes glued to the screen. Fire up the combined power of Volari V5 and DDR2, and launch yourself into the middle of the action.

With true hardware DX9 built into each chip and support for both DDR and DDR2 memory specifications, no other graphics processor for the mainstream desktop PC can match the combined power and flexibility of XGI Volari V5 processors. Volari V5 processors have been designed from the substrate up to provide industry customers with flexible product segmentation.

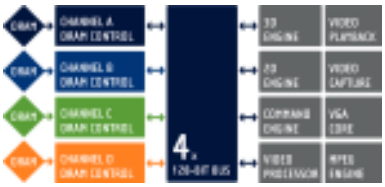
True Hardware DirectX9

TruShader™ 2.1 Engine

TruShader™ Engine takes vertex and pixel shading to a new level of realism.
With Trushader technology, 3D environments come alive with lush renderings that make your 3D game scene with haunting realism. Users can enjoy advantage of programmable DirectX9 effects that will turn your display imagery into a true work of art.

Advanced Performance Features

BroadBahn™ Memory Architecture



BroadBahn™ Memory Architecture

BroadBahn takes the speed limit off the superhighway of data flow. Through the use of sophisticated, lossless compression algorithms, BroadBahn supercharges the amount of data flowing to the DRAM, leaving your bandwidth wide open. Step on the accelerator and find out just how fast you can go, when your CPU hitches a white-knuckle ride on the BroadBahn™ highway.

DDR/DDR2 Compatibility

Each Volari V5 processor supports both DDR and DDR2 memory providing flexible support for a variety of speed and performance application. With Volari V5 processors you can link up to 256MB of DDR or DDR2 memory via a 128-bit memory interface for amazing graphics processing performance via a single chip.

V-Drive™

Not all processing environments are created equal.
The blistering demands imposed by full screen 3D applications will tax your GPU for all it's worth, leaving weaker processors in the dust. When it's time to pour on the muscle, V-Drive is like a short of pure adrenaline in the heat of the battle. V-Drive™ ratchets up processing power in perfectly timed response to computational demands, effortlessly delivering full frame graphics with flawless execution. Shift in to V-Drive™ and experience the ultimate in high speed performance.

Cipherª Powered

Original

On Screen Performance

Cipher™ Video Processor

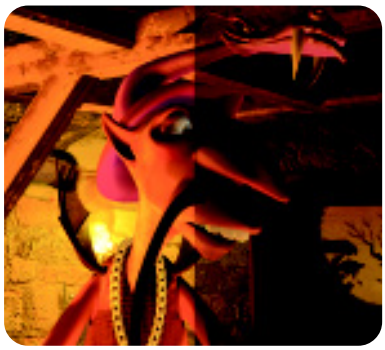
Volari V5 processors feature XGI's legendary Cipherª video processor. Leveraging this advanced de-interlacing technology means video files play with a smooth, flicker-free and fluid motion that amazes even industry professionals. And unlike competing video processors, the Cipher™ video processor converts both incoming and outgoing video feeds, ensuring that all your videos are displayed with the highest possible on-screen quality.

ColorAmp™ Engine

Each Volari V5 processor also feature XGI's cutting-edge ColorAmp™ Engine - driven by a proprietary algorithm that analyzes on-screen environments and automatically optimizes color intensity and gamma levels to provide the most accurate on-screen color and display brightness.

Intelli-Vision™ Engine

The Volari V5 processor's proprietary Intelli-Vision™ Engine makes calculated adjustments to display brightness when entering 3D mode, providing clearer and sharper graphics display performance ideal for today's 3D gaming.



Intelli-Vision™ Powered

Original

Reactor™ Unified Driver

Harness the superior power of the any Volari V5 processor with XGI's Reactor™ unified driver. Packed with useful features and fully compatible with Direct3D and OpenGL APIs, the Reactor™ unified driver allows an advanced level of processor-tuning that easily meets the demands of today's avid gamers. The Reactor™ unified driver works across all graphics boards incorporating Volari V5 processors, making driver management virtually effortless.

Feature Packed Utilities

ControlDeck™

ControlDeck™ software puts you at the dashboard of a comprehensive display control center. All Volari V5 series processors come complete with a host of power-user features that will please even the pickiest of display control-freaks. From a single interface users can manage powerful software programs including DesktopPlus™, PowerManager™, Rotech™, Navigator™ and many others!

Rotech™

For those of you who have a rotating monitor, you'll appreciate the dedicated functionality of Rotech technology. Unlike traditional monitor rotation software applications that hog CPU power, Rotech utilizes dedicated hardware functions to deliver the end result more efficiently, without bleeding your CPU dry, and that's not all. Because Rotech's functionality is integrated directly into the Volari chipset, you'll find that rotated images are crisper than ever before.

DesktopPlus™

Does your computer screen look like a literal minefield of icons and shortcuts? You could be suffering from “icon-overload”. DesktopPlus™ cuts through the clutter by creating custom tailored desktop environments to fit the moment. When it’s time for work, select your “Work-Zone” desktop option and the screen instantly morphs to display only the specific files and shortcuts that are relevant to your work. And when your work day is done, click on “Play Zone” and DesktopPlus™ will put all the work away, bringing your gaming programs right up front where you want them.

With intuitive user menus, you can set up a wide variety of “Zones” to match your own personal tastes. Just point, click and get into the zone!

Navigator™

Set yourself free from the limits of small monitor size, with Navigator from Volari™. Navigator™ boosts precious real estate on your desktop by zooming in on the areas you want to look at, while keeping you clearly oriented with a mini-navigator pop-up window. Just like a GPS map, you can zoom in on the landscape of your desktop giving the look and feel of more working space.

Volari™ V5 Series Processor Specifications

Blazing-fast PCI Bus Interface
- 32-bit PCI local bus standard Revision 2.2 compliant
- True AGP2.0 & AGP3.0 Compliant configuration setting
- Hardware auto detect for AGP1.0, AGP2.0 or AGP3.0 mode support

Octa-pipe 3D Engine
- Extreme High performance 256-bit 3D engine
- High order surface tessellation
- Optimized hardware geometry transform/lighting/setup engine
- 2 units of Vertex Shader with Fully compliant Direct3D 9.0 Vertex Shader ver. 2.0
- 2 sets of Pixel Shader (2.0) with Fully compliant Direct3D 9.0 Pixel Shader ver. 2.0
- 4 sets high performance pixel rendering pipelines
- Supports Bump Mapping, Mipmapped Cubic Mapping and Volume Texture supports flat and Gouraud shading
- High quality anisotropic filtering
- Supports 2-side stencil.
- 2X/4X full scene anti-aliasing(FSAA)

Ultimate Performance 2D Engine
- Hardware command queue
- High-speed Direct Draw Accelerator
- Hardware GDI 2000 Accelerator
- Source read-buffer to minimize engine wait-state
- Built-in destination read-buffer to minimize engine wait-state

High Definition TV-OUT Solution with XV301
- PAL and NTSC Systems.
- Composite, S-Video, and Component RGB Output Signals
- Macrovision Copy Protection Process Rev. 7.1.L1
- HDTV 480i/480p/1080i/720p YPbPr Output Signals.
- A single link TMDS transmitter with excellent scaling capability for TFT LCD panel display

MPEG-2 Video Decoder
- MPEG-2 MP@ML standards compliant
- Supports up to 20 Mbit/sec bit rate decoding
- True hardware VCD, DVD and HDTV decoding

Video Accelerator
- YUV-to-RGB color space conversion
- Bi-linear video interpolation with integer increments of 1/2048
- Complete graphics and video overlay function
- Hardware video decoder interface
- Independent VBI capture
- Supports DVD sub-picture playback overlay
- Built-in independent Gamma correction RAM

Proprietary Cipher Video Processor
- 5 fields per-pixel motion detection de-interlace function, video sources from MPEG decoder, Video capture and AVI interfaces.
- Down scaling function and scaling vector as 1/2, 1/4.
- Next generation de-interlaced and 1/2 down scaling function.

Display Memory Interface
- Supports DDR SDRAM, DDR-II SDRAM type to 256M Bytes memory

BitFluent Architecture (XGI Volari Duo Only)
- Advanced interface for dual GPU solution
- Up to 2.13GB bus bandwidth

High Integration
- Programmable 24-bit true-color RAMDAC up to 400 MHz pixel clock
- Built-in VIP interface
- VESA Plug & Display for PanelLink Interface
- Built-in Thermal Diode for GPU Security-Update

Miscellaneous
- Supports 32K/64K/128K Bytes ROM decoding
- Supports 20MHz SPI ROM interface 1140-balls 37.5mm x 37.5mm FC-BGA package

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