



Bringing a unique way of seeing things.



The Shuttle X100 features ATI's Mobility™ Radeon® X1400 - providing best-in-class graphics performance, delivering enhanced 3D gaming, high quality video playback, and high energy efficiency. Boost graphics performance with the dedicated 90-nanometer process Graphics Processing Unit (GPU) with an ultra-threaded 3D architecture, ring-bus memory controller, and a native 16x PCI Express® bus interface. Render lifelike 3D characters and scenes with any OpenGL® and DirectX® 9 game and enjoy astonishing effects with full DirectX® 9 Shader Model 3.0 support. With ATI's Avivo™ High-Definition video and display enhancements and PowerPlay™ 6.0 advanced power management, Mobility Radeon X1400 creates a new performance threshold for mobile productivity and entertainment.



Mobile on desktop.

The X100 breaks the rules of the computing world, by bring mobile technology in a desktop form-factor. The Intel Core Duo, Core Solo, and Celeron M bring powerful and energy efficient processors to time when environmental consideration is as high as performance.

Best-in-class mobile graphics performance.

Go for the industry's best-in-class graphics performance for your small-form-factor—ATI's Mobility™ Radeon® X1400. A discrete 90-nanometer process GPU with a new ultra-threaded 3D architecture delivers visual power far beyond integrated UMA graphics, performance-enhanced with a new ring-bus memory controller and high-speed 128-bit 4-channel DDR/DDR2/GDDR3 RAM support. Accelerate through tasks and entertainment with a native x16-lane PCI Express® bus interface, pumping data through 4 pixel shader pipelines and 2 vertex processors. Mobility Radeon X1400 packs all the mobile graphics power and visual velocity you need with your X100.

High-definition 3D Gaming

Take your X100 into any unconquered gaming territory with ATI's Mobility™ Radeon® X1400. Enjoy complex, movie-quality effects with OpenGL® and DirectX® 9 games title with adaptive anti-aliasing and high dynamic range (HDR) rendering. Interact with realistic 3D characters and scenes with full DirectX 9 Shader Model 3.0 support. Get enhanced High-Definition visuals with symmetric 10-bit display capabilities and an ultra-threaded performance boost from a new efficient 3D architecture.

Avivo™ video and display perfection

Spark an entertainment revolution on your X100 with ATI's spectacular Avivo™ video and display technology. Integrated with ATI's Mobility™ Radeon® X1400, Avivo delivers crisp images and stunning color fidelity with your LCD display. Connect the X100 with your home entertainment devices and enjoy smooth high-definition (HD) video playback with vector adaptive de-interlacing. Drive the latest external displays at the highest resolutions with full support for High-Definition and standard-definition (SD) modes. Featuring hardware acceleration for advanced H.264 video playback, the X100 and Mobility Radeon X1400 makes your small-form-factor the center for your ultimate entertainment experience.

Power Efficient

The X100's ultra efficient mobile processor and ATI's Mobility™ Radeon® X1400's power management technology combine to monitor user demands and machine capabilities to maximize power efficiency. Mobility™ Radeon® X1400 handles today's graphics-intensive 3D games and HD content with plenty of power for the applications of tomorrow.



Don't get left behind.

The X100 utilizes a new ground breaking generation of technology that allows your system to grow with your graphical needs. Unlike most ultra small-form-factor desktops that limit you to under performing integrated graphics, the X100 implements MXM based graphics modules that allow you to upgrade when necessary.

Mobility™ Radeon® X1400 Product Features

- 105 million transistors using 90nm fabrication process
- Four pixel shader processors
- Two vertex shader processors
- 128-bit 4-channel DDR1/DDR2/GDDR3 memory interface
- Native PCI Express x16 bus interface
- PowerPlay 6.0 power management technology
- Avivo Video and Display architecture

Ring Bus Memory Controller

- 256-bit internal ring bus for memory reads
- Programmable intelligent arbitration logic
- Fully associative texture, color, and Z/stencil cache designs
- Hierarchical Z-buffer with Early Z test
- Lossless Z Compression (up to 48:1)
- Fast Z-Buffer Clear
- Z/stencil cache optimized for real-time shadow rendering

Ultra-Threaded Shader Engine

- Support for Microsoft® DirectX® 9.0 Shader Model 3.0 programmable vertex and pixel shaders in hardware
- Full speed 128-bit floating point processing for all shader operations
- Up to 128 simultaneous pixel threads
- Dedicated branch execution units for high performance dynamic branching and flow control
- Dedicated texture address units for improved efficiency
- 3Dc+ texture compression
- High quality 4:1 compression for normal maps and two-channel data formats
- High quality 2:1 compression for luminance maps and single-channel data formats
- Multiple Render Target (MRT) support
- Render to vertex buffer support
- Complete feature set also supported in OpenGL® 2.0

Advanced Image Quality Features

- 64-bit floating point HDR rendering supported throughout the pipeline
- 32-bit integer HDR (10:10:10:2) format supported throughout the pipeline
- 2x/4x/6x Anti-Aliasing modes
- Multi-sample algorithm with gamma correction, programmable sparse sample patterns, and centroid sampling
- New Adaptive Anti-Aliasing feature with Performance and Quality modes
- Temporal Anti-Aliasing mode
- Lossless Color Compression (up to 6:1) at all resolutions, including widescreen HDTV resolutions
- 2x/4x/8x/16x Anisotropic Filtering modes
- Up to 128-tap texture filtering
- Adaptive algorithm with Performance and Quality options
- High resolution texture support (up to 4k x 4k)

Avivo™ Video and Display Platform

- High performance programmable video processor
- Accelerated MPEG-2, MPEG-4, DivX, WMV9, VC-1, and H.264 decoding and transcoding
- DXVA support
- De-blocking and noise reduction filtering
- Motion compensation, IDCT, DCT and color space conversion
- Vector adaptive per-pixel de-interlacing
- 3:2 pulldown (frame rate conversion)
- Seamless integration of pixel shaders with video in real time
- HDR tone mapping acceleration
- Maps any input format to 10 bit per channel output
- Flexible display support
- Dual integrated dual-link DVI transmitters
- DVI 1.0 compliant / HDMI interoperable and HDCP ready
- Dual integrated 10 bit per channel 400 MHz DACs
- 16 bit per channel floating point HDR and 10 bit per channel DVI output
- Programmable piecewise linear gamma correction, color correction, and color space conversion (10 bits per color)
- Complete, independent color controls and video overlays for each display
- High quality pre- and post-scaling engines, with underscan support for all outputs
- Content-adaptive de-flicker filtering for interlaced displays
- Xilleon™ TV encoder for high quality analog output
- YPrPb component output for direct drive of HDTV displays
- Spatial/temporal dithering enables 10-bit color quality on 8-bit and 6-bit displays
- Fast, glitch-free mode switching
- VGA mode support on all outputs
- Drive two displays simultaneously with independent resolutions and refresh rates
- Compatible with ATI TV/Video encoder products, including Theater 550