

# ATI Radeon™ HD 5870 Graphics

## Specifications

- 2.15 billion 40nm transistors
- TeraScale 2 Unified Processing Architecture
  - 1600 Stream Processing Units
  - 80 Texture Units
  - 128 Z/Stencil ROP Units
  - 32 Color ROP Units
- GDDR5 interface with 153.6 GB/sec of memory bandwidth
- PCI Express 2.1 x16 bus interface
- DirectX® 11 support
  - Shader Model 5.0
  - DirectCompute 11
  - Programmable hardware tessellation unit
  - Accelerated multi-threading
  - HDR texture compression
  - Order-independent transparency
- OpenGL 3.2 support
- Image quality enhancement technology
  - Up to 24x multi-sample and super-sample anti-aliasing modes
  - Adaptive anti-aliasing
  - 16x angle independent anisotropic texture filtering
  - 128-bit floating point HDR rendering
- ATI Eyefinity multi-display technology
  - Three independent display controllers
    - Drive three displays simultaneously with independent resolutions, refresh rates, color controls, and video overlays
  - Display grouping
    - Combine multiple displays to behave like a single large display
- ATI Stream acceleration technology
  - OpenCL support
  - DirectCompute
  - Double precision floating point processing support
  - Accelerated video encoding, transcoding, and upscaling
  - Native support for common video encoding instructions
- ATI CrossFire™ multi-GPU technology
  - Dual, triple, and quad GPU scaling
  - Dual-channel bridge interconnect
- ATI Avivo HD Video & Display technology
  - UVD 2 dedicated video playback accelerator
  - Advanced post-processing and scaling
  - Dynamic contrast enhancement and color correction
  - Brighter whites processing (blue stretch)
  - Independent video gamma control
  - Dynamic video range control

- Support for H.264, VC-1, and MPEG-2
- Dual-stream 1080p playback support
- DXVA 1.0 & 2.0 support
- Integrated dual-link DVI output with HDCP
  - Max resolution: 2560x1600
- Integrated DisplayPort output
  - Max resolution: 2560x1600
- Integrated HDMI 1.3 output with Deep Color, xvYCC wide gamut support, and high bit-rate audio
  - Max resolution: 1920x1200
- Integrated VGA output
  - Max resolution: 2048x1536
- 3D stereoscopic display/glasses support
- Integrated HD audio controller
  - Output protected high bit rate 7.1 channel surround sound over HDMI with no additional cables required
  - Supports AC-3, AAC, Dolby TrueHD and DTS Master Audio formats
- ATI PowerPlay™ power management technology
  - Dynamic power management with low power idle state
  - Ultra-low power state support for multi-GPU configurations
- Certified drivers for Windows 7, Windows Vista, and Windows XP

## **Speeds & Feeds**

- Engine clock speed: 850 MHz
- Processing power (single precision): 2.72 TeraFLOPS
- Processing power (double precision): 544 GigaFLOPS
- Polygon throughput: 850M polygons/sec
- Data fetch rate (32-bit): 272 billion fetches/sec
- Texel fill rate (bilinear filtered): 68 Gigatexels/sec
- Pixel fill rate: 27.2 Gigapixels/sec
- Anti-aliased pixel fill rate: 108.8 Gigasamples/sec
- Memory clock speed: 1.2 GHz
- Memory data rate: 4.8 Gbps
- Memory bandwidth: 153.6 GB/sec
- Maximum board power: 188 Watts