Detailed Features Listing

AMD Radeon™ HD 8870 GPU Feature Summary (OEM)

- 1000MHz Engine Clock
- 2GB GDDR5 Memory
- 1200MHz Memory Clock (4.8 Gbps GDDR5)
- 153.6GB/s memory bandwidth (maximum)
- 2.56 TFLOPS Single Precision compute power
- GCN Architecture[1]
  - 20 Compute Units (1280 Stream Processors)
  - 80 Texture Units
  - 128 Z/Stencil ROP Units
  - 32 Color ROP Units
  - Dual Geometry Engines
  - Dual Asynchronous Compute Engines (ACE)
- 256-bit GDDR5 memory interface
- PCI Express 3.0 x16 bus interface[2]
- DirectX® 11.1-capable graphics
- OpenGL 4.2 support
- Partially Resident Textures (PRT)
  - Ultra-high resolution texture streaming technology
- Image quality enhancement technology
  - Up to 24x multi-sample and super-sample anti-aliasing
  - Adaptive anti-aliasing
  - Morphological Anti-Aliasing (MLAA)
  - Enhanced Quality Anti-Aliasing (EQAA)
  - DirectX® 9/10/11 Supersample Anti-Aliasing (SSAA)
    - Requires AMD Catalyst™ 12.2 or later
  - 16x angle independent anisotropic texture filtering
- AMD Eyefinity multi-display technology[3]
  - Up to 6 displays supported
  - Independent resolutions, refresh rates, color controls, and video overlays
  - Display grouping
    - Combine multiple displays to behave like a single large display
  - Discrete Digital Multi-Point Audio (DDMA)
- AMD App Acceleration[4]
  - Supports OpenCL™ 1.2, DirectCompute 11 & Microsoft C++ AMP
  - Double Precision Floating Point
  - Unified Video Decoder (UVD)
    - H.264
    - VC-1
    - MPEG-2 (SD & HD)
    - MVC (Blu-ray 3D)
    - MPEG-4 Part 2 (DivX/Xvid)
    - Adobe Flash
    - DXVA 1.0 & 2.0 support
    - WMV HD
  - Video Codec Engine (VCE)
    - Multi-stream hardware H.264 encoder
    - Full-fixed mode: 1080p @ 60 FPS encoding
    - Hybrid mode: Stream Processor-assisted encoding
  - Enhanced Video Quality features
    - Advanced post-processing and scaling
      - Deblocking
      - Denoising
      - Automatic deinterlacing
      - Mosquito noise reduction
      - Edge enhancement
      - 3:2 pulldown detection
    - Advanced video color correction
      - Brighter whites processing (Blue Stretch)

        - Independent video gamma control
        - Flesh tone correction
        - Color vibrance control
        - Dynamic contrast
        - Dynamic video range control
- AMD HD3D technology[5]
    - Stereoscopic 3D display/glasses support
    - Blu-ray 3D support
    - Stereoscopic 3D gaming
    - 3rd party Stereoscopic 3D middleware software support
- AMD CrossFire™ multi-GPU technology[6]
    - Supports dual-GPU performance scaling
- Cutting-edge integrated display support
    - DisplayPort 1.2
        - Max resolution: 4096x2160 per display
        - Multi-Stream Transport
        - 21.6 Gbps bandwidth
        - High bit-rate audio
        - Quad HD/4k video support
        - 1080p60 Stereoscopic 3D
    - HDMI® (With 4k, 3D, 3GHz, Deep Color and x.v.Color™)
        - Max resolution: 4096x2160
        - 1600p60 Stereoscopic 3D
        - Quad HD/4k video support
    - Dual-link DVI with HDCP
        - Max resolution: 2560x1600
    - VGA
        - Max resolution: 2048x1536
- 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
- AMD PowerPlay™ power management technology[7]
    - Automatic power management with low power idle states
- AMD PowerTune technology[7]
    - Intelligent TDP management technology
    - Dynamic clockspeed/performance enhancement for games
- AMD ZeroCore Power technology[7]
    - Ultra-low idle power when the connected display is in power saving mode
    - Efficient low power mode for desktop work
    - Secondary GPUs in an AMD CrossFire™ technology configuration power down when unneeded
- AMD Catalyst™ graphics and HD video configuration software
    - Software support for Windows XP, Windows Vista, Windows 7 and Windows 8.
    - AMD Catalyst™ Control Center - AMD Catalyst™ software application and user interface for setup, configuration, and accessing features of AMD Radeon products.
    - Unified Graphics display driver - AMD Catalyst™ software enabling other PC programs and devices to use advanced graphics, video, and features of AMD Radeon™ products.

Additional Information

Additional hardware (e.g. Blu-ray drive, HD or 10-bit monitor, TV tuner) and/or software (e.g. multimedia applications) are required for the full enablement of some features. Not all features may be supported on all components or systems - check with your component or system manufacturer for specific model capabilities and supported technologies.

1 The GCN Architecture and its associated features (PCI Express® 3.0, AMD ZeroCore Power technology, DDM Audio, and 28nm production) are exclusive to the AMD Radeon™ HD 8900, HD 8800, HD 8700, HD 8670, HD 8570, HD 7900, HD 7800 and HD 7700 Series Graphics.

2 Utilization of PCI Express 3.0 bandwidth requires a mainboard equipped with a PCI Express 3.0 PHY. Not all mainboards feature this technology – check with your component or system manufacturer for specific model capabilities.

3 AMD Eyefinity technology supports up to six DisplayPort™ monitors on an enabled graphics card. Supported display quantity, type and resolution vary by model and board design; confirm specifications with manufacturer before purchase. To enable more than two displays, or multiple displays from a single output, additional hardware such as DisplayPort-ready monitors or DisplayPort 1.2 MST-enabled hubs may be required. Maximum two active adapters supported. See www.amd.com/eyefinityfaq for full details.

4 AMD App Acceleration is a set of technologies designed to improve video quality and enhance application performance. Full enablement of some features requires support for OpenCL™, DirectCompute or DirectX® Video Acceleration (DXVA) (including AMD's Universal Video Decoder (UVD)). Not all products have all features and full enablement of some capabilities and may require complementary products.

5 AMD HD3D is a technology designed to enable stereoscopic 3D support in games, movies and/or photos. Requires 3D stereo drivers, glasses, and display. Not all features may be supported on all components or systems – check with your component or system manufacturer for specific model capabilities and supported technologies. A list of supported stereoscopic 3D hardware is available at http://www.amd.com/HD3D.

6 AMD CrossFire™ technology requires an AMD CrossFire Ready motherboard, an AMD CrossFire™ Bridge Interconnect (for each additional graphics card) and may require a specialized power supply.

7 AMD PowerPlay. AMD PowerTune, AMD ZeroCore and other AMD power management technologies are a family of technologies offered with certain AMD Radeon™ graphics products, which are designed to intelligently manage GPU power consumption in response to certain GPU load conditions. Not all products feature all technologies—check with your component or system manufacturer for specific model capabilities.