

# The 2009 AMD Notebook Platform for Mainstream PCs featuring AMD Athlon™ II Processors & ATI Radeon™ HD Graphics

Next-generation performance for an amazing entertainment experience.



## PROCESSORS

- AMD Athlon™ II X2 Dual-Core Mobile Processors
- ATI Radeon HD 4200 Series Integrated Graphics
- ATI Radeon HD 4000 Series Premium Graphics



## PRODUCT FEATURES

- Affordable, mobile, dual-core performance and HD™ playback<sup>3</sup>
- Optimized to deliver the benefits of the Microsoft® Windows® 7 operating system<sup>11</sup>
- True HD entertainment with Blu-ray™ playback capability<sup>1,2</sup>
- Great mainstream gaming with Microsoft® DirectX® 10.1
- Sharper, more life-like 3D images in games, videos, DVDs, and more with AMD Digital Media XPress™ 2.0 technology
- Long battery life and leading-edge wireless technologies for fast downloads and connection anywhere

Feature	Function	Benefit
<b>Low Profile CPU Package Design</b>	New processor package features small footprint (27x27mm) and low profile (2.5mm), reducing platform height up to 50%.	Designed to enable today's latest, ultra-sleek, ultra-thin notebook PC designs for the ultra-mobile lifestyle.
<b>Low CPU Thermal Design Power</b>	Latest generation thermal solutions help to enable low cooling requirements.	Designed to enable today's latest, ultra-sleek, ultra-thin notebook PC designs for the ultra-mobile lifestyle.
<b>AMD PowerNow!™ Technology</b>	Dynamically switches performance states (processor core voltage and operating frequency) based on processor performance requirements.	Get more time to play/more time to work with AMD PowerNow!™ technology, the first dynamic power management technology in the industry, which delivers performance on demand and helps extend system battery life.
<b>AMD Digital Media XPress™ 2.0 Technology</b>	Provides support for SSE, SSE2, SSE3, and MMX™ instructions.	Compatible with a large installed base of multimedia-enhanced software, and designed to provide stellar performance and playback quality on digital entertainment such as games, streaming video and audio, DVDs, and more.
<b>HyperTransport™ Technology</b>	A high-speed, low latency, point-to-point communication link, providing outstanding bandwidth between system components.	Helps provide incredible system agility and graphics performance capability.
<b>Integrated Memory Controller</b>	Directly connects CPUs to memory, optimizing memory performance and bandwidth per CPU.	Helps enhance performance as memory access latency is dramatically reduced.
<b>Direct Connect Architecture</b>	Designed to eliminate the real challenges and bottlenecks of system architectures through the use of separate, dedicated high-speed links <ul style="list-style-type: none"> <li>→ between the processor and main memory</li> <li>→ between the processor and I/O</li> <li>→ between CPU cores within the same processor</li> </ul>	Enables leading-edge performance by helping to reduce delays caused when multiple components compete for access to the same common bus. Competing x86 systems use a common front-side bus (FSB).
<b>DDR2 Memory</b>	Second-generation DDR memory designed to improve overall memory performance through increased data rates and large densities.	Higher memory bandwidth over first-generation DDR for increased performance and productivity.
<b>Enhanced Virus Protection<sup>1</sup></b>	Sets part of system memory aside as 'data only' so resident code cannot be executed, only read from or written to.	Helps safeguard music, pictures, videos, and other important data.

### Operating System Compatibility

Designed to be compatible with Microsoft® Windows Vista®, Microsoft® Windows® XP Professional x64 Edition, Microsoft® Windows® XP Professional, Microsoft® Windows® XP Home Edition, Microsoft® Windows® 98, Microsoft® Windows® ME, Microsoft® Windows® NT, Microsoft® Windows® 2000, Linux®, and other PC operating systems.

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## EXCEPTIONAL PERFORMANCE

Delivering next-generation performance for an amazing entertainment experience — virtually anywhere you want it.

- Do more in less time with true multi-core processing for superior digital media and 3D gaming
- Enjoy affordable dual-core performance on the go
- Optimized to deliver the benefits of the Microsoft® Windows® 7 operating system<sup>11</sup>
- Run multiple applications simultaneously

## ULTIMATE HD EXPERIENCE

The HD your eyes crave with vivid, rich, life-like colors for your favorite Blu-ray™ movies and the latest 3D games.<sup>4,5</sup>

- Enjoy HD entertainment and 1080p playback capabilities and experience the difference in your entertainment<sup>1</sup>
- Get Microsoft® DirectX® 10.1 compatibility — so you can experience today's latest mainstream 3D games

## DESIGNED FOR MOBILITY

Optimized technologies for improved battery life, and the latest wireless solutions for faster downloads of HD content.<sup>4</sup>

- Get long battery life and performance on demand with AMD PowerNow!™ 2.0 technology
- Get up to 62% fast downloads and streaming high-definition content with 802.11n wireless<sup>10</sup>

## Processor Product Specifications/Model Comparison Data

Model	OPN	Clock Speed	TDP	Cache	Cores on Die	FPU	Max CPU BW <sup>11</sup>	I/O Bus Speed <sup>12</sup>	AMD-V™
<b>AMD Athlon™ II Dual-Core Processors for Notebook PCs</b>									
<b>M340</b>	AMM340DBO22GQ	2.2 GHz	35W	1MB total dedicated L2	2 cores	64b	25.6 GB/s	3.2 GT/s	Yes
<b>M320</b>	AMM320DBO22GQ	2.1 GHz	35W	1MB total dedicated L2	2 cores	64b	25.6 GB/s	3.2 GT/s	Yes
<b>M300</b>	AMM300DBO22GQ	2.0 GHz	35W	1MB total dedicated L2	2 cores	64b	25.6 GB/s	3.2 GT/s	Yes

Note: Features are preliminary and subject to change without notice. Customer should always consult technical documentation for design specifications.

<sup>1</sup> 1080p -capable display required.

<sup>2</sup> Blu-ray™ drive required.

<sup>3</sup> HD monitor required.

<sup>4</sup> Additional hardware or software may be required.

<sup>5</sup> Separately purchased TV Tuner may be required.

<sup>6</sup> Recording of content may be subject to digital rights management (DRM) restrictions.

<sup>7</sup> Internet access and additional hardware or software may be required (not included).

<sup>8</sup> Not all features will be supported on all machines. Check with your PC manufacturer for specific model capabilities and supported technologies.

<sup>9</sup> High-speed online access may be required; may not be available in all areas.

<sup>10</sup> In tests conducted by AMD technology partner Atheros, AMD-based notebooks downloaded 5 HD home movies, 200 digital photos and 80 mp3 songs in 62% less time than the competing Intel solution, AMD Turion™ X2 Ultra Dual-Core Mobile Processor-based Platform w/Atheros AR9280 vs. Intel 4965AGN. Source: AMD Integrated Graphics Benchmark Configurations, Wireless. MD Turion™ X2 Ultra Dual-Core Mobile Processor-based Platform w/Atheros AR9280 vs. Intel 4965AGN. Source: AMD Integrated Graphics Benchmark Configurations, Wireless.

<sup>11</sup> MAX CPU BW = Maximum processor-to-system bandwidth.

<sup>12</sup> Updated BIOS and graphics driver is required for processors with faster HyperTransport™ Link frequency not supported with discrete graphics designs.