

AMD Desktop Processor Overview



AMD Sempron™ processor

The AMD Sempron™ processor meets the evolving day-to-day needs of home and business PC users. This full-featured processor delivers best-in-class performance for today's value-conscious buyers of desktop PCs.



AMD Athlon™ 64 processor

The AMD Athlon™ 64 processor with AMD64 technology offers industry-leading performance. With its revolutionary design and 32- and 64-bit simultaneous computing capability, this processor offers confidence that a user's current and future computing needs will be met.



AMD Athlon™ 64 X2 dual-core processor

The AMD Athlon™ 64 X2 dual-core processor delivers exceptional multi-tasking capabilities and increased performance on digital media. Like having two processors working together, each one taking care of different applications, it enables users to do more in less time.



AMD Athlon™ 64 FX processor

The AMD Athlon™ 64 FX processor is in a class by itself. The world's ultimate processor for PC enthusiasts, its full-throttle technology is ideal for those who want to squeeze every last bit of performance out of their 3D gaming and digital media experience.

Features	AMD Sempron™ Processor		AMD Athlon™ 64 Processor		AMD Athlon™ 64 X2 Processor		AMD Athlon™ 64 FX Processor	
Socket	754	AM2	939	AM2	939	AM2	939	AM2
Direct Connect Architecture	X	X	X	X	X	X	X	X
HyperTransport™ Technology	X	X	X	X	X	X	X	X
Cool'n'Quiet Technology	X	X	X	X	X	X	X	X
Enhanced Virus Protection*	X	X	X	X	X	X	X	X
AMD Digital Media Xpress™			X	X	X	X	X	X
True Multi-tasking					X	X	X	X
DDR2 Technology		X		X		X		X
Energy Efficient Models		X		X		X		X
AMD Virtualization				X		X		X

AMD solutions for every desktop customer

The family user

- Product:** A first or second home PC for everyone in the family
- Customer:** Is a moderate user with basic, everyday needs
- Needs:** Email, Web surfing, simple photo editing, basic entertainment, home finances and organization, etc.

The mainstream consumer

- Product:** A powerful PC for today's high-performance digital lifestyle
- Customer:** Wants exceptional performance for entertainment and productivity applications
- Needs:** Home theater, Web surfing, music streaming, downloads, audio/video editing, gaming, etc.

The digital media enthusiast

- Product:** A home system integrating office, living room, and bedroom PCs with centralized media control
- Customer:** Has the computer at the center of their digital lifestyle and wants outstanding multi-tasking performance that won't slow them down
- Needs:** TRUE multi-tasking—simultaneously downloading music, copying video files, updating schedule and contacts, burning CDs, editing photos, instant messaging buddies, all while listening to MP3s

The ultimate PC enthusiast

- Product:** Ideal for intense applications and 3D games
- Customer:** Is looking for the ultimate computing experience and is willing to pay for it
- Needs:** The ultimate performance, expandability, and upgradeability

Direct Connect Architecture

Helps eliminate the challenges and bottlenecks of system architecture by directly connecting processors, the memory controller, and the I/O to the CPU

HyperTransport™ Technology

HyperTransport technology helps provide increased overall system performance with up to a 2000MHz full duplex system bus

Cool'n'Quiet Technology

Cool'n'Quiet technology can minimize heat and noise for a better working environment

Enhanced Virus Protection*

Can significantly reduce the cost associated with certain malicious viruses and help minimize the total cost of ownership of AMD64 processor-based systems

DDR2 Technology

Integrated DDR2 Memory Controller is available on socket AM2 compatible parts

Energy Efficient Models

These processors have earned US EPA ENERGY STAR recognition, a government-backed program helping businesses and individuals protect the environment through superior energy efficiency.

That means reduced electricity bills and environmentally friendly reduction of greenhouse gas emissions for you

AMD Virtualization

Virtualization technology is chip-based virtualization, which allows a single PC to act like multiple virtual machines and is also available on socket AM2 processor parts

AMD Digital Media Xpress™

AMD Digital Media Xpress™ enables stellar performance and playback quality on digital entertainment such as games, streaming video and audio, DVDs, and music

True Multi-tasking

Increases computing capacity without requiring additional power or cooling; enables quick, easy, and inexpensive performance upgrades, while maintaining existing system footprint

*EVP is only enabled by certain operating systems, including the current versions of Microsoft® Windows®, Linux®, Solaris, and BSD Unix. After properly installing the appropriate operating system release, users must enable the protection of their applications and associated files from buffer overrun attacks. Consult your operating system (OS) documentation for information on enabling EVP. Contact your application software vendor for information regarding use of the application in conjunction with EVP. AMD strongly recommends that customers continue to use third-party antivirus software as part of their security strategy.

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