



AMD's History of Innovation

Timeline: 1976-2006

1976

AMD and Intel sign their first comprehensive cross-license agreement, where AMD and Intel both agree to license to each other all patents each company holds.

1982

IBM selects an Intel microprocessor for its PC but only on the condition that there is a reliable second source supplier for its PC processor needs. As a result, AMD renews a comprehensive cross-license agreement with Intel.

1987

Intel notifies AMD it is terminating the second source agreement, an aggressive move to prevent AMD from producing a 486-compatible microprocessor. This begins years of legal disputes between AMD and Intel, and limits customer choice to a single source for PC microprocessors.

1990

AMD releases the Am386 ® microprocessor family, based on Intel's 80386. Sales of the Am386 are strong due to its exceptional performance.

1991

In October, Intel commences a federal court action for copyright infringement. An arbitrator subsequently awards AMD full rights to make and sell the Am386. The Supreme Court of California upholds this decision in 1994.

1993

AMD introduces the Am486 ® microprocessor; it powers Compaq computers and thousands of other manufacturers' PCs.

1994

Intel and HP announce the development of a proprietary 64-bit microprocessor architecture that is incompatible with the millions of existing x86-based PCs and software applications. Intel senior vice president Albert Yu declares, "If I were competitors, I'd be really worried. If you think you have a future, you don't."

1995

AMD introduces the AMD-K5® microprocessor, its first independently designed, socket-compatible x86 microprocessor.

1997

AMD introduces the successful AMD-K6® microprocessor, a pin-compatible alternative to Intel's Pentium™ microprocessor. Its introduction heralds the return of competition and helps drive PC costs below \$1,000 to create PCs that are affordable for the average consumer.

1998

AMD launches the AMD-K6-2 microprocessor, featuring 3DNow!™ technology. Invented by AMD, 3DNow! is the first x86 innovation to significantly enhance 3D graphics, multimedia, and other floating-point-intensive applications for Microsoft® Windows®-compatible PCs.

1999

AMD introduces the world's highest-performing x86 microprocessor, previews the first x86-based, 64-bit architecture, and announces its multi-core strategy.

2000

April: AMD PowerNow™ technology provides PC manufacturers with the first automatic power management technology to deliver cooler, quieter notebook systems with extended battery life.

October: AMD drives Double Data Rate (DDR) technology as the industry standard for high-performance memory requirements.

2001

October: AMD dispels the “megahertz myth,” the long-held industry belief that megahertz was the only indicator of processor performance, and introduces processor model numbers to reflect true performance.

2003

April: AMD introduces Enhanced Virus Protection (EVP)¹ at the x86 platform level. Available on all AMD64 processors, EVP is an important advancement to help users defend against some of the most common and damaging security threats.

AMD's unique Direct Connect Architecture links all components of the chip together using HyperTransport™ technology, allowing users to fully capture the performance advantages of 64-bit computing without encountering the bottlenecks of a front side bus.

AMD launches Opteron™ processor. AMD's approach allows end users to run their existing 32- AND 64-bit applications and operating systems at peak performance while providing a seamless migration to 64-bit computing.

September: AMD launches Athlon™ processor. AMD offers leading-edge performance for today's software, with complete readiness for the coming wave of 64-bit computing.

2005

January: Seven-time Tour de France winner Lance Armstrong announces AMD Turion™ Mobile Technology brand and 64-bit Processor at the Consumer Electronics Show in Las Vegas.

March: AMD unveils its new processor family AMD Turion™ 64 Mobile Technology tailored for highly mobile business professionals and consumers who demand reliable, high-performance notebook PCs with long battery life, outstanding wireless compatibility, rich graphics and enhanced security with EVP.

April: AMD launches its Dual-Core AMD Opteron™ processors, offering the best performance-per-watt architecture in the market.

May: AMD Athlon™ 64 X2 Dual-Core processor launches. AMD becomes the world's first and only company to provide a broad x86 dual-core client and server processor line-up.

2006

January: AMD unveils its digital media vision with the launch of the AMD LIVE! Brand which aims to change the way consumers experience digital entertainment in their home and on the go.

AMD releases the world's ultimate processor for PC enthusiasts - the AMD Athlon 64 FX-60 Dual-Core.

February: Korea Fair Trade Commission (KFTC) authorities raid the offices of Intel and other major Korean PC manufacturers as part of an investigation into possible antitrust violations. Investigators seize tons of documents and hard drives.

Chinese PC manufacturing giant Lenovo expands its relationship with AMD to roll-out AMD-powered professional desktop products in other markets including the U.S., Canada, Mexico, the U.K., France, Germany, and Southeast Asia.

Mark Knopfler and Chuck Ainlay use AMD Opteron processors in their Grammy® win for Best Surround Sound Album "Brothers in Arms - 20th Anniversary Edition."

FORTUNE magazine ranked AMD as a TOP 10 Most Admired Company for Innovation as well as the Most Admired Company in the semiconductor industry for both Innovation and Quality of Products/Services this year.

March: Japan Fair Trade Commission (JFTC) turns over evidence collected against Intel to the Tokyo District Court leading Japanese competition authorities to find that Intel violated that country's Antimonopoly Act by engaging in anticompetitive business practices deliberately designed to prevent AMD from competing.

AMD continues its multi-core leadership with the introduction of three new Dual-Core AMD Opteron processors that further minimize overall power consumption and improve cooling requirements.

The Register says, "To this day, Intel still does not sell a dual-core server chip with the two processing cores united together on a single piece of silicon like AMD did at launch with the dual-core Opteron." (Mar. 10, 2006)

George W. Bush appoints AMD chairman and CEO Hector Ruiz to serve on the President's Council of Advisors on Science and Technology (PCAST). Comprised of leaders from the private sector, academic and research communities, PCAST advises the President on issues related to technology, scientific research, and math and science education.

May: AMD announces that it will invest US\$2.5 billion in Germany to expand 300mm microprocessor production at its Dresden, Germany plant.

Dell, Inc. announces its intent to offer AMD Opteron Dual Core processor-based servers.

Microsoft and AMD announce "Pay-As-You-Go" program to drive PC adoption in emerging markets. The program provides consumers the opportunity to purchase PCs through a combination of innovative technology and a pay-as-you-go computing model. Through the joint development that is underway between AMD and Microsoft, Microsoft's FlexGo technology will also be incorporated within key AMD microprocessor products.

AMD introduces the AMD LIVE!™ PC – a full-featured, easy-to-use media center PC, designed to enable consumers to organize, distribute, share, and enjoy their content collection throughout the home and on the go. Leading OEMs including Acer, Alienware, Fujitsu Siemens Computers, Gateway, HP, Sahara, and Tsinghua Tongfang, as well as system builders in North America, Western Europe, and China, will have AMD LIVE! PCs, powered by the award-winning AMD Athlon™ 64 X2 dual-core processor

June: AMD executives and New York State officials announce plans for an option to build a 300mm microprocessor manufacturing plant in Luther Forest Technology Park. This unprecedented economic development project is projected to create more than 1,200 new high-tech jobs, thousands of construction jobs, and more than 3000 indirect jobs.

July: The *Financial Times Deutschland* (FTD) exposes apparent collusion between Intel and Media Saturn Holdings MSH) – Europe’s largest consumer electronics retailer. Evidence obtained by FTD indicates that Intel pays MSH millions of Euro to ensure that not a single product containing an AMD processor can be purchased by European consumers in any of their hundreds of stores throughout Europe. AMD filed a formal complaint with German competition authorities.

July: AMD and ATI announce their plans to join forces to create a “processing powerhouse.” AMD will acquire ATI for US\$5.4 billion in a transaction to close in the 4th quarter of 2006. Jim Allchin, Co-President of Microsoft’s Platforms & Services Division says this of the deal: “We’re excited by the potential of what AMD and ATI can deliver together to enhance the Windows Vista experience for our customers even further.”

AMD teams up with Telmex to provide affordable Internet connectivity throughout Mexico via the “Telmex Internet Box Personal Internet Communicator.” The Telmex offering is another step forward for AMD’s 50x15 initiative, which is a commitment to help deliver basic Internet and computing capability to 50 percent of the world’s population by the year 2015.

August: AMD introduces the next generation of AMD Opteron microprocessors, which feature quad-core upgradeable platforms that reduce total cost of ownership and deliver performance-per-watt improvements in the datacenter.

¹Enhanced Virus Protection (EVP) is only enabled by certain operating systems including the current versions of Microsoft® Windows®, Linux, Solaris and BDX Unix. After properly installing the appropriate operating system release, users must enable the protection of the applications and associated files from buffer overrun attacks. Consult your OS documentation for information on enabling EVP. Contact your application software vendor for information regarding use of the application in conjunction with EVP. AMD and its partners strongly recommend that users continue to use third party anti-virus software as part of their security strategy.

²AMD, the AMD Arrow logo, AMD Athlon, AMD Opteron, AMD Turion, AMD Sempron and combinations thereof, and AMD PowerNow! Are trademarks of Advanced Micro Devices, Inc. HyperTransport is a licensed trademark of the HyperTransport Technology Consortium. Microsoft and Windows are registered trademarks of Microsoft Corp. in the U.S. and/or in other jurisdictions. Other names are for informational purposes only and may be trademarks of their respective owners.