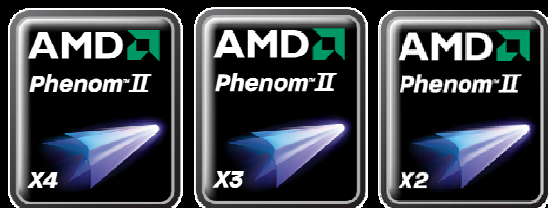


AMD Phenom™ II Processors

Deliver optimal multi-core value with superior high definition computing*, advanced multitasking performance, and innovative, energy efficient solutions.



NAME

AMD Phenom™ II X4 Processors

AMD Phenom™ II X3 Processors

AMD Phenom™ II X2 Processors

SOUNDBITE

The power to do it all with AMD Phenom™ II Processors

FEATURES

- > True Multi-core Processing
- > Direct Connect Architecture
- > Integrated Dual-Channel Memory Controller with up to DDR2-1066 support for AM2+ and up to DDR3-1333 for AM3
- > HyperTransport™ 3.0 Technology
- > AMD Balanced Smart Cache
- > AMD Wide Floating Point Accelerator
- > AMD Memory Optimizer Technology
- > AMD Digital Media XPress™ 2.0
- > AMD Virtualization™ (AMD-V™) Technology with Rapid Virtualization Indexing
- > AMD PowerNow!™ Technology

AMD
The future is fusion

END USER BENEFITS

PERFORMANCE

- **DO IT ALL.** AMD PHENOM™ II PROCESSORS HAVE THE POWER TO DO IT ALL. FEATURING NEXT-GENERATION QUAD-CORE DESIGN, AMD PHENOM™ II PROCESSORS CRUSH EVEN THE MOST DEMANDING TASKS. SO DESIGN IT, RENDER IT, PLAY IT, CREATE IT, STREAM IT, HD IT.* WITH AMD PHENOM™ II PROCESSORS, IF YOU CAN IMAGINE IT, YOU CAN DO IT.

VISUAL EXPERIENCE

- **LIVE YOUR LIFE IN HD.** AMD PHENOM™ II PROCESSOR IS FOR HIGH DEFINITION ENTERTAINMENT, GAMING, CREATIVITY, AND BEYOND. WITH AMD PHENOM™ II PROCESSORS AS THE FOUNDATION, YOU'LL ENJOY A NEW LEVEL OF RESPONSIVENESS AND VISUAL INTENSITY. YOUR GAMES, PHOTOS, VIDEOS, AND HOME MOVIES WILL LOOK BETTER IN HD.* AMD PUTS HIGH DEFINITION COMPUTING WITHIN EVERYONE'S REACH.

ENERGY EFFICIENT

- **EFFICIENT PERFORMANCE.** AMD PHENOM™ II PROCESSORS COMPLETE EVEN THE MOST DEMANDING TASKS AMAZINGLY FAST, SO SYSTEMS CAN SPEND LESS TIME PROCESSING AND MORE TIME IDLING. AMD PHENOM™ II PROCESSORS USE LOW POWER AT IDLE SO THE TIME BETWEEN TASKS CAN WORK TO YOUR ADVANTAGE. THE RESULT IS THE ABILITY TO DO MORE, QUICKLY, WITH MINIMAL ENERGY. AMD PHENOM™ II PROCESSORS DELIVER PERFORMANCE HEADROOM WITH AMD POWERNOW!™ TECHNOLOGY FOR SUPERIOR ENERGY EFFICIENCY.

* HD MONITOR REQUIRED.

PRODUCT FEATURES

- **True multi-core processing** enables amazing multitasking to help users run more applications and do more in less time
- **Direct Connect Architecture** delivers leading-edge PC system performance
- **Integrated dual-channel memory controller** allows dramatic application performance with superior system throughput and low latency to help users get a better PC experience
- **HyperTransport™ 3.0 technology** provides incredible system agility for blistering 3D graphics performance
- **AMD Balanced Smart Cache** supports a better multi-tasking and multi-threaded experience
- **AMD Wide Floating Point Accelerator** helps improve digital media and 3D gaming experiences
- **AMD Memory Optimizer Technology** helps improve performance of multi-threaded software
- **AMD Digital Media XPress™ 2.0** enables a more dramatic experience with sharp and life-like 3D graphics
- **AMD Virtualization™ (AMD-V™) technology** helps virtualization software to run more securely and efficiently
- **Amd PowerNow™ technology** enables cooler and quieter platform designs by providing extremely efficient performance and energy usage

Operating System Compatibility

The AMD Phenom™ II processors are designed to be compatible with Windows Vista® Ultimate, Windows Vista Home Premium, Windows Vista Home Basic, Windows Vista Business, Windows Vista Enterprise, Microsoft® Windows® XP Professional x64 Edition, Windows XP Professional, Windows XP Home Edition, Windows 98, Windows ME, Windows XP Media Center Edition, Windows NT®, Windows 2000, Linux®, and other PC operating systems. For more information, visit www.amd.com.

AMD Phenom™ II Processor Product Specifications

| | |
|----------------------------------|--|
| Cache Size | L1 Cache (Instruction + Data): 128KB x4 (64KB + 64KB for each core) L2 Cache: 512KB x4(quad-core) ; 512x3 (triple-core); 512x2 (dual-core) L3 Cache: 4MB or 6MB Shared L3 |
| Process Technology | 45-nanometer SOI (silicon-on-insulator) technology |
| HyperTransport™ technology links | One 16-bit/16-bit link @ up to 4000MT/s full duplex; or up to 16.0GB/s I/O Bandwidth |
| Memory | Integrated memory controller up to 17.1GB/sec dual channel memory bandwidth- AM2+ package up to 21GB/sec dual channel memory bandwidth- AM3 package |
| Types of Memory | AM2+ package: PC2 8500 (DDR2-1066); PC2 6400 (DDR2-800); PC2 5300 (DDR2-667); PC2 4200 (DDR2-533); PC2 3200 (DDR2-400) DDR2 unbuffered AM3 package: Support for unregistered DIMMs up to PC2 8500 (DDR2-1066MHz) and PC3 10600 (DDR3-1333MHz) |
| Die Size | 258mm ² |
| Packaging | Socket AM2+ - 940-pin organic micro Pin Grid Array (micro-PGA) Socket AM3 - 938-pin organic micro Pin Grid Array (micro-PGA) |

AMD Phenom™ II X4 Processor Product Model Comparisons

| MODEL NUMBER | CLOCK FREQUENCY | SYSTEM BUS | PACKAGE PROFILE | VOLTAGE | MAX TEMP | TDP | TOTAL DEDICATED L2 CACHE | L3 CACHE | CMOS TECH |
|--------------|-----------------|------------|-----------------|--------------|----------|------|--------------------------|----------|-----------|
| 955* | 3.2GHz | 4.0GT/s | socket AM3 | 0.875-1.5V | 62°C | 125W | 2MB | 6MB | 45nm SOI |
| 945 | 3.0GHz | 4.0GT/s | socket AM3 | 0.875-1.5V | 62°C | 125W | 2MB | 6MB | 45nm SOI |
| 940 | 3.0GHz | 3.6GT/s | socket AM2+ | 0.875-1.5V | 62°C | 125W | 2MB | 6MB | 45nm SOI |
| 920 | 2.8GHz | 3.6GT/s | socket AM2+ | 0.875-1.5V | 62°C | 125W | 2MB | 6MB | 45nm SOI |
| 910 | 2.6GHz | 4.0GT/s | socket AM3 | 0.875-1.425V | 71°C | 95W | 2MB | 6MB | 45nm SOI |
| 810 | 2.6GHz | 4.0GT/s | socket AM3 | 0.875-1.425V | 71°C | 95W | 2MB | 4MB | 45nm SOI |
| 805 | 2.5GHz | 4.0GT/s | socket AM3 | 0.875-1.425V | 71°C | 95W | 2MB | 4MB | 45nm SOI |

Energy Efficient AMD Phenom™ II X4 Processor Product Model Comparisons

| MODEL NUMBER | CLOCK FREQUENCY | SYSTEM BUS | PACKAGE PROFILE | VOLTAGE | MAX TEMP | TDP | TOTAL DEDICATED L2 CACHE | L3 CACHE | CMOS TECH |
|--------------|-----------------|------------|-----------------|-------------|----------|-----|--------------------------|----------|-----------|
| 905e | 2.5GHz | 4.0GT/s | socket AM3 | 0.825-1.25V | 70°C | 65W | 2MB | 6MB | 45nm SOI |
| 900e | 2.4GHz | 4.0GT/s | socket AM3 | 0.850-1.25V | 70°C | 65W | 2MB | 6MB | 45nm SOI |

AMD Phenom™ II X3 Processor Product Model Comparisons

| MODEL NUMBER | CLOCK FREQUENCY | SYSTEM BUS | PACKAGE PROFILE | VOLTAGE | MAX TEMP | TDP | TOTAL DEDICATED L2 CACHE | L3 CACHE | CMOS TECH |
|--------------|-----------------|------------|-----------------|--------------|----------|-----|--------------------------|----------|-----------|
| 720* | 2.8GHz | 4.0GT/s | socket AM3 | 0.850-1.425V | 73°C | 95W | 1.5MB | 6MB | 45nm SOI |
| 710 | 2.6GHz | 4.0GT/s | socket AM3 | 0.875-1.425V | 73°C | 95W | 1.5MB | 6MB | 45nm SOI |

Energy Efficient AMD Phenom™ II X3 Processor Product Model Comparisons

| MODEL NUMBER | CLOCK FREQUENCY | SYSTEM BUS | PACKAGE PROFILE | VOLTAGE | MAX TEMP | TDP | TOTAL DEDICATED L2 CACHE | L3 CACHE | CMOS TECH |
|--------------|-----------------|------------|-----------------|-------------|----------|-----|--------------------------|----------|-----------|
| 705e | 2.5GHz | 4.0GT/s | socket AM3 | 0.80-1.25V | 72°C | 65W | 1.5MB | 6MB | 45nm SOI |
| 700e | 2.4GHz | 4.0GT/s | socket AM3 | 0.825-1.25V | 72°C | 65W | 1.5MB | 6MB | 45nm SOI |

AMD Phenom™ II X2 Processor Product Model Comparisons

| MODEL NUMBER | CLOCK FREQUENCY | SYSTEM BUS | PACKAGE PROFILE | VOLTAGE | MAX TEMP | TDP | TOTAL DEDICATED L2 CACHE | L3 CACHE | CMOS TECH |
|--------------|-----------------|------------|-----------------|--------------|----------|-----|--------------------------|----------|-----------|
| 550* | 3.1GHz | 4.0GT/s | socket AM3 | 0.850-1.425V | 70°C | 80W | 1MB | 6MB | 45nm SOI |
| 545 | 3.0GHz | 4.0GT/s | socket AM3 | 0.875-1.425V | 70°C | 80W | 1MB | 6MB | 45nm SOI |

*Available as Black Edition PIB