



# AMD最新テクノロジー アップデート

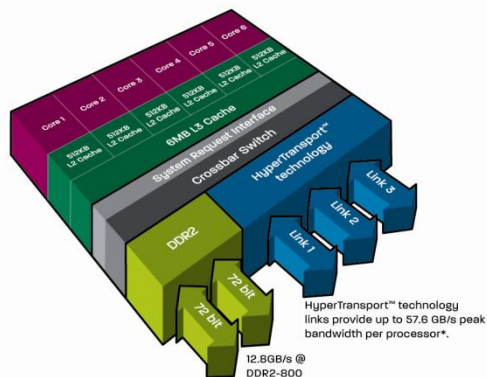
日本AMD株式会社  
マーケティング&ビジネス開発本部  
コマーシャルマーケティング部  
山野 洋幸



# 6コア AMD Opteron™ プロセッサ (コードネーム: Istanbul)のご紹介



# 6コア AMD Opteron™ プロセッサ (コードネーム: Istanbul)



Six-Core  
AMD Opteron™  
Processor Design 45nm for Socket F (1207)

\*HT3 @ up to 19.2 GB/s per link



- 本物の6つのコアを統合
- 新たなHyperTransport™ テクノロジ、HT Assist
- HyperTransport 3 technology (HT3) バンド幅の拡張
- 統合メモリコントローラの改良
- 従来のクアッドコア製品と同様の熱設計消費電力を実現

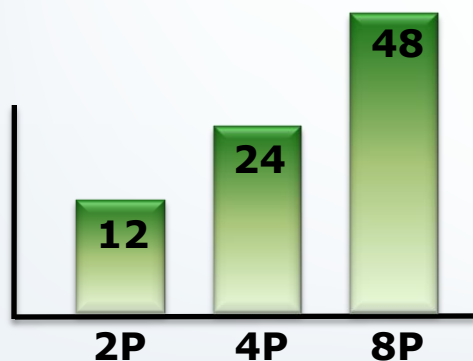
従来のクアッドコア製品に対して最大30%以上の性能向上！

| Series | Model   | Cores | Freq    | NB      | Wattage | L2 Cache  | L3 Cache | Production |
|--------|---------|-------|---------|---------|---------|-----------|----------|------------|
| 8000   | 8435    | 6     | 2.6GHz  | 2.2GHz  | 75W     | 512K/core | 6MB      | May        |
| 8000   | 8431    |       | 2.4GHz  |         |         |           |          |            |
| 2000   | 2435    |       | 2.6GHz  |         |         |           |          |            |
| 2000   | 2431    |       | 2.4GHz  |         |         |           |          |            |
| 2000   | 2427    |       | 2.2GHz  |         |         |           |          |            |
| 8000   | 8425 HE | 6     | 2.1 GHz | 2.2 GHz | 55W     | 512K/core | 6MB      | July 3rd   |
| 2000   | 2425 HE |       | 2.1 GHz |         |         |           |          |            |
| 2000   | 2423 HE |       | 2.0 GHz |         |         |           |          |            |
| 8000   | 8439 SE | 6     | 2.8 GHz | 2.2 GHz | 105W    | 512K/core | 6MB      | July 24th  |
| 2000   | 2439 SE |       | 2.8 GHz |         |         |           |          |            |
| 2000   | 2419EE  | 6     | 1.8GHz  | 2.0GHz  | 40W     | 512K/core | 6MB      | September  |



# さらに使いやすく

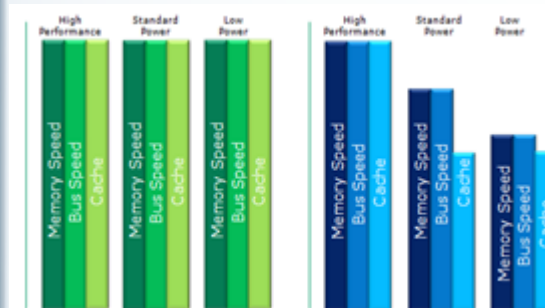
トータル48コアまで  
スケーラブル



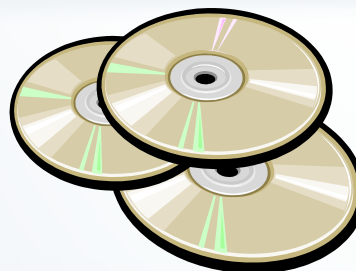
同じ消費電力で  
さらなる性能向上



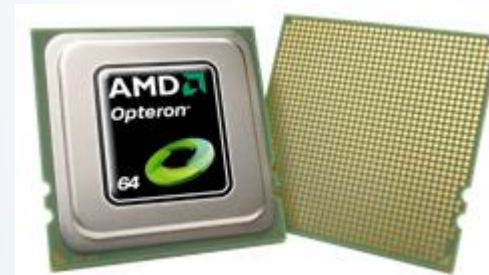
すべての製品において  
妥協のない機能実装



ソケット互換による  
アップグレード



システム移行を容易にする  
プラットフォーム互換性



SEからEEまで  
フルラインナップ\*\*

\*Compared to Quad-Core AMD Opteron processor codenamed "Shanghai." \*\*Six-Core AMD Opteron™ EE and SE processors planned launch Q3 09.

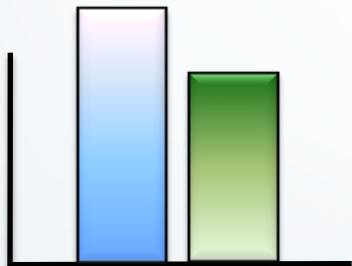
4 AMD最新テクノロジー アップデート



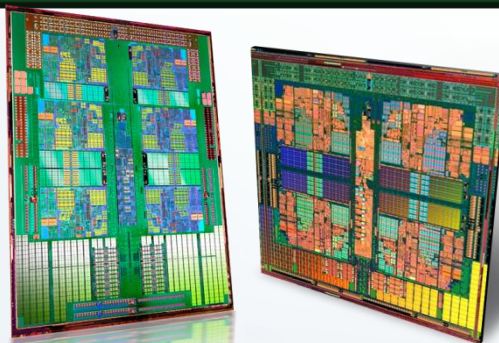
**AMD**  
The future is fusion

# トータルコストでの優位性

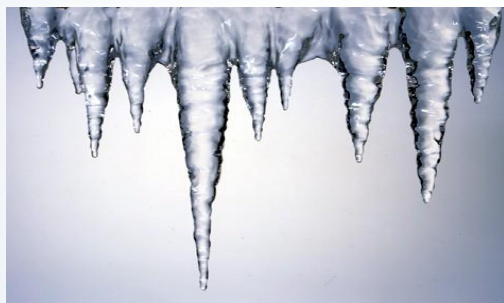
低コストプラットフォーム  
で導入費用を削減



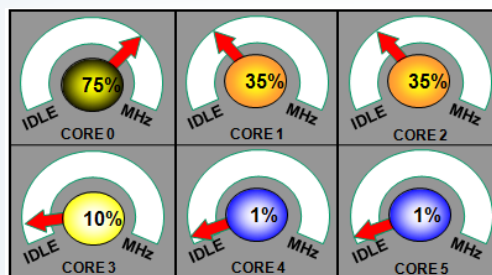
プラットフォームの一貫性が  
中長期の管理コストを削減



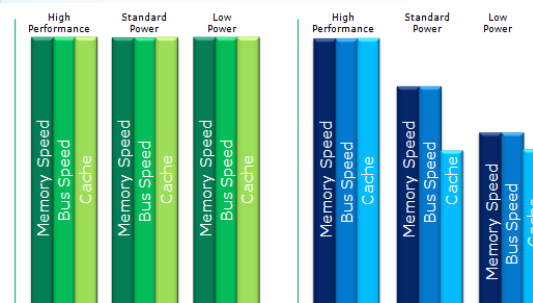
メモリアーキテクチャの継続  
によりシステムコストを削減



HE & EE 6コア  
低消費電力製品\*



電力効率と省電力機能が  
運用コストを削減

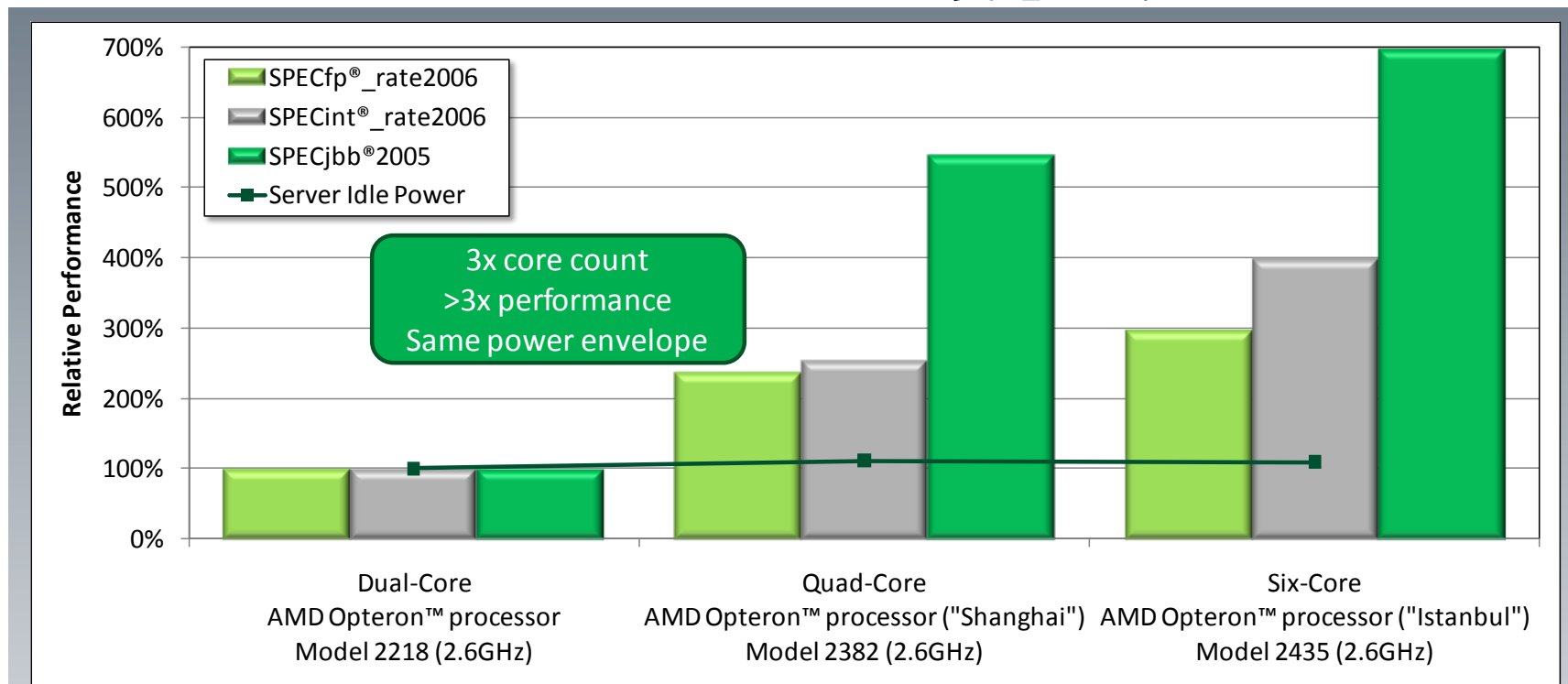


すべての製品に  
すべての機能を提供



# 消費電力を変えずに性能向上

**6コア AMD Opteron™ プロセッサを搭載したサーバーは  
従来のデュアルコア・クアッドコアOpteronを搭載したサーバーを  
大きく上回る性能を同一の消費電力で実現**



SPEC, SPECfp, SPECint, and SPECjbb are registered trademarks of the Standard Performance Evaluation Corporation. The performance results for Six-Core AMD Opteron™ processor Model 2435 and the SPECjbb result for Quad-Core AMD Opteron™ processor Model 2382 are based upon data submitted to Standard Performance Evaluation Corporation as of May 21, 2009. The other performance results stated below reflect results published on <http://www.spec.org/> as of May 21, 2009. The server idle power results are based on measurements of server active idle power for 60 seconds at AMD performance labs as of May 21, 2009. The comparison presented below is based on the best performing two-socket servers using AMD Opteron™ processor Models 2218, 2382, and 2435. For the latest results, visit <http://www.spec.org/>. Please see backup slides for configuration information.



# Cloud Usage-based Platform Enablement

*Laser-focused on enabling ultra efficient platform "Kroner"*

Tyan Model 8208 - Design based on target customer feedback

Highly Efficient Power Supplies

Thermally Controlled low voltage fans

2.5" drive support

Self-contained Modular design (serviceability)

CPU Voltage Regulators

MEMORY Voltage Regulators

# of DIMMs

IMC

RPMI Support

Motherboard layout / Component Placement

Optimized for HE and EE processors

AMD Chipset

BIOS Settings

On Board Video

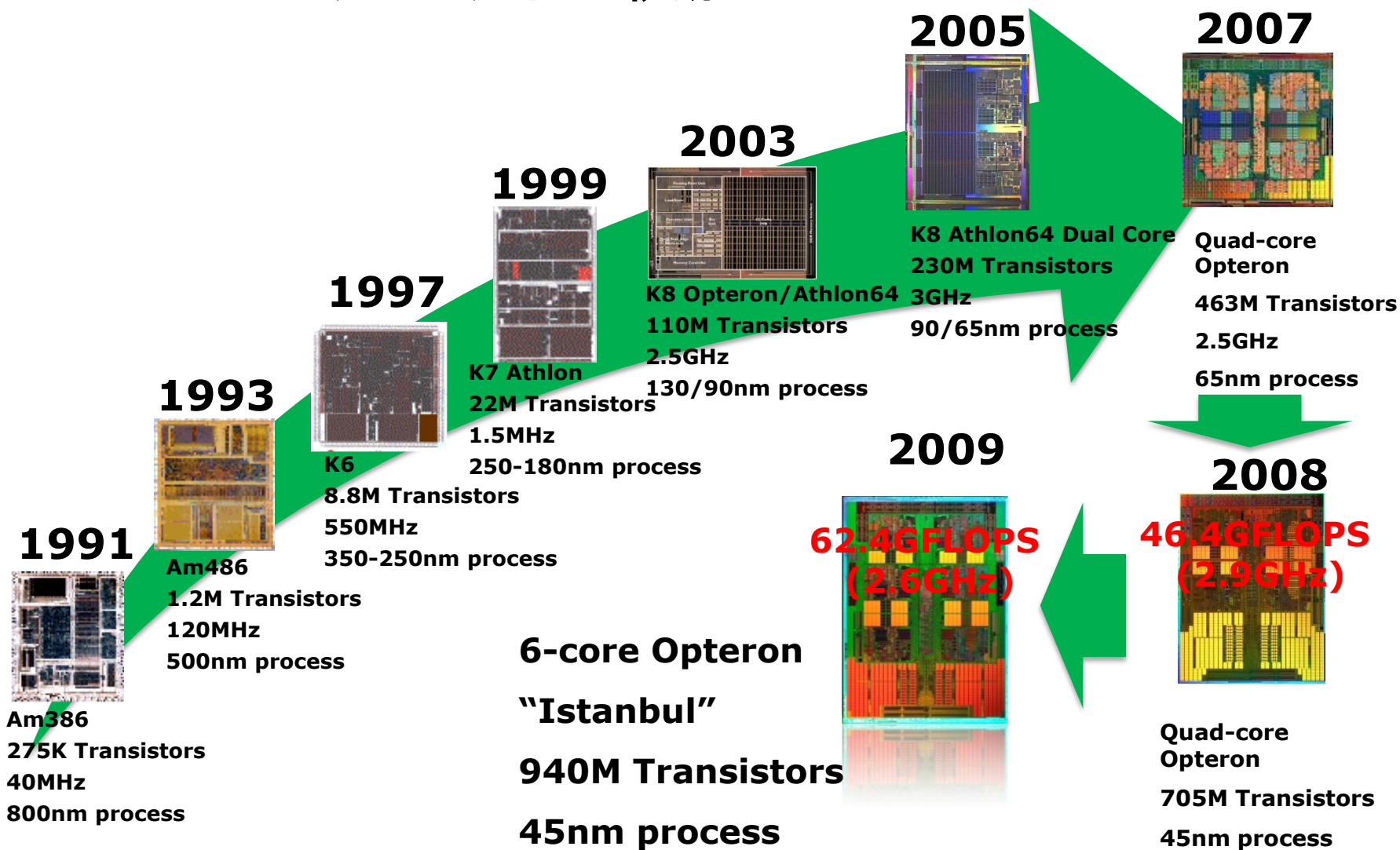


A detailed, high-resolution image of an AMD Opteron processor die, showing its intricate circuitry and various components. The die is rectangular with a complex pattern of gold-colored pads and internal structures. It is positioned vertically in the background, slightly tilted, and its reflection is visible on the surface below it.

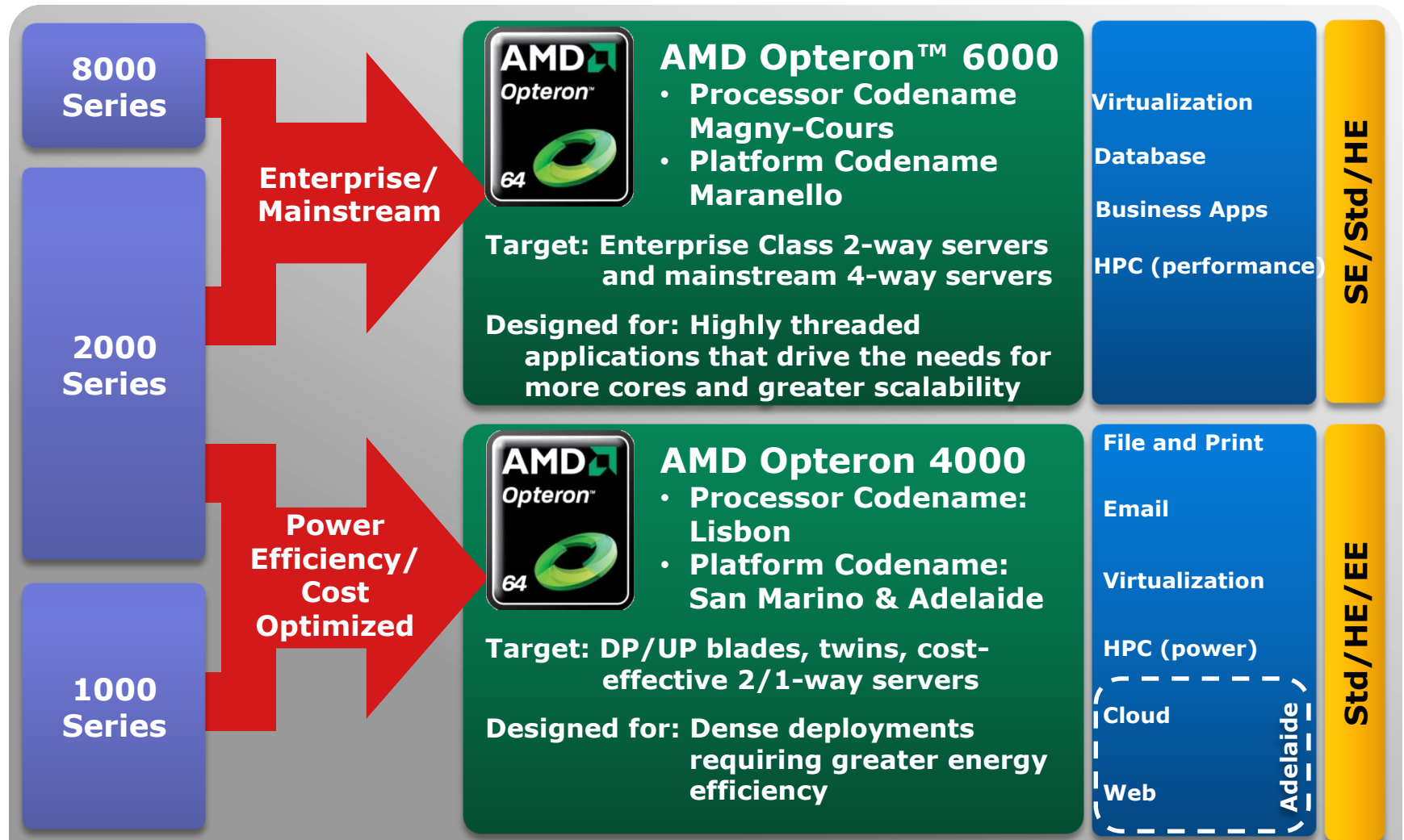
# AMD Opteron™ プロセッサ 最新ロードマップのご紹介



# AMDプロセッサの進化の軌跡



# Product Positioning



# AMD Opteron™ プロセッサ ロードマップ

65nm

45nm

32nm

| Platform Segment           | 2009                                                                                                                                                              |                                                                                                                                                                                      |                                                        | 2010                                                                                                                                                                                                                               | 2011                                        |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| 4-way Performance Platform | <b>Shanghai</b><br>4-Core <ul style="list-style-type: none"><li>•6M L3</li><li>•3x HT-3 (4.4GT)</li><li>•AMD-V technology</li><li>•RDDR2 (Dual-Channel)</li></ul> | <b>Istanbul</b><br>6-Core <ul style="list-style-type: none"><li>•6M L3</li><li>•3x HT-3 (4.8GT)</li><li>•HT Assist</li><li>•AMD-V technology</li><li>•RDDR2 (Dual-Channel)</li></ul> | 2 and 4-way Enterprise / Mainstream Platform           | <b>Magny-Cours</b><br>8/12-Core <ul style="list-style-type: none"><li>•12M L3</li><li>•4x HT-3 (6.4GT)</li><li>•U/RDDR3 &amp; LV RDDR3 (Quad-Channel)</li><li>•Cool Speed</li><li>•C1E</li><li>•AMD-V</li><li>•HT Assist</li></ul> | <b>Interlagos</b><br>12/16-Core<br>New Core |
|                            | "Socket F (1207)"                                                                                                                                                 |                                                                                                                                                                                      |                                                        | "Maranello"<br>"Maximum Scalability" <ul style="list-style-type: none"><li>•AMD SR56x0</li><li>•AMD SP5100</li></ul>                                                                                                               |                                             |
| 2-way Mainstream Platform  | <b>Shanghai</b><br>4-Core                                                                                                                                         | <b>Istanbul</b><br>6-Core                                                                                                                                                            | 1 and 2-way Energy Efficient / Cost Optimized Platform | <b>Lisbon</b><br>4/6-Core <ul style="list-style-type: none"><li>•6M L3</li><li>•2x HT-3 (6.4GT)</li><li>•U/RDDR3 &amp; LV RDDR3 (Dual-Channel)</li><li>•Cool Speed</li><li>•C1E</li><li>•HT Assist</li><li>•AMD-V</li></ul>        | <b>Valencia</b><br>6/8-Core<br>New Core     |
|                            | "Socket F (1207)"                                                                                                                                                 |                                                                                                                                                                                      |                                                        | "San Marino" (Std/HE/EE)<br>"Optimized Energy Efficiency" <ul style="list-style-type: none"><li>•AMD SR56x0</li><li>•AMD SP5100</li><li>•Advanced Platform Management</li></ul>                                                    |                                             |
| 1-way Platform             | <b>Budapest</b><br>4-Core                                                                                                                                         | <b>Suzuka</b><br>4-Core <ul style="list-style-type: none"><li>•DDR3</li><li>•1xHT3</li><li>•AMD-V technology</li><li>•6M L3</li></ul>                                                |                                                        | <b>"Adelaide" (EE Only)</b><br>"Ultra Low Power" <ul style="list-style-type: none"><li>•AMD SR5650</li><li>•AMD SP5100</li><li>•LV DDR3</li><li>•HT1</li></ul>                                                                     |                                             |
|                            | "Socket AM2+"                                                                                                                                                     |                                                                                                                                                                                      |                                                        | "Buenos Aires"<br>•AMD SP5100<br>•AMD SR56x0                                                                                                                                                                                       |                                             |

Green denotes new feature

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# グラフィックス製品・GPGPUの動向



# ATI Stream Development and Deployment

## Development



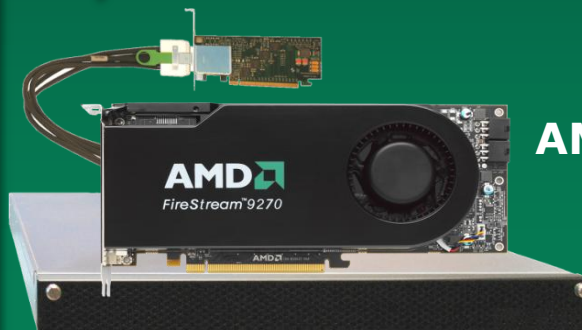
## Deployment



**ATI Radeon™ graphics**  
for consumer applications



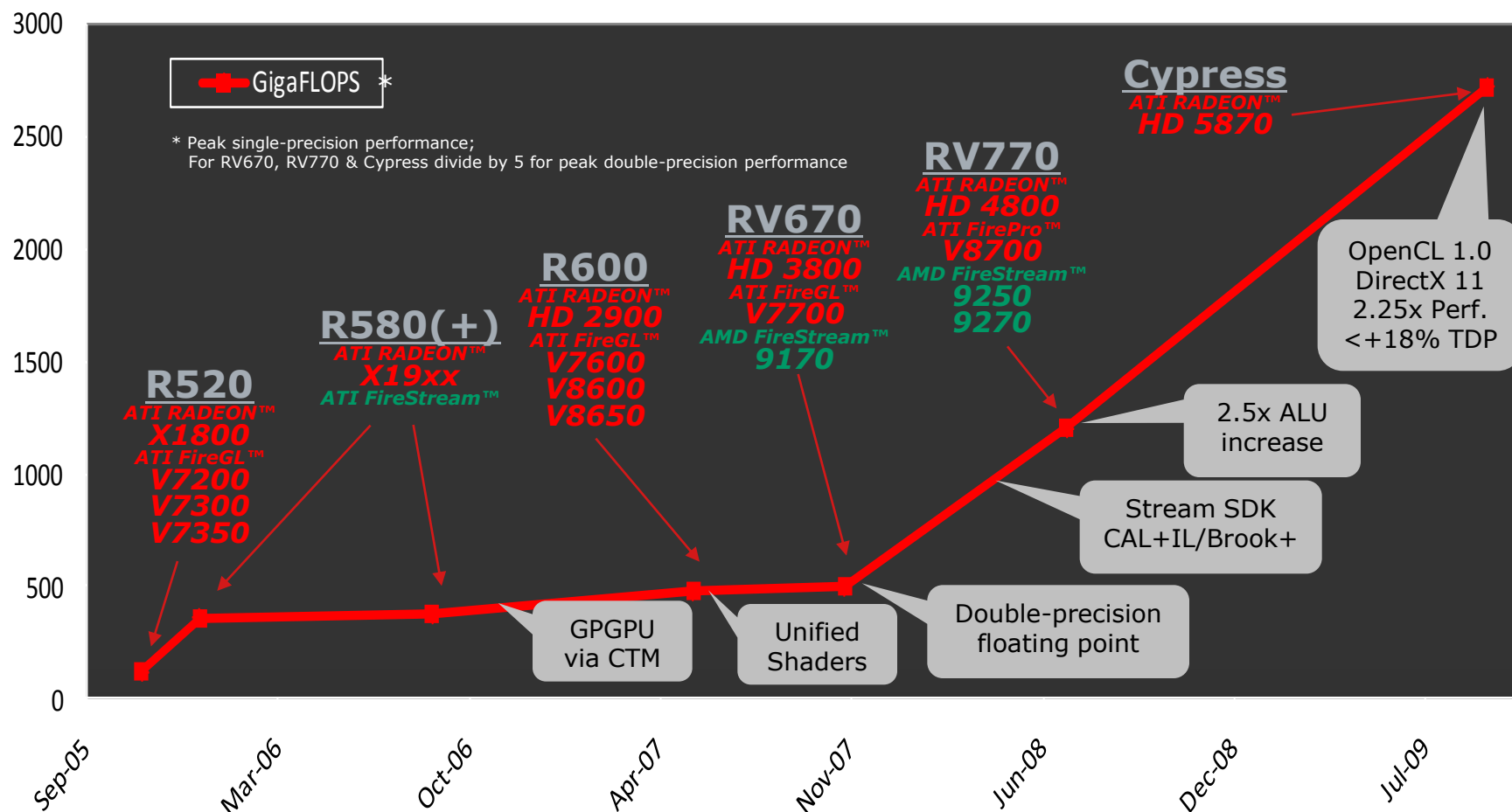
**ATI FirePro™ graphics**  
for professional graphics



**AMD FireStream™**  
**compute accelerator**  
for computation



# GPGPU Processing Power Trend



# AMD Developer Central (http://developer.amd.com)

Welcome to AMD Developer Central | AMD's Software Developer Portal - Mozilla Firefox

ファイル(E) 編集(E) 表示(V) 履歴(S) ブックマーク(B) ツール(I) ヘルプ(H)

http://developer.amd.com/Pages/default.aspx

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**AMD Developer Central**  
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**AMD DEVELOPER**  
**INSIDE TRACK**

**AMD**  
The future is fusion

Your central resource for tools, technologies, best practices, and expert guidance to optimize your software solution performance on AMD platforms.

**Quick Links**

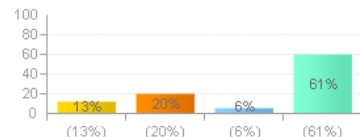
- ATI Stream SDK v2.0 with OpenCL™ 1.0 Support
- ATI Stream Profiler
- AMD x86 Open64 Compiler Suite
- AMD Inside Track Video
- "Istanbul" Zone
- GPU Tools
- Videos
- Drivers & Downloads
- CPU Tools

**What's New**

- » **Featured Item:** Just released: **ATI Stream SDK v2.01**  
Thursday, February 11, 2010
- » Just released: **ATI Stream Profiler 1.1**  
Thursday, February 11, 2010
- » Just released: **Stream KernelAnalyzer 1.4**  
Thursday, February 11, 2010
- » New: **Open64 Compiler Developer Guide**  
Thursday, February 11, 2010
- » **See More**

**Quick Poll**

Are you currently developing or planning on supporting the AVX instruction set in your application development efforts?



| Response                                              | Percentage |
|-------------------------------------------------------|------------|
| a) No plans at this time                              | 13%        |
| b) Currently researching how to take advantage of AVX | 20%        |
| c) Already developing specific AVX code               | 6%         |
| d) What's AVX?                                        | 61%        |

■ a) No plans at this time  
■ b) Currently researching how to take advantage of AVX  
■ c) Already developing specific AVX code  
■ d) What's AVX?

Current Survey  
» See more

**Forums**

**Blogs**



# ONLY AMD!



CPU



GPU

Only  
**AMD**



OpenCL

**KHRONOS**  
GROUP

DirectCompute

**Microsoft®**



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**AMD**  
The future is fusion

**Thank You !!**  
**Hiroyuki.Yamano@amd.com**



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