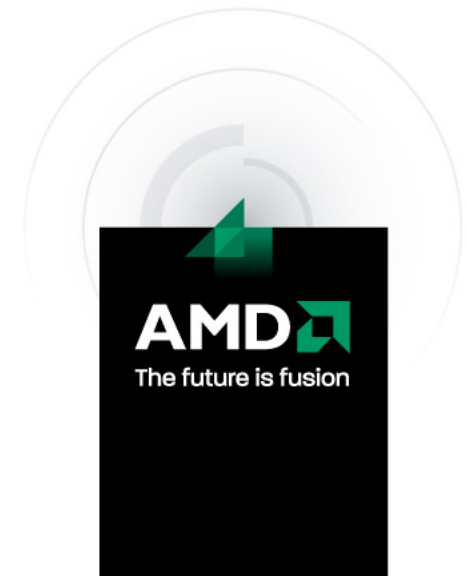


# AMD Embedded Solutions (AES) Product Roadmap

Q3 2010  
(Version 1.0)



Always refer to the processor/chipset data sheets for technical specifications.  
Feature information in this document is provided for reference only.



# Embedded AMD Opteron™ Roadmap

## Current Processors (July 2010)

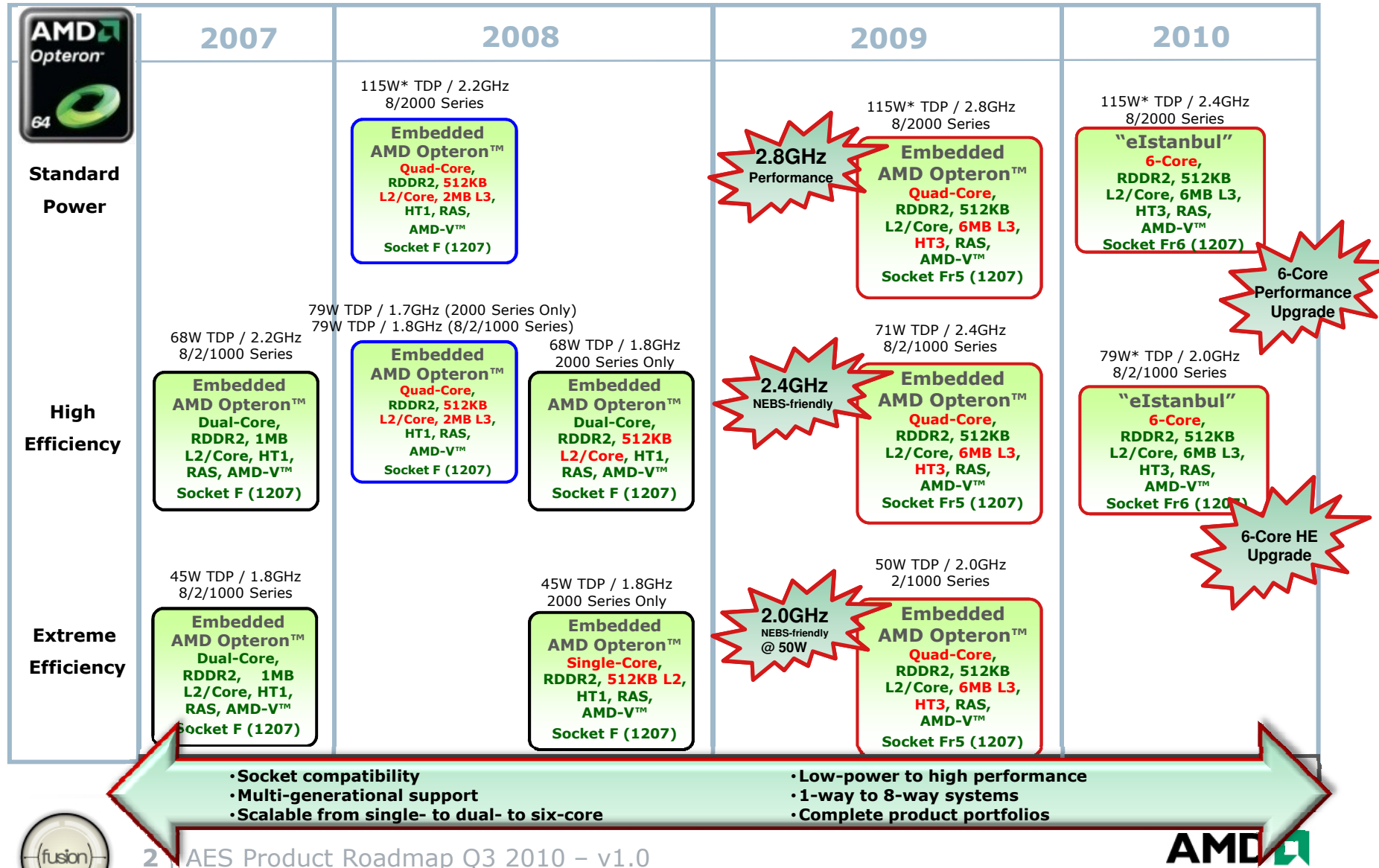
90nm
65nm
45nm

\*Supports standard server class ambient temperatures only.

Green Text = Existing Features  
Red Text = Updated / New Features

Solid Box = Plan of Record

Dash Box = Planning Purposes Only (Not Yet POR)



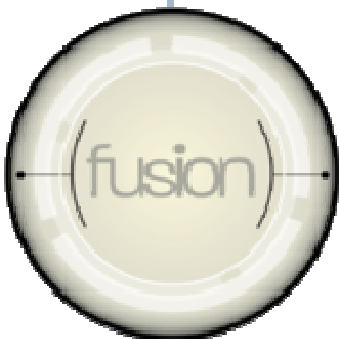
2 | AES Product Roadmap Q3 2010 - v1.0

**Note:** Planned production availability is shown in targeted six month windows for reference only.

Features are preliminary and subject to change. Customer should always consult technical documentation for design specifications.

**AMD**  
The future is fusion

# Embedded Low-Power Socketed Processor Roadmap (July 2010)

CPU	2007-2008	2009-2010	2011	2012
Socketed High Performance and Low Power Processors	22W / 3400e / 1.8GHz 35W / 3600+ / 1.9GHz 35W / 4200+ / 2.0GHz <div>Embedded AMD Athlon™ X2 Dual-Core, 2 Ch DDR2, 2x 512KB L2, HT1, ECC capable, Socket AM2</div>	65W / Q54L / 2.2GHz 45W / 600E / 2.2GHz 0MB L3**+ <div>Embedded AMD Phenom™ II XLT Quad-Core, 2 Ch DDR3, 4x 512KB L2, 6MB L3, HT3, ECC capable, Socket AM3</div>	<div></div> <p>If you have a NDA in place please contact AES for more details!</p>	
	31W / TL-56 / 1.8GHz 35W / TL-62 / 2.1GHz <div>Embedded AMD Turion™ X2 Dual-Core, 2-Ch DDR2, 2x 512KB L2, HT1 Socket S1g1</div>	45W / V66C / 2.8GHz* <div>Embedded AMD Athlon™ II XL Dual-Core, 2 Ch DDR3, 2x 1MB L2, HT3, ECC capable, Socket AM3</div>		
	25W / 3100+ / 2.0GHz 15W / 2600+ / 1.6GHz 8W / 2100+ / 1.0GHz <div>Embedded AMD Athlon™ Single-Core, 2 Ch DDR2, 1x 512KB L2, HT1, ECC capable, Socket AM2</div>	45W / V64L / 2.7GHz 25W / V50L / 2.0GHz <div>Embedded AMD Athlon™ II XLT Dual-Core, 2 Ch DDR3, 2x 1MB L2, HT3, ECC capable, Socket AM3</div>		
	<div>AM2: DDR2</div> <div>Socket AM3: DDR3</div>			

65nm

45nm




65nm  
45nm

**Note:** Planned production availability is for reference only. Refer to production and longevity charts for specific details.  
 Features are preliminary and subject to change. Customer should always consult technical documentation for design specifications.  
 \* May support lower case temperature. \*\* Not production silicon. +18-month longevity only.



# Embedded Low-Power BGA Processor Roadmap (July 2010)



CPU	2007-2009	2010	2011	2012
BGA Processors for Compact Client Solutions	<p>Black Text = Existing Features Red Text = Updated / New Features Solid Box = Plan of Record Dash Box = Planning Purposes Only (Not Yet POR)</p> <p>18W / L625 / 1.6GHz</p> <div> <b>Embedded AMD Turion™ Neo X2</b>                      Dual-Core, 2 Ch DDR2,                      2x 512KB L2, HT1,                      ECC capable, ASB1 BGA                 </div> <p>18W / L325 / 1.5GHz</p> <div> <b>Embedded AMD Athlon™ Neo X2</b>                      Dual-Core, 2 Ch DDR2,                      2x 512KB L2, HT1,                      ECC capable, ASB1 BGA                 </div>	<p>Dual: 25W / N54H / 2.2GHz Dual: 15W / N40H / 1.5GHz</p> <div> <b>Embedded AMD Turion™ II Neo</b>                      2 Ch <b>DDR3-1333</b>,                      2x 1MB L2, HT3,                      ECC capable, <b>ASB2</b> BGA                 </div> <p>Dual: 25W / N54L / 2.2GHz Dual: 15W / N40L / 1.5GHz</p> <div> <b>Embedded AMD Turion™ II Neo</b>                      Dual-Core, 2 Ch DDR3,                      2x 1MB L2, HT3,                      ECC capable, <b>ASB2</b> BGA                 </div>	<div>  <p>If you have a NDA in place please contact AES for more details!</p> </div>	
	<p>15W / 210U / 1.5GHz 12W / 208U / 1.4GHz 8W / 200U / 1.0GHz</p> <div> <b>Embedded AMD Sempron™</b>                      Single-Core, <b>1 Ch</b> DDR2,                      1x <b>256KB</b> L2, HT1,  <b>ASB1 (BGA) 812 Balls</b> </div>	<p>Dual: 12W / N36L / 1.3GHz Single: 12W / R44L / 1.7GHz</p> <div> <b>Embedded AMD Athlon™ II Neo</b>                      2 Ch DDR3, 1-2x 1MB L2,                      ECC capable, <b>HT1</b>,  <b>ASB2</b> BGA                 </div> <p>Single: 8W / R34L / 1.0GHz</p> <div> <b>Embedded AMD Athlon™ II Neo</b>                      2 Ch DDR3, 1x 1MB L2,                      ECC capable, <b>HT1</b>,  <b>ASB2</b> BGA                 </div> <p>Requires LV DDR3</p>		
	<div>  <b>ASB1: DDR2</b> </div>	<div>  <b>ASB2: DDR3</b> </div>		

65nm  
45nm

**Note:** Planned production availability is for reference only. Refer to production and longevity charts for specific details. Features are preliminary and subject to change. Customer should always consult technical documentation for design specifications.



# Embedded AMD Geode™ Processor Roadmap (July 2010)





CPU	2007	2008	20xx
Industrial Client	3.8W TDP / 500MHz / LX800 <b>AMD Geode™</b> Single-Core, DDR1, 128KB L2, MMX™, <b>Ind. Temp (-40C to +85C)</b> BGU481		Black Text = Existing Features Red Text = Updated / New Features Solid Box = Plan of Record Dash Box = Planning Purposes Only (Not Yet POR)
Ultra Low Power Client	5.1W TDP / 600MHz / LX900 3.8W TDP / 500MHz / LX800 3.4W TDP / 433MHz / LX700 <b>AMD Geode™</b> Single-Core, DDR1, 128KB L2, MMX™, 3DNow!™ Tech. BGU481		<b>DDR2 Memory Module</b> <b>Geode LX Refresh:</b> <b>DDR2 Support</b> <b>PATA-to-SATA</b> <b>LPC-to-SPI</b> 2.9W TDP / 366MHz / LX600 <b>AMD Geode™</b> Single-Core, DDR1, 128KB L2, MMX™, 3DNow!™ Tech. BGU481

**Note:** Planned production availability is for reference only. Refer to production and longevity charts for specific details.

Features are preliminary and subject to change. Customer should always consult technical documentation for design specifications.



# AMD Enterprise Telecom/Storage Chipset Roadmap (July 2010)

Manu.	2007	2008	2009
 <p>Black Text = Existing Features Red Text = Updated / New Features Solid Box = Plan of Record Dash Box = Planning Purposes Only (Not Yet POR)</p>			<div> <b>SR5690</b> (I/O Bridge) 16x16 5.2GT/s HT3 Link, 42x PCIe® Gen2, A-Link II, IOMMU, RAS         </div> <div> <b>SR5670</b> (I/O Bridge) 16x16 5.2GT/s HT3 Link, 30x PCIe Gen2, A-Link II, IOMMU, RAS         </div> <div> <b>SR5650</b> (I/O Bridge) 16x16 5.2GT/s HT3 Link, 22x PCIe Gen2, A-Link II, IOMMU, RAS         </div> <div> <b>SP5100</b> (Southbridge) A-Link II, 6 Port SATA II, 12 Port USB 2.0, PCI Bus, LPC, SPI, EIDE, I2C         </div>
	<div> <b>HT-2100 (A2)</b> (HyperTransport™ Tunnel) 16x HT1 Link, 24x PCIe Gen 1         </div> <div> <b>HT-1000 (B1)</b> (Southbridge) 8x HT1 Link, PCI-X®, 4 SATA, 4 USB 2.0         </div>	<div> <b>HT-1100 (A2)</b> (Southbridge) 8x HT1 Link, 8x PCIe/PCI, 4 Ports SAS/SATA IDE, 12 Ports USB 2.0         </div>	<p>Early AES Customer Engagement = Q2'09 General Samples: Q2'09 General Availability: Q3'09</p>


**Note:** Planned production availability is shown in targeted six month windows for reference only.

Features are preliminary and subject to change. Customer should always consult technical documentation for design specifications.



# AMD Embedded Client Chipset Roadmap

(July 2010)

Manu.	2007 - 2008	2009	2010	2011
Integrated Graphics Roadmap	<div> <b>780E</b>            (GPU/Northbridge)            No TVOUT/Macrovision,            HT 3.0, UVD 2.0            HD Integrated Graphics,            DirectX® 10.0 Support,            PCIe® Gen 2,            LVTM and PCIe 2 x8         </div> <div> <b>M690E/T</b>            (GPU/Northbridge)            No Macrovision (E only)            HT 1.0, TV-Out (T Only)            Integrated Graphics,            x8 PCIe® (1 port),            x4 PCIe (configurable),            VLDS/DVI/VGA         </div>		<div> <b>785E</b>            (GPU/Northbridge)            No TVOUT/Macrovision,  <b>OS Idle Power Savings</b>  <b>DirectX® 10.1</b>  <b>Enhanced Mode</b>  <b>Pin compatible with 780E</b> </div>	
				<p>Black Text = Existing Features            Red Text = Updated / New Features            Solid Box = Plan of Record            Dash Box = Planning Purposes Only (Not Yet POR)</p>


**Note:** Planned production availability is shown for reference only.

Features are preliminary and subject to change. Customer should always consult technical documentation for design specifications.



# AMD Embedded Client Chipset Roadmap

(July 2010)

Manu.	2007 - 2008	2009	2010	2011
Fusion Controller Hub/Southbridge Roadmap				
	<b>SB600</b> (Southbridge) PCIe® /A-link to NB, PCI Interface, 10 USB 2.0 Ports, 4 STA II Ports, PATA Interface		<b>SB850</b> (Southbridge) PCIe® /A-link to NB, 14 USB 2.0 + 2 USB 1.1, 6 SATA 6Gb/s Port + eSATA, Clock gen, NIC, PCIe GPP 2 x1, RAID 5	
		<b>SB710</b> (Southbridge) PCIe® /A-link to NB, PCI Interface, 12 USB 2.0 + 2 USB 1.1, 6 SATA 2.5 Port + eSATA	<b>SB820M</b> (Southbridge) PCIe® /A-link to NB, 14 USB 2.0 + 2 USB 1.1, 6 SATA 6Gb/s Port + eSATA, Clock gen, PCIe GPP 2 x1	

Black Text = Existing Features  
Red Text = Updated / New Features  
Solid Box = Plan of Record  
Dash Box = Planning Purposes Only (Not Yet POR)

**Note:** Planned production availability is shown for reference only.

Features are preliminary and subject to change. Customer should always consult technical documentation for design specifications.

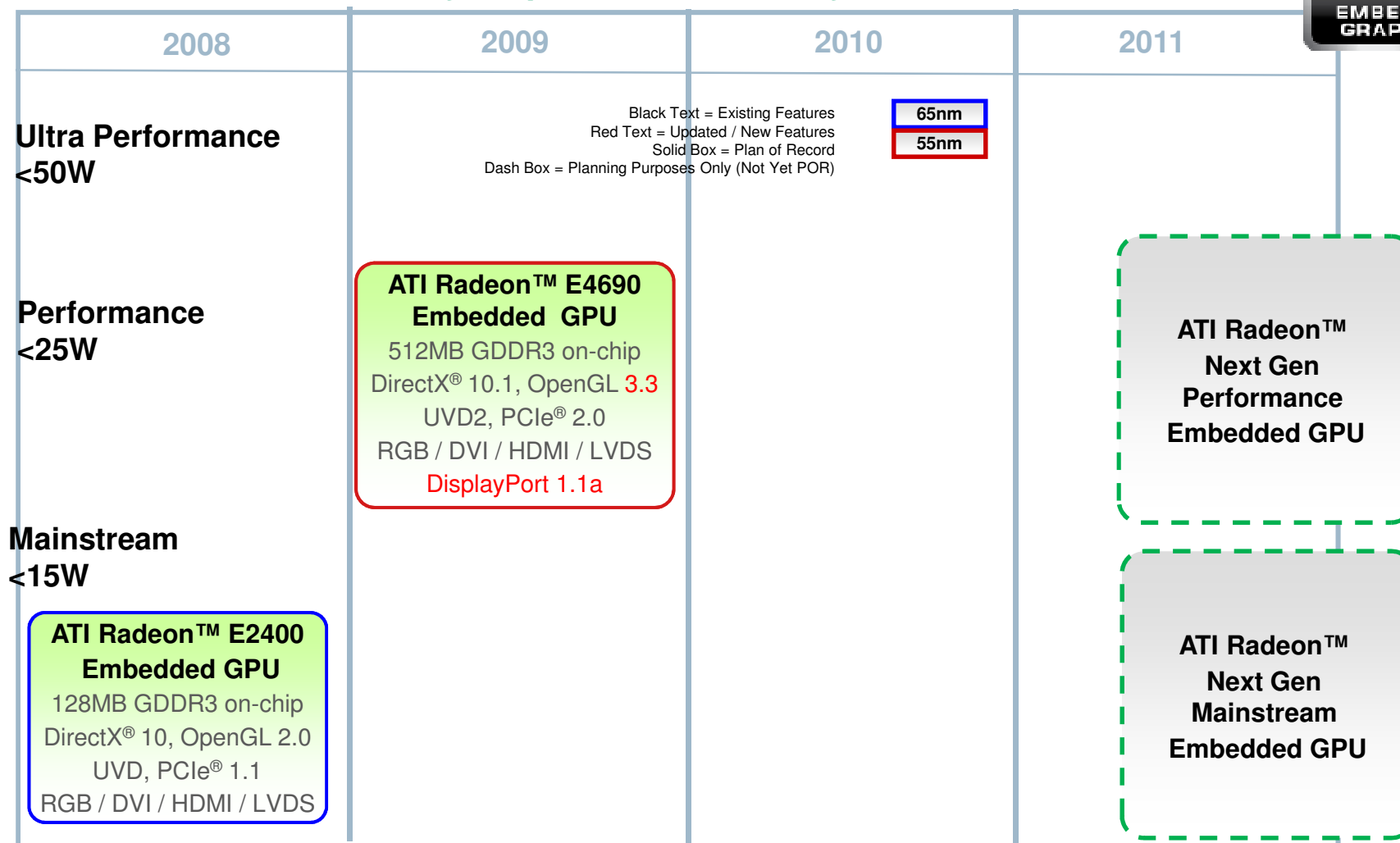
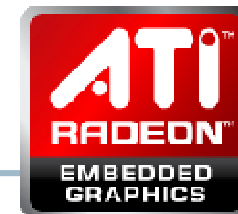




# Embedded Discrete GPU ASIC Roadmap

(July 2010)

5+ year planned availability



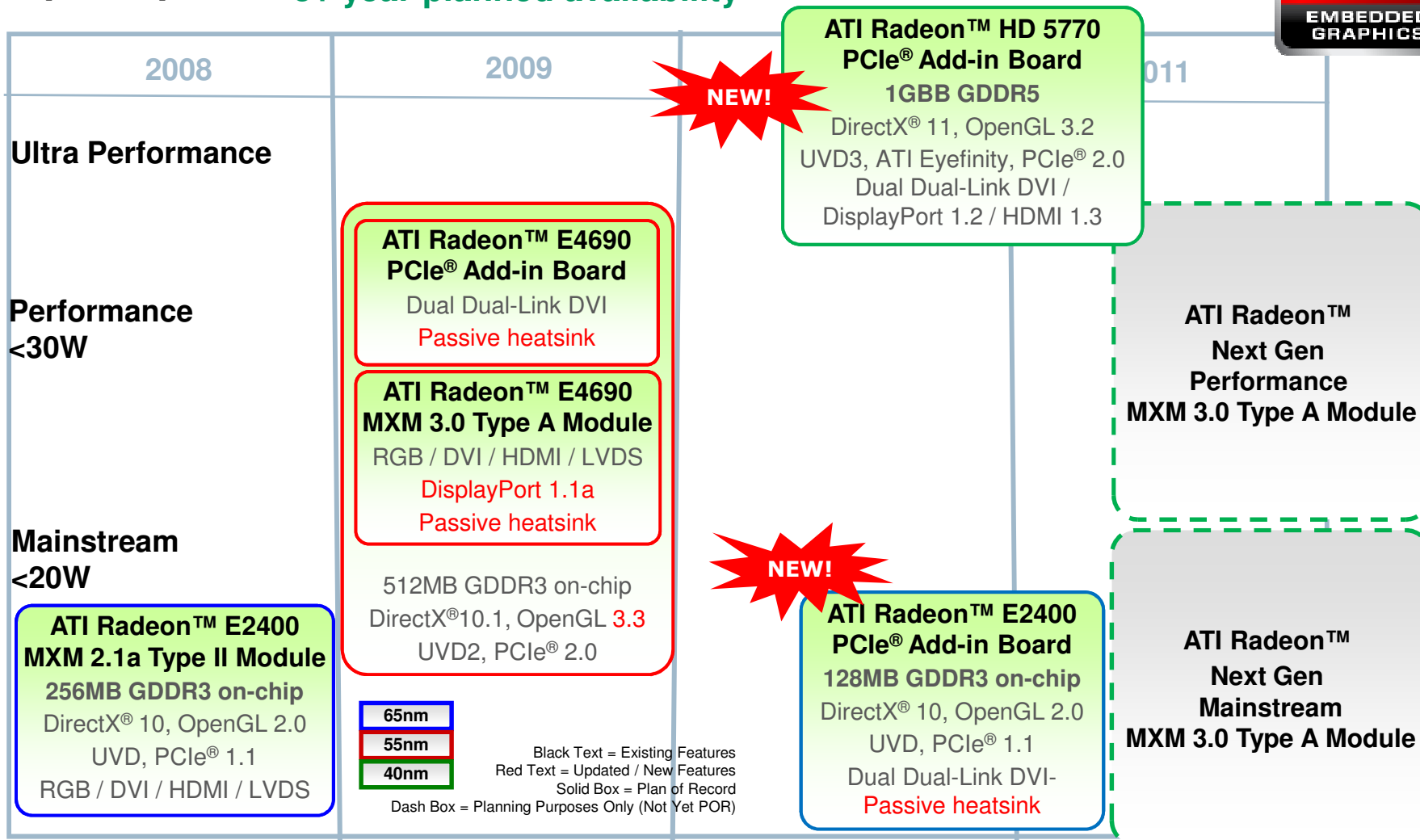
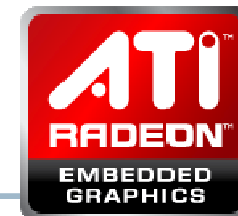
**Note:** Production availability is for reference only. Features are preliminary and subject to change. Customer should always consult technical documentation for design specifications.



# Embedded Discrete GPU Board Roadmap

(July 2010)

5+ year planned availability\*\*



**\*\* Note:** Production availability is for reference only. HD 5770 longevity 3 yrs.

Features are preliminary and subject to change.

Customer should always consult technical documentation for design specifications.



# For detailed information please refer to:

More information you find on [www.amd.com/embedded](http://www.amd.com/embedded)

## Technical documentation you find for...

### Embedded Processors, chipsets, reference designs, technical documentation

Embedded developer website on [wwwd.amd.com/dev](http://wwwd.amd.com/dev)  
(registration required)

### Embedded Graphics

- Step 1) Go to <http://secure.amd.com> and click on Sign Up to create an account. Follow the instructions and note the email verification process to finalize the account. Close your browser before proceeding to Step 2.
- Step 2) Go to <http://secure.amd.com/sites/edg> and click on "Request NDA Access" under the How To section and fill in the form to be approved for full NDA technical documentation access.



## Disclaimer

The information presented in this document is for informational purposes only and may contain technical inaccuracies, omissions and typographical errors.

The information contained herein is subject to change and may be rendered inaccurate for many reasons, including but not limited to product and roadmap changes, component and motherboard version changes, new model and/or product releases, product differences between differing manufacturers, software changes, BIOS flashes, firmware upgrades, or the like. AMD assumes no obligation to update or otherwise correct or revise this information. However, AMD reserves the right to revise this information and to make changes from time to time to the content hereof without obligation of AMD to notify any person of such revisions or changes.

AMD MAKES NO REPRESENTATIONS OR WARRANTIES WITH RESPECT TO THE CONTENTS HEREOF AND ASSUMES NO RESPONSIBILITY FOR ANY INACCURACIES, ERRORS OR OMISSIONS THAT MAY APPEAR IN THIS INFORMATION. AMD SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. IN NO EVENT WILL AMD BE LIABLE TO ANY PERSON FOR ANY DIRECT, INDIRECT, SPECIAL OR OTHER CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF ANY INFORMATION CONTAINED HEREIN, EVEN IF AMD IS EXPRESSLY ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

## Trademark Attribution

AMD, the AMD Arrow logo, ATI, the ATI logo, AMD Athlon, AMD Opteron, AMD Phenom, AMD Sempron, AMD Turion, AMD-V, Geode, Radeon, and combinations thereof, are trademarks of Advanced Micro Devices, Inc. in the United States and/or other jurisdictions. HyperTransport is a licensed trademark of the HyperTransport Technology Consortium. Microsoft, Windows, Windows Vista, and DirectX are registered trademarks of Microsoft Corporation. PCIe and PCI-X are registered trademarks of PCI-SIG. Other names used in this presentation are for identification purposes only and may be trademarks of their respective owners.

©2010 Advanced Micro Devices, Inc. All rights reserved.

