

List of AMD accelerated processing unit microprocessors

This is a list of microprocessors designed by Advanced Micro Devices, under the AMD Accelerated Processing Unit product series.

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Feature overview

Platform	Features of AMD Accelerated Processing Units					Desna, Ontario, Zacate		Kabini, Temash, Mullins		Beema, Mullins		Carriizo-L	
	Desktop	Mobile	Desktop, Mobile	Mobile		Jan 2011	May 2013	Q2 2014		May 2015			
Foundry	GlobalFoundries 32 nm SOI					28		28		28		28	
Die size (mm²)	228					245		245		245		245	
Socket	FM1, FS1					FM2, F41 + FP2		FM2+ , FP3		FP4		FT1	
CPU architecture	AMD 10h					Piledriver		Steamroller		Excavator		Bobcat	
GPU architecture	N/A					VCE 1.0		VCE 2.0		TBA		N/A	
Power saving Engine	PowerPlay					PowerTune		PowerTune		TBA		N/A	
Max. no. of displays	2-3					2-4		2-4		2		2	
Direct Rendering Manager	Yes ^[4]					Yes ^[4]		Yes ^[5]		Yes		Yes	
TrueAudio	N/A					Yes ^[7]		N/A		N/A ^[2]		TBA	

■ Unified shaders: Texture mapping units: Render output units

■ 2-to-4 more than two displays, the additional panels must have native DisplayPort support.^[8] Alternatively active DisplayPort-to-DVI/HDMI/DVI-D/GA adapters can be employed

Desktop processors

Lynx: "Llano" (2011, 32 nm)

- Manufactured on GlobalFoundries' 32 nm SOI process for Socket FM1
 - Die size: 228 mm², with 1.178 billion transistors^{[9][10]}
 - GPU: TeraScale 3 (VLIW4)
 - All A and E series models feature *Redwood*-class integrated graphics on die (*BeaverCreek* for the dual-core variants and *WinterPark* for the quad-core variants). Sempron and Athlon models exclude integrated graphics.^[11]
 - Support for up to four DIMMs of up to DDR3-1866 memory
 - 5 GT/s UMI
 - Integrated PCIe 2.0 controller
 - Select models support Turbo Core technology for faster CPU operation when the thermal specification permits
 - Select models support Hybrid Graphics technology to assist a discrete Radeon HD 6450, 6570, or 6670 discrete graphics card.
- This is similar to the current Hybrid CrossFireX technology available in the AMD 700 and 800 chipset series
- MMX, SSE, SSE2, SSE3, SSE4a, Enhanced 3DNow!, NX bit, AMD64, Cool'n'Quiet, AMD-V

Model number	Stepping	CPU					GPU			Memory support	TDP	Released	Part number	
		Cores	Frequency	Turbo	L2 Cache	V _{core}	Model	Config ²	Frequency					
E2-3000 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=13)	B0	2	2.4 GHz	N/A	2 × 512 KB	0.9125-1.4125	HD 6370D	160:8:4	443 MHz	DDR3-1600	65 W	Q4 2011	ED7500	
A4-3300 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=20)			2.5 GHz						443 MHz			Sep 7, 2011	AD3700	
A4-3400 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=14)	B0	2	2.7 GHz	N/A	2 × 512 KB	0.9125-1.4125	HD 6410D	160:8:4	600 MHz	DDR3-1600	65 W	Sep 7, 2011	AD3700	
A4-3420			2.8 GHz						600 MHz			Dec 20, 2011	AD3700	
A6-3500 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=19)	3		2.1 GHz	2.4 GHz							65 W	Aug 17, 2011	AD3700	
A6-3600 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=15)			2.1 GHz	2.4 GHz										AD3700
A6-3620 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=33)	B0	2	2.2 GHz	2.5 GHz		0.9125-1.4125	HD 6530D	320:16:8	443 MHz	DDR3-1866		Dec 20, 2011	AD3700	
A6-3650 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=16)	4		2.6 GHz									Jun 30, 2011	AD3700	
A6-3670K (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=31)			2.7 GHz								100 W	Dec 20, 2011	AD3700	
A8-3800 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=17)			2.4 GHz	2.7 GHz								Aug 17, 2011	AD3700	
A8-3820 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=42)			2.5 GHz	2.8 GHz							65 W	Dec 20, 2011	AD3700	
A8-3850 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=18)	B0	4	2.9 GHz			0.9125-1.4125	HD 6550D	400:20:8	600 MHz	DDR3-1866		Jun 30, 2011	AD3700	
A8-3970K (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=30)			3.0 GHz								100 W	Dec 20, 2011	AD3700	

Virgo: "Trinity" (2012, 32 nm)

- Manufactured on GlobalFoundries' 32 nm SOI process for Socket FM2
- CPU: Piledriver
- GPU: TeraScale 3 (VLIW4)
- Die Size: 246 mm², 1.303 Billion transistors^[12]
- Support for up to four DIMMs of up to DDR3-1866 memory
- 5 GT/s UMI
- OpenCL 1.2, AMD Streamline, UVD3
- Integrated PCIe 2.0 controller, and Turbo Core technology for faster CPU/GPU operation when the thermal specification permits
- Unified Shader Processors, 4 Texture Mapping Units (TMUs), 1 Render Output Unit (ROPs)
- Athlon models exclude integrated graphics
- Select models support Hybrid Graphics technology to assist a Radeon HD 7350, 7450, 7550, 7570, 7670 discrete graphics card.^[13]

Model number	Stepping	CPU					GPU			Memory support	TDP	Released	Part number
		Cores	Frequency	Turbo	L2 Cache	V _{core}	Model	Config ²	Frequency				
Sempron X2 198	B0	2	2.5 GHz	N/A	2 × 512 KB	0.9125-1.4125	HD 7500D	160:8:4	443 MHz	DDR3-1600	65 W	Q1 2012	SD198XOJ22GX SD198XOJGXBOX
Athlon II X2 221	B0	2	2.8 GHz	N/A	2 × 512 KB	0.9125-1.4125	DDR3-1866			DDR3-1600	65 W	Q1 2012	AD221XOJ22GX AD221XOJGXBOX
Athlon II X4 611 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=769)			2.6 GHz							100 W	Aug 15, 2011	AD631XOJ243GX AD631XWN243GX	
Athlon II X4 638 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=784)			2.7 GHz							65 W	Feb 8, 2012	AD638XOJ243GX AD638XOJGXBOX	
Athlon II X4 641 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=785)	B0	4	2.8 GHz	N/A	4 × 1 MB	0.9125-1.4125	DDR3-1866			100 W	Feb 8, 2012	AD641XWN243GX AD641XWN243GX	
Athlon II X4 651			3.0 GHz							100 W	Nov 14, 2011	AD651XWN243GX AD651XWN243GX	
Athlon II X4 651K			3.0 GHz							100 W	Q1 2012	AD651XWN243GX AD651XWN243GX	

"Richland" (2013, 32 nm)

- CPU: Two or four Piledriver-cores
- GPU: TeraScale 3 (VLIW4)
- MMX, SSE, SSE2, SSE3, SSE3a, SSE4a, SSE4.1, SSE4.2, AMD64, AMD-V, AES, CLMUL, AVX, AVX 1.1, XOP, FMA4, CXTI6, F16C, BMI
- (Bit Manipulation instructions), ABM (Advanced Bit Manipulation), TBM (Trailing Bit Manipulation instructions), Turbo Core 3.0.
- PowerNow!
- HD Media Accelerator, Hybrid Graphics
- GPU based on 4-way VLIW architecture first introduced with the HD 6900

Model number	Stepping	CPU					GPU			Memory support	TDP	Released	Part number
		Cores	Frequency	Turbo	L2 Cache	V _{core}	Model	Config ²	Frequency				
Sempron X2 250 ^[18]	A1	2	3.2 GHz	3.6 GHz	1 MB		N/A				65 W		SD250
Athlon X2 350 ^[19]	A1	2	4.0 GHz	4.2 GHz	1 MB	0.825-1.475	N/A			DDR3-1866	65 W	Jun 2013	AD3500
Athlon X4 750 ^[19]			3.4 GHz	3.9 GHz							65 W		AD3700
Athlon X4 760K (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=848)	A1	4	3.8 GHz	4.1 GHz	2 × 2 MB	N/A				DDR3-1866	100 W	Jun 2013	AD7600
A4-4000 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=81)			3.0 GHz	3.2 GHz		0.80-1.145						May 2013	AD4000
A4-4020 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=104)	2		3.2 GHz	3.4 GHz		7480D	128	720 MHz		DDR3-1333	65 W	Jan 2014	AD4020
A4-6300 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=95)	A1	2	3.7 GHz	3.9 GHz	1 MB	8370D	128	760 MHz		DDR3-1600	65 W	July 2013	AD6300
A4-6320 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=103)			3.8 GHz	4.0 GHz	1 MB	8370D	128	760 MHz		DDR3-1600	65 W	Dec 2013	AD6320
A4-6320B (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=138)	A1	2	3.8 GHz	4.0 GHz	1 MB	8370D	128	760 MHz		DDR3-1600	65 W		AD6320
A4-7300 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=129)			3.8 GHz	4.0 GHz	1 MB	8470D	192	800 MHz		DDR3-1600	65 W	Aug 2014	AD7300
A4-7300B (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=136)	A1	PR0-7300B	3.8 GHz	4.0 GHz	1 MB	8470D	192	800 MHz		DDR3-1600	65 W	Aug 2014	AD7300
A6-6400K (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=83)	2		3.9 GHz	4.1 GHz	1 MB	8470D	192	800 MHz		DDR3-1866	65 W	Jun 4, 2013	AD6400
A6-6400B (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=91)			3.9 GHz	4.1 GHz	1 MB	8470D	192	800 MHz		DDR3-1866	65 W	Jun 4, 2013	AD6400
A6-6420K (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=84)	2		4.0 GHz	4.2 GHz	1 MB	8470D	192	800 MHz		DDR3-1866	65 W	Jan 2014	AD6420
A4-6420B (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=117)			4.0 GHz	4.2 GHz		8470D	192	800 MHz					AD6420
A8-6500T (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=90)	A1	4	2.1 GHz	3.1 GHz	2 × 2 MB	8550D	256	720 MHz		DDR3-1866	45 W	Sep 18, 2013	AD6500
A8-6500 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=82)			2.1 GHz	3.1 GHz	2 × 2 MB								AD6500
A8-6500B (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=93)	A1	4	3.3 GHz	4.1 GHz	2 × 2 MB	8570D	256	800 MHz		DDR3-1866	65 W	Jun 4, 2013	AD6500
A8-6600K (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=81)	A1	4	3.9 GHz	4.2 GHz	2 × 2 MB	8570D	256	844 MHz		DDR3-1866	100 W	Jun 4, 2013	AD6600
A10-6700T (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=89)	A1	4	2.5 GHz	3.5 GHz	2 × 2 MB	8650D	384	720 MHz		DDR3-1866	45 W	Sep 18, 2013	AD6700
A10-6700 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=80)			3.7 GHz	4.3 GHz							65 W	Jun 4, 2013	AD6700
A10-6790K (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=91) ^[20]	A1	4	4.0 GHz	4.3 GHz	2 × 2 MB	8670D	384	844 MHz		DDR3-1866	100 W	Oct 29, 2013	AD6790
A10-6800K (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=79)			4.1 GHz	4.4 GHz	2 × 2 MB	8670D	384	844 MHz		DDR3-2133	100 W	Jun 4, 2013	AD6800
A10-6800B (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=92)	A1	4	4.1 GHz	4.4 GHz	2 × 2 MB	8670D	384	844 MHz		DDR3-2133	100 W	Jun 4, 2013	AD6800

"Kabini" (2014, 28 nm)

- Socket AM1, aka Socket FS1b (micro platform)
- 2 to 4 CPU Cores (Jaguar microarchitecture)
- SSE4.1, SSE4.2, AVX, AES, F16C, BMI1 support
- SOC with integrated memory, PCIe, 2x USB 3.0, 6x USB 2.0, Gigabit Ethernet, and 2x SATA III (6 Gb/s) controllers
- GPU based on Graphics Core Next (GCN)

Model number	Stepping	CPU					GPU			Memory support	TDP	Released	Part number
		Cores	Frequency	Turbo	L2 Cache	Multi	V _{core}	Model	Config ²	Frequency	Turbo		
Sempron 2650 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=108)	A1	2	1.45 GHz	N/A	1 MB		0.5-1.4V	R3 (HD 8240)	128:8:4	400 MHz	N/A		AD2650
Sempron 3850 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=107)	A1	4	1.30 GHz	N/A	2 MB		0.5-1.4V	R3 (HD 8280)	128:8:4	450 MHz	N/A		AD3850
Athlon 1510 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=106)	A1	4	1.60 GHz	N/A	2 MB		0.5-1.4V	R3 (HD 8400)	128:8:4	600 MHz	N/A		AD1510
Athlon 5350 (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=105)	A1	4	2.05 GHz	N/A	2 MB		0.5-1.4V	R3 (HD 8400)	128:8:4	600 MHz	N/A		AD5350

"Kaveri" (2014, 28 nm)

- Socket FM2+^[21] support for PCIe 3.0
- Two or four CPU cores based on the Steamroller microarchitecture
- Three to eight Compute Units (CUs) based on Graphics Core Next (GCN)^[22] microarchitecture; 1 Compute Unit (CU) consists of 64 Compute Units (CUs)
- AMD Heterogeneous System Architecture (HSA 2.0)
- SIP blocks: Unified Video Decoder, Video Coding Engine, TrueAudio^[1]
- Unified Shader Processors, 4 Texture Mapping Units (TMUs), 1 Render Output Unit (ROPs)
- Select models support Hybrid Graphics technology by using a Radeon R7 240 or R7 250 discrete graphics card^[26]
- Display controller: AMD Eyefinity 2, 4K Ultra HD support, DisplayPort 1.2 SuperSpeed^[27]

Model number	Stepping	CPU					GPU			Memory support	TDP	Released	Part number
		Cores	Frequency	Turbo	L2 Cache	Multi	V _{core}	Model	Config ²	Frequency	Turbo		
Athlon X2 450 ^[19]	A1	2	3.5 GHz	3.9 GHz	1 MB		N/A			DDR3-1866	65 W		AD450XBYB
Athlon X4 840 ^[19]			3.1 GHz	3.8 GHz							65 W		AD4700
Athlon X4 860K (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=847)	A1	4	3.7 GHz	4.0 GHz	2 × 2 MB		N/A			DDR3-1866	95 W		AD860KXB AD860KXWB
A4-PR0-7350B (http://products.amd.com/en-us/DesktopAPUDetail.aspx?id=133)													

E-240 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=2)	B0	1	1.5 GHz	512 kB	7.5x	1.175 - 1.35					500 MHz							
E-300 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=22)	B0?		1.3 GHz			6.5x		HD 6310		80:8:4	488 MHz	N/A		DDR3-1066				18 W
E-350 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=41)	B0	2	1.6 GHz	2 x 512 kB		8x	1.25 - 1.35				492 MHz							
E-450 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=21)	B0 C0		1.65 GHz			8.25x		HD 6320			508 MHz	600 MHz		DDR3-1333				

Brazos 2.0: "Ontario", "Zacate" (2012, 40 nm)

- Based on the Bobcat microarchitecture,^[36] manufactured in TSMC's 40 nm process in BGA-413 package for socket FT1
- SSE, SSE2, SSE3, SSE4a, NX bit, AMD64, AMD-V
- PowerNow!
- DirectX 11 integrated graphics

Model	Stepping	CPU							GPU					Memory support	TDP	Released	
		Cores	Frequency	Turbo	L2 Cache	Multi ¹	V _{core}	Model	Config ²	Frequency	Turbo						
C-70 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=39)	C0	2	1.0 GHz	1.33 GHz		5x - 6.65x		HD 7290		80:8:4	276 MHz	400 MHz		DDR3-1066		9 W	
E1-1200 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=150)	B0?		1.4 GHz			7x		HD 7310			500 MHz	N/A		DDR3-1066			
E1-1500 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=31)	?		1.48 GHz		2 x 512 kB					80:8:4	529 MHz	N/A					18 W
E2-1800 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=31)	B0?		1.7 GHz			8.5x		HD 7340			523 MHz	680 MHz		DDR3-1333			
E2-2000 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=31)	?		1.75 GHz			8.75x					538 MHz	700 MHz					

Brazos-F1: "Hondo" (2012, 40 nm)

- Based on the Bobcat microarchitecture,^[36] manufactured in TSMC's 40 nm process in BGA-413 package for socket FT1. Found in tablet computers
- SSE, SSE2, SSE3, SSE4a, NX bit, AMD64, AMD-V
- PowerNow!
- DirectX 11 integrated graphics

Model	Stepping	CPU							GPU					Memory support	TDP	Released
		Cores	Frequency	Turbo	L2 Cache	Multi ¹	V _{core}	Model	Config ²	Frequency	Turbo					
Z-60 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=36)	2		1.0 GHz		N/A	2 x 512 kB	5x		HD 6250		80:8:4	276 MHz	N/A	DDR3-1066	4.5 W	Oct 2011

"Kabini", "Temash" (2013, 28 nm)

- Socket FT3 (BGA)
- 2 to 4 CPU Cores (Jaguar microarchitecture)
- SSE4.1, SSE4.2, AVX, AES, F16C, BMI1 support
- Turbo Dock Technology, C6 and C6E low power states
- GPU based on Graphics Core Next (GCN)
- AMD Eyefinity multi-monitor for up to two displays

Model	Stepping	CPU							GPU					Memory support	TDP	Released
		Cores	Frequency	Turbo	L2 Cache	V _{core}	Model	Config ²	Frequency	Turbo						
A4-1200 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=87)	B0	2	1.0 GHz			1 MB		HD 8180		128:8:4	225 MHz			DDR3-1066	4 W	
A4-1250 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=86)			1.0 GHz					HD 8210			N/A			DDR3-1333	8 W	
A4-1350 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=96)							0.40 - 1.40 V	HD 8210			300 MHz			DDR3-1066	8 W	
A6-1450 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=85)								HD 8250				400 MHz		DDR3-1066	8 W	May 2013

Temash, Elite Mobility APU

Model	Stepping	CPU							GPU					Memory support	TDP	Released
		Cores	Frequency	Turbo	L2 Cache	V _{core}	Model	Config ²	Frequency	Turbo						
A4-1200 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=87)	B0	2	1.0 GHz			1 MB		HD 8180		128:8:4	225 MHz			DDR3-1066	4 W	
A4-1250 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=86)			1.0 GHz					HD 8210			N/A			DDR3-1333	8 W	
A4-1350 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=96)							0.40 - 1.40 V	HD 8210			300 MHz			DDR3-1066	8 W	
A6-1450 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=85)								HD 8250				400 MHz		DDR3-1066	8 W	May 2013

Kabini, Mainstream APU

Model	Stepping	CPU							GPU					Memory support	TDP	Released
		Cores	Frequency	Turbo	L2 Cache	V _{core}	Model	Config ²	Frequency	Turbo						
E1-2100 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=70)	B0		1.0 GHz					HD 8210		128:8:4	300 MHz			DDR3-1333	9 W	May 2013
E1-2200 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=99)			1.05 GHz				0.50 - 1.40 V	HD 8210			300 MHz			DDR3-1333	9 W	Feb 2014
E1-2500 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=69)	2		1.4 GHz		1 MB			HD 8240			400 MHz			DDR3-1333	15 W	May 2013
E2-3000 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=68)			1.65 GHz					HD 8280			450 MHz			DDR3-1600	15 W	May 2013
E2-3800 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=98)			1.3 GHz			0.50 - 1.40 V		HD 8280			450 MHz			DDR3-1600	15 W	Feb 2014
A4-5000 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=67)			1.5 GHz					HD 8330			497 MHz			DDR3-1600	15 W	May 2013
A4-5100 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=97)	4		1.55 GHz	2 MB		0.50 - 1.40 V		HD 8330			497 MHz			DDR3-1600	15 W	Feb 2014
A6-5200 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=66)			2.0 GHz					HD 8400			600 MHz			DDR3-1600	25 W	May 2013
A4 Pro-3340B (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=139)			2.2 GHz					HD 8240			400 MHz			DDR3-1600	25 W	Nov 2014

"Beema", "Mullins" (2014, 28 nm)

- Socket FT3b (BGA)
- CPU: 2 to 4 (Puma cores)
- GPU based on Graphics Core Next (GCN)
- SSE4.1, SSE4.2, AVX, AES, F16C, BMI1 support
- Intelated Turbo Boost
- Platform Security Processor, with an integrated ARM Cortex-A5 for TrustZone execution

Model	Stepping	CPU							GPU					Memory support	TDP	Released
		Cores	Frequency	Turbo	L2 Cache	V _{core}	Model	Config ²	Frequency	Turbo						
E1 Micro-6200T (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=111)	2		1.0 GHz	1.4 GHz	1 MB					R2		300 MHz		DDR3-1066	3.95 W	
A4 Micro-6400T (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=86)			1.0 GHz	1.6 GHz	2 MB		0.50 - 1.40 V			R3	128:8:4			DDR3-1333	4.5 W	
A10 Micro-6700T (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=109)	4		1.2 GHz	2.2 GHz	2 MB					R6		500 MHz		DDR3-1333	4.5 W	

Beema, Notebook APU

Model	Stepping	CPU							GPU					Memory support	TDP	Released
		Cores	Frequency	Turbo	L2 Cache	V _{core}	Model	Config ²	Frequency	Turbo						
E1-6010 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=115)	2		1.35 GHz		1 MB							350 MHz		DDR3-1333	10 W	Q2 2014
E1-6015 ^[37] (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=115)			1.4 GHz							R2						Q2 2015
E2-6110 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=110)			1.5 GHz		N/A		0.5 - 1.4 V					500 MHz		DDR3-1600	15 W	Q2 2014
A4-6210 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=110)			1.8 GHz							R3	128:8:4			DDR3-1600	15 W	Q2 2014
A4-6250 ^[38] (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=112)	4		2.0 GHz		2 MB							267 MHz	600 MHz	DDR3-1600	25 W	
A6-6310 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=112)			1.8 GHz	2.4 GHz						R4		800 MHz		DDR3-1866	15 W	Q2 2014
A8-6410 (http://products.amd.com/en-us/NotebookAPUDetail.aspx?id=130)			2.0 GHz	2.4 GHz						R5		800 MHz		DDR3-1866	15 W	Q2 2014

"Carriro-L" (2015, 28 nm)

- Socket FT4 (µBGA)^[39]
- CPU: 2 to 4 (Puma+ cores)

Model	Stepping	CPU							GPU					Memory support	TDP	Released
		Cores	Frequency	Turbo	L2 Cache	Model	Config ²	Frequency	Turbo							
E1-7010 ^[40]			1.5 GHz		1 MB	R2	DDR3L-1333	10 W	May 2015							
E2-7110 ^[41]			4 2.2 GHz		2 MB	R3	DDR3L-1600	12-15 W	May 2015							
A4-7310			4 2.4 GHz		2 MB	R4	DDR3L-1600	12-25 W	May 2015							
A8-7410			4 2.4 GHz	2.5 GHz	2 MB	R5	DDR3L-1866	12-25 W	May 2015							

Embedded processors

Brazos: "Ontario" and "Zacate" (2011, 40 nm)

- Socket FT1 (BGA-413)
- CPU microarchitecture: Bobcat^[42]
- GPU microarchitecture: TeraScale 2 (VLIW5) "Evergreen"
- Memory support: single-channel, support up to two DIMMs of DDR3-1333 or DDR3L-1066
- 5 GT/s UMI

Model number	Stepping	CPU							GPU					Memory support	TDP	Released	Part number
		Cores	Frequency	Turbo	L2 Cache	Multi ¹	V _{core}	Model	Config ²	Frequency	Turbo						
G-Series T24L	B0	1	800 MHz	1.0 GHz	512 kB	4x 5x									5 W	Mar 1, 2011	GET24LFPB12GTE
G-Series T30L	B0	1	1.4 GHz		512 kB	7x				N/A	DDR3-1066				18 W	Mar 1, 2011	GET30LGBB12GTE
G-Series T48L	B0	2	1.6 GHz		2 x 512 kB										Mar 1, 2011	GET48LGBB22GTE	
G-Series T16R	1		615 MHz		512 kB	7x					276 MHz	DDR3L-1066			4.5 W	Jun 25, 2012	GET16RFQB12GVE
G-Series T40R	1		1 GHz		512 kB	5x				HD 6250	80:8:4	280 MHz	DDR3-1066		5.5 W	May 23, 2011	GET40RFQB12GVE
G-Series T40E	2		1 GHz		2 x 512 kB							280 MHz	DDR3-1066		6.4 W		GET40EFQB22GVE
G-Series T40N†	B0	2	1.0 GHz		2 x 512 kB	5x				HD 6250 HD 6290	80:8:4	280 MHz	DDR3-1066		9 W	Jan 19, 2011	GET40NFPB22GTE
G-Series T44R	B0	1	1.2 GHz		512 kB	6x				HD 6250		280 MHz			Jan 19, 2011	GET44RFPB12GTE	
G-Series T48N	B0	2	1.4 GHz		2 x 512 kB	7x				HD 6310	80:8:4	500 MHz	DDR3-1066		18 W	Jan 19, 2011	GET48NGBB22GTE
G-Series T52R	B0	1															