Application Note

Developer Relations
Commerce Valley Drive East
Thornhill, Ontario
Canada L3T 7N6
Tel: (905) 882-2600 extension 6000
Fax: (905) 882-2620

Subject: ATI Graphic Card Listing

Date: Jan 15, 1997
P/N: APPL0016-02

Thank you for your inquiry regarding the capabilities and/or hardware configurations of ATI graphics card. On the following pages you will find a set of quick reference charts which list all retail and the most common OEM product names along with some basic information about the capabilities and hardware.

This is NOT an exhaustive list but does cover the products that applications are most likely to encounter in the installed base. The following product are **not** covered in this application note:

- Any graphics products introduced before the VGAWonder series. These include CGA/monochrome cards such as the Graphics Solution, EGA cards such as the EGAWonder and the VIP.
- Motherboard graphics which use ATI chipsets. These designs are not under the control of ATI and therefore we cannot make any representations in regards to them.
- OEM products which are sold under another vendor's trade name. The listed OEM product names are either generic or products which the vendor publicly made it known that they where manufactured by ATI. The terms of our contract with other vendors prevent us from disclosing their information.

The information is accurate to the best of our knowledge at this date. ATI may make changes to listed products or introduce new products at any time without notice. The SVGA, mach8 and mach32 family products have not been shipped for some time and therefore this information can be considered to be stable. The mach64 GX family products are currently in its end of life phase and several products are no longer shipped. It is unlikely that any new products based on the mach64 GX will be introduced. ATI is actively developing additional variants of the mach64 chipset with exciting new functionality. There will be a number of new products and using the new chipsets in existing products over the remainer of the year. Please monitor the ATI BBS, Compuserve Forum. Web site and/or Fax Back service for new product announcements.

Product Name	Bus	Chipset(s)	Memory [2]		DAC [5]	Max Color Depth (bits per pixel) [3]					H/W [4]	Comments
r = retail *o* =OEM	Type [1]		VGA/SVGA	Accel.	Types	640	800	1024	1280	1600		
SVGA (non-accelerated) Family												
VGAWonder V3 *r*	i	18800-0	256/512		IMS G176	8	8	4			chevb	
VGAWonder V4 *r*	i	18800-1	256/512		IMS G176	8	8	4			chevb	
VGAWonder V5 *r*	i	18800-1	256/512		IMS G176	8	8	4			chevb	
VGAWonder + V1 *r*	i	28800-2	256/512		IMS G176	8		4			chevi	
VGAWonder + 1Mb *r* VGA 1024D *o*	i	28800-4/5	256/512/1M		IMS G176	8	8	8			chevi	
VGAWonder XL *r*	i	28800-5	256/512/1M		SC 11483	15	8	8			chevi	
VGAWonder XL24 *r* VGA 1024 DXL *o*	i	28800-5/6	256/512/1M		20C491 Bt481	24	15	8			chevi	
VGA Basic 16 *r*	i	28800-2/4/5	256		IMS G176	4					chev	no SVGA
VGA Edge *r*	i	18800-1	256		IMS G176	8	4				chev	
VGA Edge 16 *r*	i	18800-1	256		IMS G176	8	4				chev	
VGA Integra *r*	i	28800-5	256/512		IMS G176	8	8	4			chev	
VGA 640 *o*	i	18800-0 28800-2/4/5 26300	256		IMS G176	8					chev	
VGA 800 *o*	i	18000-0 28800-2/4/5 28300	256/512		IMS G176	8	8				chev	
VGA 1024 *o* VGA Charger *o*	i	18800 0/1 28800 2/4/5	256/512/1M		IMS G176	8	8	8			chev	numerous flavors with different configurations some w/ & w/o mouse
VGA 1024 VLB *o*	v	68800 3/6	1M *d*								chev2	a short lived NON-accelerated SVGA compatible with the VGAWonder + 1Mb
VGAStereo F/X *r*	i	28800-5	256/512		SC 11483	15	8	4			chev	essentially a XL with a SB comp sound card

Product Name	Bus	Chipset(s)	Memory [2]		DAC [5]	Max Color Depth (bits per pixel) [3]					H/W [4]	Comments
r = retail *o* =OEM	Type [1]		VGA/SVGA	Accel.	Types	640	800	1024	1280	1600		
mach8 Accelerator Family												
8514/Ultra *r*	im	38800		512/1M *v*	IMS G176	8	8	8	4		8	dual bus 'flippy'
Graphics Ultra *r*	i	28800-5 38800	256/512 *d*	512/1M *v*	IMS G176	8	8	8	4		chev8i	
Graphics Vantage *r*	i	28800-5 38800	256/512 *d*	512/1M *d*	IMS G176	8	8	8	4		chev8i	
VGAWonder GT *r*	i	28800-5 38800	512 *d*	1M *v*	IMS G176	8	8	8	4		chev8i	H/W is identical to a Graphics Ultra
8514/Ultra AT *o*	i	38800		512/1M *v*	IMS G176	8	8	8	4		8	AT bus only
8514/Ultra MCA *o*	m	38800		512/1M *v*	IMS G176	8	8	8	4		8	microchannel bus only
8514 Vantage AT *o*	i	38800		512/1M *d*	IMS G176	8	8	8	4		8	AT bus only
mach32 Accelerator Family												
Graphics Ultra + *r*	i	68800-3/6	1M *d*	1/2M *d*	68875	24	24	16	8		chev82b	
Graphics Ultra Pro *r*	ie	68800-3/6	1M *v*	1/2M *v*	68875	24	24	16	8		chev82b	VGA could be disabled only ISA has mouse
Graphics Ultra Pro *r*	mv	68800-3/6	1M *v*	1/2M *v*	68875	24	24	16	8		chev82	
Graphics Ultra Pro *r*	p	68800 AX	1M *v*	1/2M *v*	68875	24	24	16	8		chev82	
Graphics Wonder *r*	iv	68800 3/6	1M *d*	1M *d*	Bt481 20C491 82C490	24	16	8	4		chev82	
Graphics Ultra XLR *o*	v	68800 3/6	1M *v*	1/2M *v*	68830 68875	16 24	16 24	16 16	8 8		chev82	Gateway 2000 both memory & DAC upgradable
Graphics Ultra AXO *o*	p	68800 AX	1M *d*	1/2M *d*	Bt481 68875	24	24	16	8		chev82	Gateway 2000
VLB mach32-D *o*	v	68800 3/6	1M *d*	1/2M *d*	68830 20C491 82C490	16	16	16	8		chev82	some with 1M non-upgradable memory
PCI mach32-D *o*	p	68800 AX	1M *d*	1/2M *d*	Bt481 20C491	24	24	16	8		chev82	some with 1M non-upgradable memory
ISA mach32 *o*	i	68800 3/6	1M	1/2M *d/v*	68875	24	24	16	8		chev82b	came with or without mouse port

Product Name	Bus	Chipset(s)	Memory [2]		DAC [5]	Max Color Depth (bits per pixel) [3]					H/W [4]	Comments
r = retail *o* =OEM	Type [1]		VGA/SVGA	Accel.	Types	640	800	1024	1280	1600		
mach64 Accelerator Family												
Graphics Xpression *r*	ivp p	GX C/D or CT C/D	1/2M *d*	1/2M *d*	ST 1702 CH8398 20C408 68875 internal	32	32	16	8		v	
Graphics PRO TURBO *r*	ivp	GX C/D	2/4M *v*	2/4M *v*	68860 B/C	32	32	32	24		v	
Win Boost *o*	ivp p	GX C/D or CT C/D	1/2M *d*	1/2M *d*	ST 1702 CH8398 20C408 internal	32	32	16	8		v	
Win Turbo *r*	ivp	GX C/D	2M *v*	2M *v*	68860 B/C	32	32	16	8		v	
Win Turbo *o*	vp	GX C/D	2/4M *v*	2/4M *v*	68860 B/C	32	32	32	24		v	some upgradable to 2M and others to 4M
Graphics PRO TURBO 1600 *r*	p	GX F	2/4M *v*	2/4M *v*	RGB 514	32	32	32	24	16	v	Available Q3 '95
Video Xpression *r*	p	264VT	2M *d*	2M *d*	internal	32	32	16	8		v	
Video Boost *o*	p	264 VT or 264 VT 2	2M *d*	2M *d*	internal	32	32	16	8		v	
Video Xpression+ *r* Video Boost S *o*	p	264 VT 2	2M *s*	2M *s*	internal	32	32	16	8		v	
3D Xpression *r*	p	3D RAGE	2M *d*	2M *d*	internal	32	32	16	8		v	
3D Xpression+ *r*	p	3D RAGE II	2/4M *s*	2/4 *d*	internal	32	32	32	24		v	
3D Xpression+ PC2TV *r*	p	3D RAGE II	2/4M *s*	2/4 *d*	internal	32	32	32	24		v	equipped with ImpacTV video output
3D PRO TURBO PC2TV *r*	p	3D RAGE II	4/8M *g*	4/8M *g*	internal	32	32	32	32	16	v	equipped with ImpacTV video output
All-In-Wonder	p	3D RAGE II	2/4M *d*	2/4M *d*	internal	32	32	16	8		v	equipped with ImpacTV video output, video input and TV tuner

[1] i = ISA, e = EISA, m = microchannel, v = VLB, p = PCI
[2] -mach8 based products use separate controllers and memory for VGA and for accelerator modes

-mach32 based products share a common pool of memory between VGA and accelerator modes but the VGA hardware can only access 1M
-mach64 based products share a common pool of memory between VGA and accelerator modes and all memory is accessible in either VESA VBE or accelerator modes
- d = dram, v = vram, s = sdram, g = sgram
3 - based on maximum memory installed
- in the case of mach8/32 for accelerator modes only, VGA modes are limited to 8bpp
4 - H/W compatibility c = CGA, e = EGA, h = Hercules, v = VGA, 8 = 8514/a, 2 = ATI 28800, b = Bus mouse port, i = InPort mouse port
5 - See Application Note #10 for more detail