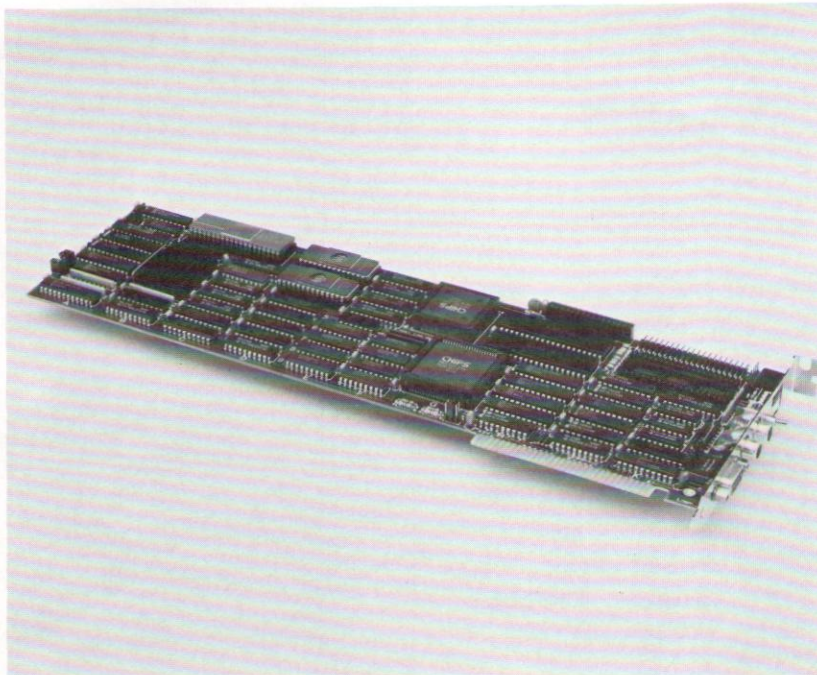


ORCHID TurboEGA™



TurboEGA

Enhanced Graphics Adapter and High-Speed Accelerator for IBM PCs and XTs

The Perfect Microsoft Windows™ Engine

Orchid's TurboEGA is the complete solution. We took our popular TinyTurbo 286™ accelerator and our Orchid EGA™ card and combined them onto one card to give you three times more speed and beautiful graphics. Now power-hungry programs can run on a PC. There's even a socket for an optional 80287 math processor. TurboEGA packs all of these functions into one slot at an affordable price.

Speed, Simplicity, Savings - TurboEGA upgrades your PC or XT to the performance of an IBM AT without the complications of transferring files to a new system. TurboEGA is transparent to the user so you don't have to spend hours learning how to use a new system—just plug in the TurboEGA and go. You save time and money and get AT speed for running high-powered programs like Microsoft Windows. The increase in productivity will pay for the TurboEGA in just a few weeks.

Superb Graphics and Text - TurboEGA is four video boards in one to give you full compatibility with the IBM EGA, CGA, MDA, and the Hercules Graphics card. It gives you the industry's breathtaking new standard: EGA color graphics with 640 x 350 resolution and 16 colors displayable out of a palette of 64. And you get full-color text with an 8 x 14 character cell on the IBM Enhanced Color Display or monochrome text in a 9 x 14 character cell on a monochrome display.

Applications - The high-speed, high resolution TurboEGA speeds up all types of software so you'll finish your work more quickly. It's perfect for supercharging CAD programs such as AutoCAD, P-CAD, VersaCAD, CADVANCE, MICRO CADAM, or drafix. Data bases like dBASE and VP-info sort with the speed of an AT. Lotus 1-2-3 and SuperCalc 3 calculate up to 3 times faster. If you use Freelance, Energraphics, Diagraph, or other presentation graphics packages, you won't have to sit and wait for your graphic displays. With painting programs like PC Paint Plus, EGA Paint, or Windows Paint™, graphic artists can let their creativity flow instead of waiting for their PCs'. And word processing with Word Perfect or Windows Write™ is executed without hesitation.

ACCELERATOR

- ▲ Supercharges a PC or XT to run Faster than an IBM-AT
- ▲ 80286 runs applications from high-speed cache on its 16-bit bus
- ▲ Speeds up graphics, networks, spreadsheets, EMS memory, data bases
- ▲ 8088 processor stays in the system for 100% compatibility

GRAPHICS

- ▲ Four-in-one graphics board: EGA, CGA, MDA and Hercules compatibility on a single board
- ▲ 256K graphics RAM comes standard
- ▲ High-resolution color graphics: 640 x 350 resolution; 16 colors displayable out of a palette of 64

Benchmark	IBM XT	IBM AT	TurboEGA
AutoCAD Nozzle Regen	202	102	82/17.6*
Spreadsheet Calculation	44	15	14
Data Base Sort	25.4	13.4	14.9
PC Paint Plus Fill Screen w/Color	109	42	37

(Time in seconds)

* With 5 MHz 80287 installed

ORCHID TurboEGA™

Technical Specifications

System Requirements: IBM PC, XT or 8088-based compatible

Monitors (TTL):
 ECD Enhanced Color Display (IBM 5154)
 21.85KHz & 15.75KHz H. scan
 CD Color Display (IBM 5153)
 15.75KHz H. scan
 MD Monochrome Display (IBM 5151)
 18.43KHz H. scan

Standards Supported:
 EGA Enhanced Graphics Adapter
 CGA Color Graphics Adapter
 MDA Monochrome Display Adapter
 HGC Hercules Graphics Card

Modes:	Text Modes	Char Cell	Colors	Screen Format	Required Monitor
	EGA	8 x 14	16/64	80 x 25	ECD
	CGA	8 x 8	16	80 x 25	ECD, CD
		8 x 8	16	40 x 25	ECD, CD
	MDA	9 x 14	2	80 x 25	MD
	HGC	9 x 14	2	80 x 25	MD
	Graphics Modes	Graphics Resolution	Colors	Screen Format	Required Monitor
	EGA	640 x 350	16/64	80 x 25	ECD
		640 x 350	4/64	80 x 25	ECD
		640 x 200	16	80 x 25	ECD, CD
		320 x 200	16	40 x 25	ECD, CD
		640 x 350	2	80 x 25	MD
	CGA	320 x 200	4	40 x 25	ECD, CD
		320 x 200	2	40 x 25	ECD, CD
		640 x 200	2	80 x 25	ECD, CD
	MDA	720 x 348	2	80 x 25	MD
	HGC	720 x 348	2	80 x 25	MD

Size: Full length, single board

Connectors: DB-9 for Video output
 Feature connector with 2 RCA jacks
 Berg strip for light pen

CPU: 8MHz 80286 operating at 7.2MHz
 Socket for PC's original 8088

Cache: 8 kilobytes RAM

Software: Diskette provided for Hercules and CGA emulation

Math: Socket for optional 5MHz or 8MHz 80287 floating point math processor (highly recommended for best CAD performance)

BIOS: 300% faster than the IBM EGA BIOS

Quality Engineering

Orchid TurboEGA was designed and built by Orchid in the U.S. We took our time to engineer a quality solutions oriented product. We back our TurboEGA with a one-year warranty and have a dedicated support staff standing by to assist you. These are the qualities that makes Orchid the leader in innovative PC add-ons.

How the TurboEGA Supercharges Your Applications

A ribbon cable runs from the TurboEGA to your host computer's 8088 socket. Plug the original 8088 into the socket on the TurboEGA. A rear-panel switch toggles between the 8088 and the 80286 processors to alleviate any compatibility problems. With the switch in Turbo mode, the TurboEGA's 80286 processor turbo-charges your 8-bit PC or XT with a high-speed 16-bit processor.

If you already have an AT but need the benefits of an EGA then Orchid also has the Orchid EGA with the same four video board compatibility.



ORCHID TECHNOLOGY

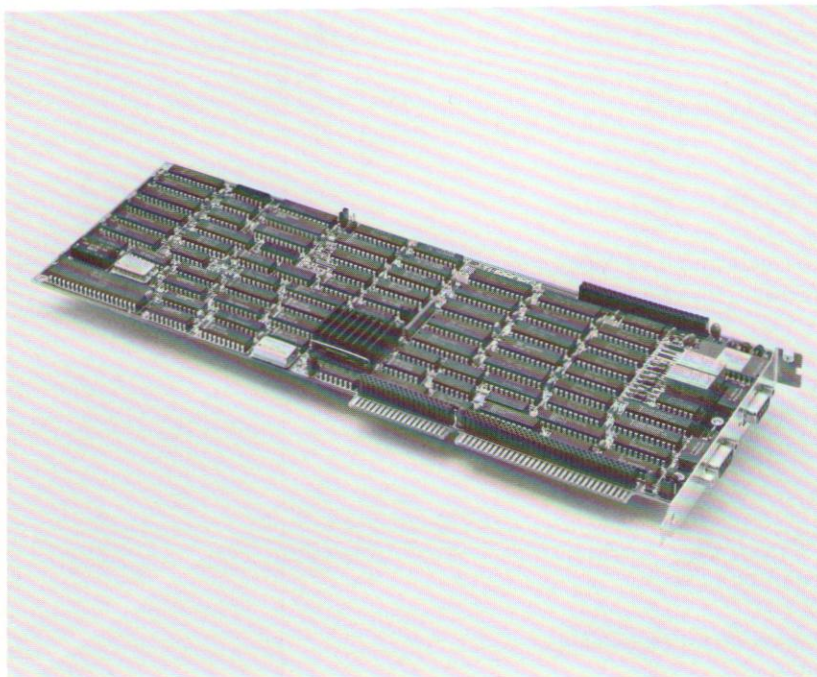
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ORCHID (EUROPE) LTD.

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ORCHID TurboPGA™



- ▲ Single-slot, single-board design
- ▲ Compatible with the IBM PGC
- ▲ Up to 100 times faster than the IBM PGC
- ▲ 640 x 480 resolution
- ▲ 256 colors from a palette of 262,144
- ▲ 3-D & 2-D commands
- ▲ Hardware pan and 4-level zoom
- ▲ Half of IBM's price

TurboPGA:

High-Speed, Low-Cost Professional Graphics Adapter for IBM ATs

Orchid's TurboPGA is the first low-cost Professional Graphics Adapter that is compatible with IBM's high-resolution professional graphics standard. The TurboPGA has the added benefit of greater speed because it uses an on-board 8MHz 80186 processor. This results in a speed increase of up to 100 times over IBM's board with an average increase of about 5 times.

With a resolution of 640 x 480, a palette of over a *quarter of a million colors*, and high-speed graphics, the TurboPGA is an excellent choice for all applications. CAD, graphic art, medical and geological imaging, industrial controlling, and scientific development are just a few areas that can benefit from the TurboPGA. For the serious CAD user, TurboPGA already supports all major software such as: AUTOCAD, VERSACAD, ANVIL 1000MD, CADVANCE, P-CAD, MICRO CADAM and more.

When you base your graphics workstation around the TurboPGA, you get more than a low-cost, high-performance graphics board. You get the benefit of going with the industry standard, the same standard used by IBM. TurboPGA ends the compatibility and obsolescence worries associated with non-standard boards. Make an investment that gives you confidence—Orchid's TurboPGA.

Greater Monitor Flexibility

To maximize flexibility, the Turbo PGA gives you two choices instead of on-board CGA emulation:

Single Monitor Non-dedicated Graphics Workstation

The TurboPGA allows you to connect the output of your own EGA* or CGA card into the TurboPGA. With the TurboPGA connected to a variable-sync monitor, you can switch between PGA output and your other video card's output on the fly. This allows you to use your workstation for more general applications such as word processing or spread sheets. This way you can get the maximum usage from your investment.

Dual Monitor Professional Style Workstation

You can use the TurboPGA with a standard IBM-PGC-compatible monitor such as the Amdek 730. This allows a separate monitor with its compatible video adapter to give you a continuously displayed text screen, similar to professional dedicated CAD systems. Many people use the second monitor to display commands, help screens, and other computer applications.

*EGA cards require optional Orchid Digital-to-Analog Converter or Orchid's EGA daughtercard.

TurboPGA™

Technical Specifications:

Output:	Analog
Horizontal scan frequency:	30.48 KHz
Vertical scan frequency:	60 Hz non-interlaced

When used in conjunction with other video cards and a variable-sync monitor, the horizontal and vertical scan frequencies will equal that of the other cards while they are in use.

Power consumption:	4.5 amps
Drawing speeds:	
Drawing rate	30,000,000 pixels/sec.
2-D (10 cm H. & V. lines)	5000 vectors/sec.
3-D (Rotating Cube)	320 vectors/sec.
Solids (Circle)	8,380,000 pixels/sec.
Standard Text (8 x 12)	14,800 characters/sec.

Colors:	256 displayable out of 262,144
Display RAM:	320 kilobytes
Communications buffer:	4 kilobytes
Processor:	8MHz 80186

Features:

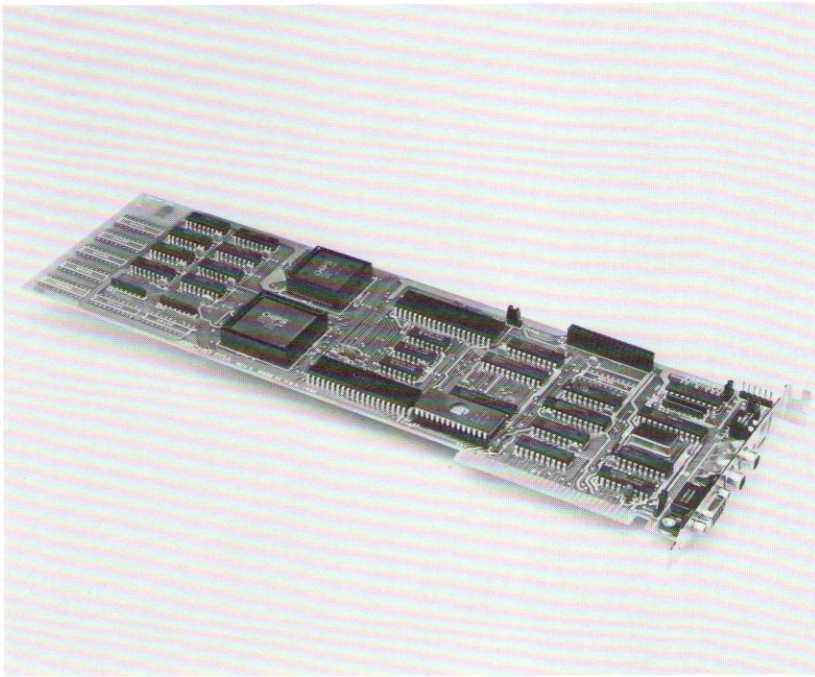
- Zero wait-state, 16-bit host interface
- VDI compatible
- Directly accessible display memory through 3K movable window

Operating Temperature:	0-55°C
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ORCHID EGA™



- ▲ Four-in-one graphics board: EGA, CGA, MDA and Hercules compatibility on a single board
- ▲ Fully compatible with IBM EGA
- ▲ 256K graphics RAM comes standard
- ▲ High-resolution color graphics: 640 x 350 resolution; 16 colors displayable out of a palette of 64
- ▲ Includes Screen Saver software
- ▲ Light Pen interface
- ▲ BIOS 300% faster than the IBM EGA BIOS

Orchid EGA

Enhanced Graphics Adapter for the IBM PC, XT, AT, and Compatibles

Includes All Four of the Most Popular Video Adapters

Now you can use your present graphics software and run the new programs written for the Enhanced Graphics Adapter, the industry's new standard in color graphics. The Orchid EGA gives you unsurpassed functionality and compatibility. More compatible than any comparable EGA, the Orchid EGA runs programs such as AutoCAD and Lotus 1-2-3 in EGA, CGA or even Hercules mode.

Benefits - The Orchid EGA gives you high-quality text: full-color text with an 8 x 14 character cell on the IBM Enhanced Color Display; monochrome text in a 9 x 14 character cell on a monochrome display.

The Orchid EGA's powerful graphics let applications such as Lotus 1-2-3 or Microsoft Windows convey more information more effectively so you will be more productive with your PC. The latest presentation graphics programs such as Freelance, Show Partner, Energraphics, or Diagraph increase the impact of your presentations. Your PC becomes a powerful, high-resolution color CAD workstation with programs such as AutoCAD, VersaCAD, CADVANCE, drafix, or Generic CAD. Graphic arts programs such as PC Paint Plus, EGA Paint, or PC Paintbrush give your creativity a brilliant canvas. And there are countless more applications.

Recommended Systems - The Orchid EGA is engineered to work in IBM PC, XT, and AT computers to give you a high-resolution color display. However, as with the IBM EGA, there is a significant loss in performance with PCs and XTs due to the heavy processing burden placed upon the 8088 processor. If performance equaling that of an AT is required then Orchid's TurboEGA is recommended. This board has a high-speed 80286 replacement accelerator and the Orchid EGA all on one card.

Quality Engineering

The Orchid EGA was designed and built by Orchid in the U.S. While others rushed to the market, we took our time to engineer a quality product. That's why the Orchid EGA comes with a one-year warranty that can be doubled simply by returning the registration card. And Orchid's dedicated support staff is standing by to assist you. These are the qualities that makes Orchid the leader in innovative PC add-ons.

ORCHID EGA™

Technical Specifications

System

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