



BARRACUDA

PC-Based Image Generator

BARRACUDA offers dramatic technological advances over all existing PC-based IGs. Increased pixel and polygon performance, essential simulation effects, scalable architecture, and an affordable price combine to make this high-end graphics board the number one IG solution for all simulation requirements, including full-mission applications.

Primary Image has been designing high-performance graphics solutions for the PC-platform since the early 1990's, and as a result, its expertise is unsurpassed by any other IG manufacturer. Like its predecessors, **BARRACUDA** extracts the very best performance from any application and provides a number of unique and key benefits:

Advanced simulation features and high-definition images ensure maximum realism for all training applications:

- True, full-screen, super-sampled anti-aliasing on pixels and depth buffer
- Advanced texture modes include anisotropic sharpness filtering, surface contour and environmental texture mapping. All detail and projected textures achieved in real-time
- Special effects include fog, rain, reflections, shadows and sensor simulation
- High resolutions, up to and including HDTV
- Overcomes non-deterministic aspect of NT

BARRACUDA has phenomenal price-to-performance ratios:

- Parallel, multi-pipelined, multi-path, flexible IG
- Ultra-high pixel and polygon throughput
- On-board polygon and texture storage
- On-board, flexible and programmable polygon processor

BARRACUDA is based on the increasingly powerful and highly flexible PC-platform:

- True, user-controlled scalability guarantees pixel and polygon performance upgrades are immediate and cost-effective
- Enables flexible, single or multiple channel configurations to keep within your budget limits
- Hardware support for all major simulation API's with Tempest, OpenGL and GLIDE interfaces. Upgradable software to support custom or new API's
- Complete forward and backward compatibility to secure 'through-life' support of your training solution

BARRACUDA supports all training applications:

- Requires no specialist training or costly first-line support
- Manufacture traceability provides for upgrades, maintenance and software revisions
- Standard PCI Bus Interface
- Introduces full-screen sub-pixel anti-aliasing to OpenGL

Web Site: www.primary-image.com





BARRACUDA

...Virtually Unstoppable...



BARRACUDA Technical Specification:

Entry level:

Single board with on-board geometry processor

Expansions:

Multiple boards per channel
Multiple channels per system

Barracuda SuperHighway - PCI broadcast board for multiple board applications

Barracuda Cruncher - Local geometry processing expansion cards

Channel expansion: 1 to 16 channels

Pixels / second / channel:

Up to 400 million anti-aliased (tri-linear & detail, Z-buffered, lit)
Peak rate 4800 million texture calculations / second

Simulation polygons:

Up to 300K / channel / second (IG mode)
Up to 1M / channel / second (accelerator mode)

Real-time texture modes:

Linear, bi-linear, tri-linear, tri-linear with detail, tri-linear with projected textures, glisten mapping, surface contour texturing, anisotropic

Video memory:

32 to 256 bits per pixel

Anti-aliasing:

Full screen sub-pixel on both pixels and Z-buffer 2 to 8 sub-pixels

Polygons:

Flat, lit, gouraud shaded, textured flat, textured lit, textured gouraud, additive projected, modulate projected alpha blend transparency

Lighting:

Lighting calculated per pixel and per polygon modes

Fading:

Calculated per pixel, linear, exp, exp2 modes

Texture polygon memory:

32 Mbyte to 64 MBytes on line

Pixel write capacity:

@ 1280 x 1024, 60Hz - 5 times
@ 1024 x 768, 60Hz - 8 times

Video resolutions:

Flexible video mode support
VGA (640x480) to (1280 x 1024)

Gamma correction:

Programmable

Video outputs:

0.7Vpp RGBHV synchronization

Software interfaces:

Software renderers supporting OpenGL (version 1.1)
GLIDE (version 2.4), custom renderer API's, Tempest

Host requirements:

Pentium/ Pentium II/ Pentium Pro with free PCI slots running Windows 95 / 98 / NT

Bus interface:

PCI 2.1 Compliant

Dimensions:

Height: 122 mm Length: 312 mm Depth: 17mm

Operating temperature - humidity:

0°C to +50°C
20° to 80° RH non-condensing

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