EPX™-50

EPX™ quality for price-sensitive applications.

KEY FEATURES

Rockwell Collins EPX-50 is aimed at price-sensitive applications and offers the features of EPX technology running on commercial off-the-shelf PCs and commercially available graphics processors. EPX-50 is compatible with all other EPX systems, enabling customers to mix low-cost systems with higher performance systems to achieve a flexible mix of price and performance for different levels of training while sharing a common database and common host interface. In addition, because EPX-50 uses consumer graphics boards, it is positioned to leverage advancements in consumer technology.

KEY BENEFITS

> The most realistic scene fidelity, image quality and performance available using COTS PCs

> Common host interfaces, including CIGI, allowing integration with existing host systems

> Common databases with other EPX products

> Multi-channel synchronization

> Deterministic update rates, including robust scene management

> Enhanced scene realism with sensors and environmental effects through use of pixel and vertex shaders

> Mission Functions Engine (MFE) option

CHANNELS

> Configurable, from 1 to 32

TERRAIN PROCESSING

> Continuous, multiple level of detail terrain created on the fly

> Models and 3D features automatically conform to terrain

DATABASE MANAGEMENT

> Components created, edited and stored independently

> Components inserted in real time

> One or two removable SATA hard drives, typical. Additional hard disk drives available

Rockwell Collins

Building trust every day

ATMOSPHERIC EFFECTS

> Maximum visibility range: 50 nmi (25-50 typical)
> 3 layers of cloud and fog
> Regional weather with smooth transitions
> Falling snow and rain effects
> Wet surface, snow and ice covered runways/roads
> Thunderstorm cell, lightning
> Scattered clouds

TEXTURE

> 1 GByte of unified memory typical
> Continuous Texture™ with automatic, multiple-resolution texture blending
> 2-16 configurable anisotropic filtering

OCCULTING/ANTIALIASING

> Configurable from 2-8 sub-pixel samples
> Point sample, full-screen antialiasing

LIGHTING

> Gouraud or Phong lighting model
> Pixel-rate landing lights, steerable searchlights, flares, headlights

MISSION FUNCTIONS

> Collision detection: swept line segments against any object
> Height above terrain
> Line-of-sight ranging
> Laser range finding
> Intervisibility calculation (MFE required)

HIGH-PRECISION SENSOR SIMULATION

> Physics-based atmosphere model
> Sensor IG video out to post-processor: 16 bits
> Sensor video format up to 1600 x 1200
> FLIR, NVG, EO, LLTV, to include effects on sea
> Correlated databases
> Multiple IR bands
> Contrast and target area tracking with image stabilization

OVERLOAD MANAGEMENT

> Dynamic level of detail range adjustment

UPDATE RATE

> Programmable to 180 Hz (30 Hz to 60 Hz typical)
> Real-time determinism guaranteed

DISPLAY FORMAT

> Raster, programmable, non-interlaced
> Expandable up to 2048 x 1536 pixels/video output
> Analog/digital (DVI) output
> Programmable refresh rate, 60 Hz typical

INTERCHANNEL SYNCHRONIZATION

> Rockwell Collins software EPLock™ or
> Video Stream Manager (VSM) hardware genlock

HARDWARE

> Real-time processors: COTS dual-core PC
> Graphics processors: COTS dual-core PC
> Renderer: COTS PCIe graphics card

Building trust every day.

Rockwell Collins delivers smart communication and aviation electronic solutions to customers worldwide. Backed by a global network of service and support, we stand committed to putting technology and practical innovation to work for you whenever and wherever you need us. In this way, working together, we build trust. Every day.

For more information, contact:

Rockwell Collins
400 Collins Road NE
Cedar Rapids, Iowa 52498
+1.800.321.2223
+1.319.295.5100
fax: +1.319.378.1172
email: learnmore@rockwellcollins.com
www.rockwellcollins.com

Rockwell Collins

Building trust every day