

Independence IDX 8000 | Image Generator



A new standard for the most powerful and compact real-time image generation available in simulation, training and mission rehearsal applications.

Now includes GeoScapeSE® Worldwide Database with Southern California and San Francisco high resolution insets.

The Independence® Difference

Able to meet or exceed the requirements of virtually any image generation application, the Independence IDX 8000 provides the best value in open architecture, advanced IG solutions available today. IDX 8000 is perfect for any simulation system: fixed-wing and rotary-wing aviation, FAA Level-D Full-flight simulators, weapons and gunnery systems, hardware-in-the-loop sensors, automotive research, development and driving simulators, military ground vehicles, fixed base and forward air traffic control, ship's bridge, mono & stereo scientific visualization and virtual reality.

As the top-of-the-line model in the Independence IG series, the IDX 8000 leads the way in providing the industry's highest compute performance density. By incorporating low profile server-class mother boards with the latest Intel Haswell processors, and up to two of NVIDIA's "Pascal" architecture GPUs on each, the IDX 8000 achieves up to 4X the performance of the previous NVIDIA technology.

With its smaller package and increased performance, IDX 8000 sets the standard for rapid deployment, field upgradeability and scene realism. The IDX 8000 delivers performance, fidelity, reliability, quality and overall value. With its NVIDIA Quadro Sync technology, the IDX 8000 can scale up to any large system, with over 50 synchronized channels.

Features

Industry-Leading Technology Insertion Capabilities

- Compatibility with existing application software, synthetic environments and program certifications
- Reduce life cycle costs by using common PC components

Scalable Performance and Fidelity

- Performance and fidelity can be tailored at the channel level for both OTW and sensor simulation channels

Optional

- Choice of three GPU price/performance levels:
 - NVIDIA Quadro P4000, P5000 or P6000 (subject to availability)

Maximum Visual Computing, Minimal Space

- 1U IGR8 combines server-class mother board, latest Intel processors, 1 or 2 NVIDIA GPUs, and precision sync modules to provide the best performance computing density
- Ideal for 20/20 visual acuity and deployed mission rehearsal

Open Architecture Support

- Optimized support for CIGI 3.x over dedicated gigabit ethernet
- Optimized support for industry standard synthetic environment formats: NPSI, CDB, OpenFlight, and CTDB
- Optional support for DIS & HLA protocols via CIGI

Certifications

- CE, FCC level A, and ETL-certified to ensure compliance with U.S. and international

Enhanced Sensor Simulation (Quest2 and viXsen)

- High-dynamic range (16-bit) real-time at aperture, environmental rendering
- JRM SigSim-based sensor simulation available
- Correlated OTW with sensor view
- Local Area Contrast Enhancement (LACE)
- Compatible with Camber RTK and Boeing MMRS
- Material classified textures from OTW databases using Quantum3D (NTDDS) and popular third-party (MCM) material classifier tools

Shader-Based Real-Time Rendering

- Advanced weather: 3D volumetric clouds, lightning, fog, cloud shadows
- Advanced marine: 3D ocean, shoreline simulation, reflections on water
- Rotorwash, realtime shadows and foliage, spotlights

FAA Level-D Full-Flight Simulation Capable

- Lightpoints, thunderstorms, patchy fog, runway contaminants, lightning, etc.

Worldwide Database (WWDB)

- 10M/15M background imagery
- Level 1 DTED
- Capability to customize drop-in high resolution insets
- Continuous flight
- Southern California high resolution inset
- San Francisco International Level D capable inset

Outputs

- Standard dual-link DVI real-time 3D output support for digital video formats (P5000 and P6000) display port only for P4000
- Native support for High Resolution projectors
- Standard support for genlock to external sync sources
- Optional support for interlaced outputs (OTW and sensor simulation channels)
- Optional customer-specific timings

Specifications*

IG Characteristics

- Noise-suppressed 12U, 18U or 35U cabinet
- Single-phase or 3-phase power with optional UPS
- KVM support for console
- 1U IG Controller (IGC)
- 1U IG Rendering Units (IGU)
- Environment Management System (EMS) monitors temperature, humidity, and smoke detection (optional)
- Optional 1U SAS expansion drive bay w/ 4x4TB disks
- Optional Fibre Channel Centralized NAS storage

IGU Rendering Units

- 1U diskless, server-class PC
- Intel Xeon Haswell Six-Core CPU + 32GB ECC DRAM
- 64-bit Windows 7 Embedded Standard
- 1 or 2 NVIDIA Quadro P4000, P5000 or P6000
- Up to 4 video channel outputs per IGU

IGC (Controller)

- 1U Enterprise Class Server
- Intel Xeon Haswell Six-Core CPU
- 16GB ECC System Memory
- NVIDIA GPU
- Enterprise RAID controller w/3 internal 4TB disks (not required when using the NAS option above)
- Microsoft Windows Server 2012

*Specifications subject to change