QUANTUM3D
TRAINING. SIMULATION. TECHNOLOGY.

Independence IDX 9000 | Image Generator

A new standard for the most powerful 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 9000 provides the best value in open architecture, advanced IG solutions available today. IDX 9000 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 9000 leads the way in providing the industry's highest compute performance density. Incorporating server-class mother boards with the latest Intel Xeon Scalable processors, and up to four NVIDIA's RTX GPUs on each 4U node, the IDX 9000 delivers cutting edge performance.

With its smaller package and increased performance, IDX 9000 sets the standard for rapid deployment, field upgradeability and scene realism. The IDX 9000 delivers performance, fidelity, reliability, quality and overall value. With its NVIDIA Quadro Sync technology, the IDX 9000 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 RTX A4000, RTX A5000 or RTX A6000 (subject to availability)

Maximum Visual Computing, Minimal Space

- 4U IGR9 combines server class dual processor mother-boards, the latest Intel Xeon Scalable Processors, up to 4 NVIDIA Quadro RTX GPUs, and precision sync modules to provide the best performance computing density
- Ideal for 20/20 visual acuity and deployed mission rehearsal

Optimized Support for Quantum3D's MANTIS Image Generator Software

- Synchronized and correlated multichannel support
- CIGI 2.0, 3.x and 4.0 host interface
- FAA Level D capable
- Large range of optional plugins, including:
  - Advanced weather & marine effects
  - Runway effects & global airports
  - Support for both proprietary and CDB terrain databases
  - Sensor support for SWIR, MWIR, LWIR, NVG simulation/stimulation and TV channels

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

World-Wide Database (WWDB)

- 15M background imagery, Level 1 DTED elevation
- Supports drop-in high-res areas of interest (AOIs)

Outputs

- Standard DisplayPort real-time 3D output support for digital video formats
- 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

Certifications

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

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)
- 4U 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

- 4U Diskless Enterprise Class Server
- Dual Intel Xeon Scalable 8 Core CPU + 64GB ECC DRAM
- 64-bit Windows 10 LTSC
- Up to 4 NVIDIA Quadro RTX A4000, A5000, or A6000 GPUs
- Currently supports 4 video channels per IGU (1 CH/GPU)

IGC (Controller)

- 1U Enterprise Class Server
- Intel Xeon Scalable 8 Core CPU
- 48 GB ECC System Memory
- NVIDIA Quadro GPU
- Enterprise RAID controller w/3 internal 4TB disks (not required when using the NAS option above)
- Microsoft Windows Server 2019

*Specifications subject to change