Our rendering system Vector is a complete solution for high-end virtual studio applications. The system is designed for live broadcasting of television stations. It includes hardware as well as software and is able to produce scalable networked interactive real-time graphics in broadcast quality. Vector uses the best graphic performance available today and supports all hardware accelerated technologies. Vector’s drag and drop user interface makes it easy to handle most complex virtual environments. You have complete control over all geometries, animations, cameras and chroma key setups. A rundown list for on-air play control can easily be generated. Different user modes and the highly configurable interface make StudioCfg the only tool necessary to setup and run your virtual studio application via networking. Our rendering system Vector provides more performance in real-time and thus in live production than any other known system. Custom solutions for special setups and additional features are available upon request.

The complete solution for high-end virtual studio applications. Full control and free configuration.
Hardware

Dual processor setup for best multitasking performance. 2 GB of RAM for the most complex scenarios. Redundant powersupplies and raid harddrive systems for secure uninterrupted performance.

- 24 parallel rendering pipelines.
- 512 megabytes of 256-bit DDR memory.
- Full support for programmable vertex and pixel shaders in hardware supporting high-level shading or assembly languages.
- Capable of processing up to 1,400 million vertices per second.
- Up to 128-bit per pixel floating point colour precision.
- Complete feature set of OpenGL® including extensions.
- Dual GPU systems (configurations possible).
- Full scene anti-aliasing (up to 16x).
- Driver architecture for integration of multiple broadcast video I/O Boards.
- SDI output in 4:2:2:4
- Key channel SDI output.
- Capture multiple SDI inputs in 4:2:2:4
- Key channel SDI input.
- Optional GPI module for external trigger control.

Software

A complete solution for high-end virtual studio applications, including full camera tracking, optional chroma keyer, video I/O, integrated setup and design tools and a freely configurable runtime control application with drag and drop functionality.

- Complete integration into 3D Max® for scene export, shader management, animation control, video options and other custom virtual studio options.
- Standard TCP/IP protocol command syntax for control from custom interfaces or integration into existing media control systems.
- Integration of tracking systems via driver architecture for networking, parallel or serial protocol.
- Support for fixed position camera sensor heads, optical and encoder based.
- Live video sources can be used as standard textures on any 2D or 3D surface with full field-rendering support.
- Broadcast video quality output with optional parallel rendering for best anti-aliasing quality and field based filtering.
- A smooth depthblur can be coupled with tracking data to simulate realworld optical depth of field.
- Optional chroma keyer with extended color suppression control.
- Real-time non-linear animations, controlled by scripts.
- Based on the Shark3D high-end real-time 3D application development kit for VR applications, visualisations and games, optimised for multi-node networking and multi-user applications. The core technology includes a modern 3D renderer, a universal object management system and seamlessly integrated networking and multi-user. The technology is an inherently open system allowing us to add new functionality in a flexible way.
- Universal shader configuration system including multitexturing, multipass rendering, blending modes and transparency, multi-channel shader animations, and freely configurable hardware shader programs.
- Mirrors, reflections and refractions. Including static and mobile mirrors, transparent and opaque. Including distortion effects.
- Video streams as textures with alpha.
- Font rendering, real-time keying, hierarchical animation, mesh deformation.
- Export integration into 3D Max®