

FPV UAV Simulator



Ultra-low footprint FPV UAV training

MVRsimulation's® First Person View (FPV) UAV Simulator provides a highly-realistic training solution for the operation of racing-style quadcopter attack drones on the contested battlefield. The internally-developed simulator combines MVRsimulation's Virtual Reality Scene Generator® (VRSG®) with a high-fidelity flight model from Bihrle Applied Research, to replicate the tactile, visual and cognitive demands of operating agile UAVs in combat to successfully defeat enemy targets.

The FPV UAV can be used as an ultra-low footprint stand-alone training device for tactical operations or networked with other in-use air and ground simulators that operate on the VSRG infrastructure, enabling Large Scale Combat Operations (LSCO) training. The FPV UAV can integrate with GOTS and commercial semi-automated forces (SAF) software to see all entities in the simulated environment.





High-fidelity visualization

MVRsimulation's VRSG provides highly-realistic simulated environments for users to train to acquire, identify, prioritize and defeat ground targets. VRSG streams full motion video (FMV) including KLV metadata to stimulate tactical communication systems. Build geospecific and accurate training environments using MVRsimulation's extensive 3D model library and geospecific terrain. VRSG's 3D model library includes over 10,200 military, commercial, human and culture models. Models have articulating parts, damage states, advanced animations, and thermal hot-spots.

Realistic flight model

Bihrle's high-performance physics model is configured as a very lightweight quad-rotor racing drone UAV with front-facing FPV camera and attachable payload. It has been developed to replicate a high-performance UAV similar to those in active use. The high-fidelity model is hosted in Bihrle's DSix simulation environment. The simulation employs a modular physics-based blade-element framework that has been used for full-scale rotorcraft training applications in Full Flight Simulators (FFS) and Flight Training Devices (FTD).



Train to defeat targets

- Navigate visually in detailed terrain that closely replicates real-world locations using VRSG's whole-world round-earth VRSG terrain with high-resolution and 3D cultural inset areas of interest.
- Locate, identify and defeat targets using VRSG's continually-updated real-time 3D model library, including military platforms and weapon systems currently being deployed on battlefields worldwide.
- Create and edit real-time 3D scenarios to play back in VRSG: Use Scenario Editor's (included) game-level editor type interface to add culture and moving models directly to 3D terrain to create dense 3D scenes and build pattern-of-life scenarios including damage states for the culture area as real-time effects.
- Train for the real-world experience of operating in electronically denied and degraded environments: The VRSG stream can be downrated as the range of the UAV flight increases and replicate the effects of counter-UAV devices such as EW jammers.
- VRSG streams HD-quality H.264 video complete with KLV metadata to integrate with ATAK.
- System specifications can be found at www.mvrsimulaton.com/products/fpv-uav-simulator.html.





For more information, visit www.mvrsimulation.com, contact sales@mvrsimulation.com or scan the QR code.



