

# CAESprint

Virtual Reality (VR) Trainer



## Overview

The CAE Sprint Virtual Reality (VR) trainer is an integral element of the CAE Trax Academy, a student-centric, self-paced, or instructor-led training continuum - a system integrating multiple training elements and tools for a closed-loop, integrated, immersive training experience. More than just another simulation-based training device, the CAE Sprint VR trainer is a medium to deliver lesson content and guided training to help pilots gain skills faster, train for events which cannot easily be replicated in the air and improve crew-based operational performance, enabling the transition from single pilot to multi-crew training.

### CAE Sprint Virtual Reality (VR) Trainer

The CAE Sprint VR Trainer is a high-fidelity immersive training device, adaptable to the gamut of student needs.

Visual immersion is enabled via a VR headset with high-resolution out-the-window visuals generated by the CAE Prodigy image generator while delivering the visual acuity to read the instrument panel. Primary flight controls, available for both fixed wing and rotary wing aircraft provide realistic force feedback to improve training value.

### The realistic immersive experience of the CAE Sprint VR trainer is enhanced by:

- Platform-tailored configurations leverage full-fidelity software for efficient training capabilities
- Excellent visual quality delivered by the integration of the Head Mounted Display (HMD) and CAE Prodigy image generator to provide a realistic out-the-window (OTW) visual environment, with 20/20 visual acuity enabling the ease of cockpit instruments reading
- Sound environment enablement
- Biometric evaluation tools



### The CAE Sprint VR trainer helps support better student throughput:

- Students train at their own pace, not limited by communal progress at the group/class level, or blocked by scheduling restrictions
- The CAE Sprint VR trainer can be reconfigured to provide training on multiple platforms for both fixed-wing and rotary wing aircraft
- Visual database, collimated Heads Up Display (HUD), full weather simulation consistent with high-fidelity simulator
- Multiple CAE Sprint VR trainers can be linked to enable crew or team training; physical controls can be automated to reproduce instructor follow-through lesson experience
- Low cost of ownership facilitates an increased number of devices available for training

### The CAE Sprint VR Trainer better supports quality training when integrated with CAE Trax Academy:

- Embedded CAE Trax Academy training content provides higher value than VR simulation alone
- The CAE Sprint VR training device can be interfaced with the current Learning Management System (LMS) in use
- CAE's Adaptive Learning system, captures student learning data at a micro-level to provide AI-based recommendations for personalized learning
- The CAE Virtual Coach delivers immediate, actionable instruction and feedback
- CAE Rise (Real-time Insights and Standardized Evaluations) performance assessment, tracking and benchmarking for continuous improvement
- CAE's courseware provides a common core simulation base ensuring continuity throughout the training continuum

## CAE Sprint VR Training Device Configuration

Configuration profile*	Platform-tailored cockpit controls
Training tasks	Procedures training, demonstrating maneuvers, flight training, live sorties familiarization, weather conditions
Simulation	CAE high-fidelity aircraft simulation with full virtual environment (i.e. weather, sound)
Self-paced lessons	Tailored to customer curriculum
Virtual coach (provided by CAE Trax Academy)	Embedded objective assessment and real-time virtual coach powered by CAE Rise, based on: Aircraft dynamics - Flight controls - Cockpit switches - Eye tracking
Headset	High-end commercial grade headset, 20/20 eye acuity in targeted viewing area
Cockpit interface	Infrared (IR) camera-based bare-handed tracking
Structure	Representative cockpit geometry
Stick/Cyclic	Force-feedback
Throttle/Collective	Replica
Pedals	Active controls
Seat	Partial replica with electric height adjustment
Cueing	Generic high-end seat
Network	Interoperability capabilities over High Level Architecture (HLA) and Distributed Interactive Simulation (DIS)

\* Configuration profiles are based on identified training requirements as defined by a training needs assessment. The configurations above are examples.



The CAE Sprint VR trainer offers the ability to offload training tasks from high-end flight training devices and simulators. The platform-tailored nature of the CAE Sprint VR trainer reinforces platform familiarity and muscle memory for better, more realistic immersion and training.

The effectiveness of the CAE Sprint VR trainer is increased with the integration of training content and support. Small, sophisticated and affordable, the CAE Sprint VR trainer makes self-paced immersive training highly accessible, enabling student pilots to practice and put learning into action for optimum progress in training.

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