

Offboard Instructor Operator Station (IOS)



CAE offers Training System Updates to existing military customers in the form of products and services to enhance training system capability and availability, and to prolong the useful life of equipment. As a leading training expert, CAE collaborates with customers to determine the best plan of action for your needs and budget.

Overview

While an Offboard Instructor Operator Station (IOS) has been common for fighter, trainer and some helicopter simulators, traditionally the IOS for full-flight or full-mission simulators for transport, tanker, maritime patrol and other training devices is co-located within the cockpit compartment. The recent COVID-19 global pandemic has driven requirements to look for new ways to safely and efficiently deliver essential training services to help maintain preparedness and readiness. CAE is now offering a range of Offboard IOS solutions that can be integrated and adapted to **any** training device.

Offboard IOS

CAE has extended the capability of the Offboard IOS to accommodate integration with any simulator, including those with a traditional IOS behind the cockpit or with multiple aircrew members. The Offboard IOS extends the flexibility of the IOS to enable the physical absence of the instructor from the flight deck. Instructors are able to conduct training exercises from outside the full-mission simulator while still interacting with the aircrew and monitoring performance.

The CAE Offboard IOS:

- Enables the instructor to conduct training and mission rehearsal exercises without being physically present on the flight deck
- Supports the ability to reduce the number of instructors required, as necessitated by instructor shortages or social distancing measures
- Eliminates the close physical proximity ordinarily experienced in the cockpit compartment of a full-mission simulator while preserving full instructional capability and situational awareness
- Creates the potential for a single instructor to manage multiple training devices during exercises that demand a lower instructor workload, such as Government Use Training for experienced crews
- Provides customers the flexibility to operate a simulator IOS either internally or externally
- Offers the ability to control multiple simulators within a facility, thus optimizing flight simulator operation from a central location



CAE offers an easily deployable Offboard IOS solution which replicates an onboard IOS, or an option offering more extensive capability. CAE's full-fidelity Offboard IOS gives customers maximum flexibility, delivers optimum operational performance, full crew and cockpit observability, no loss in instructor capability and improved safety for all personnel.

- Secure offboard instructor environment that allows access to all information and monitoring required to execute a tactical scenario and train aircrew
- Well suited for tactical mission training
- Typically contains crew resource management (CRM) cameras
- For use on any full-mission simulator: fighter, trainer, transport, tanker, maritime patrol, helicopter
- Staffed by one or two instructors
- Supported by touch screen displays and repeaters
- Graphical representations of the cockpit instruments
- Can be used with or without the on-board IOS
- Communications with headsets
- Recording (audio/visual) for use during debrief sessions
- Keyboard/mouse
- Speakers

CAE's Offboard IOS is designed using a common baseline architecture that is adaptable to meet the specific technology and hardware configuration of the target simulator system. This helps ensure the CAE Offboard IOS solution is easily deployable to all the different simulators – CAE and non-CAE – in the field while taking advantage of existing components.

CAE's quick and deployable Offboard IOS is a low-cost and highly effective solution that can be implemented in short order. This non-intrusive installation results in no or minimal loss of training time.

Basic Offboard IOS

- Uses only equipment currently resident on target simulator system
- Remote session to Onboard IOS from existing terminal
- Provides limited instructional capability
- Period of Performance: 1 - 2 days, minimal pre-work required
- Installation performed in an evening

Full-Fidelity Offboard IOS

- IOS station with table, computers, monitors, communications, video, and Emergency Power Off/ Emergency Motion Off
- Period of Performance: 30 days total including hardware lead-time
- Common baseline architecture
- Offers optional enhancements
- Adapts to meet specifics of target simulator system
- Installation performed over a weekend

Program Examples

CAE has implemented Offboard IOS solutions on a range of programs, including the following:

- **Helicopter:** U.S. Navy MH-60R and MH-60S Seahawk, Royal New Zealand Air Force SH-2G Super Seasprite, and others
- **Fighter/Trainer:** All training devices for platforms such as T-6C, M346, Tornado, and Eurofighter include Offboard IOS solutions
- **Transport/Tanker/Maritime Patrol:** U.S. Air National Guard C-130J, Taiwan P-3C, and others

CAE's Training System Updates team is ready to provide customers with an Offboard IOS solution that improves training flexibility and enhances safety. Talk to your CAE representative to determine the right approach for your needs and budget.



Download a copy of our COVID-19 Protocol for Training Centres which provides guidance on conducting training sessions as well as recommended procedures for cleaning and disinfecting training devices. These guidelines will assist instructors, trainees and maintenance technicians with safeguarding health and safety during training and maintenance sessions. <https://www.cae.com/update-on-covid-19/>

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