



**TRU**  
SIMULATION®

ROTORCRAFT FLIGHT TRAINING DEVICE

# INTEGRA HORIZON

# CHANGING HOW YOU THINK ABOUT SIMULATION

**SIMULATOR  
COMPONENTS**

When you work with TRU Simulation™, you'll get a team who listens to your needs for today and tomorrow. Together, we'll consider your training requirements and financial realities to help you select from our full lineup of devices—supporting ab-initio to type rating pilot training. We've integrated technology across our entire product lineup, so pilots can train on the same software used in full flight simulators. Keep exploring to learn how TRU Simulation™ excels in rotorcraft simulation and how we can bring that reality to you.



## **INTEGRA HORIZON**

Discover high quality training balanced with an attractive price when compared to full flight simulators. TRU Simulation™ is an expert at building the most advanced Full Flight Simulators (FFS) and our Integra Horizon™ Flight Training Devices (FTD) benefit from the same software baseline and advanced design delivering the highest fidelity and realism for this category of simulation.

### **QUALIFICATION**

**FAA, TC, ANAC, CAAC, CASA, JACB, GACA** FTD 5,6,7  
**EASA, DGCA, GCAA** FNPT II/III / FTD 2-3

## **EXPLORE THE DEVICE**

The world of simulation and training can be a complicated and confusing one. At TRU Simulation™, we are here to help guide you in understanding your training requirements and suggest a solution that is best fit for you.



The required components of an FTD are largely defined by aviation regulators. While these regulations vary from country to country, most are aligned with the FAA (14 CFR Part 60) or EASA (CS-FSTD) which are similar in their requirements. Integra Horizon™ simulators meet or exceed all regulatory requirements, but instead of a onsize-fits-all approach like many other simulator manufacturers, TRU Simulation™ prides itself on customizing the training device to meet the customer's specific needs.

## MOTION

Lower level FTDs are not required per regulations to have a motion system while this is required for the most advanced FTDs. TRU Simulation's™ REALCue™ 6 Degrees of Freedom (6DOF) electric mini-motion system is designed to accurately simulate helicopter vibrations, buffets, and additional enhanced cueing for an elevated level of pilot sensory sensation, realism, and fidelity. This state-of-the-art system combines easy to replace Commercial Off The Shelf (COTS) computer hardware with TRU Simulation's™ proprietary motion cueing software creating a highly realistic flight experience. TRU's eMOTION™ Control Panel with intuitive Graphical User Interface (GUI) makes testing, running diagnostics, and manual operations easy and efficient.

## VISUAL

FTD visual systems are highly customizable to fit the customer's desired needs. Displays can range from high-definition televisions to large wrap around visual systems using the latest projectors. All visual systems are designed to create a bright and clear visual scene with an IG capable of displaying many different scenes and special effects including:

- High definition airport models
- Full atmospheric and environmental effects such as clouds, fog, and storms
- Various lighting conditions including day, dawn, dusk, and night



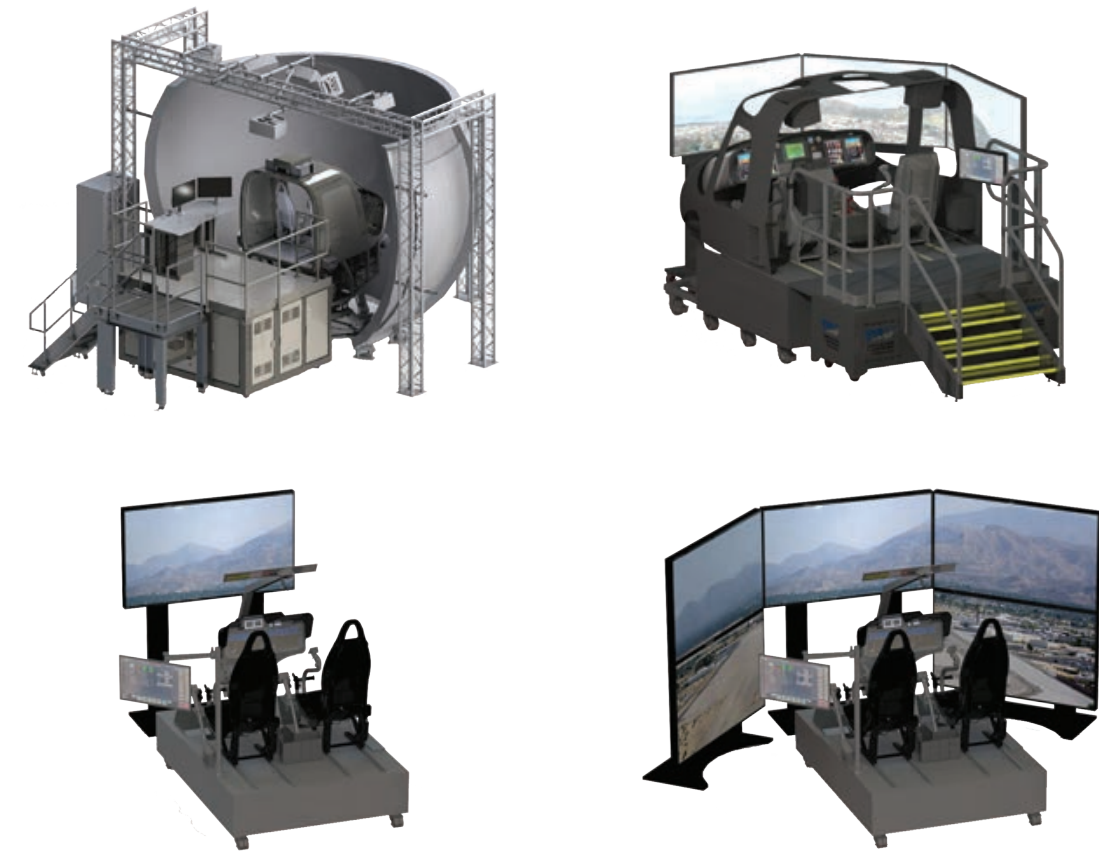
## FLIGHT CONTROLS

Perhaps the most critical area that defines a high-quality simulator is if it flies like the actual aircraft it's simulating. TRU Simulation™ has a long history of producing the most advanced Control Loading System (CLS) in the industry. Our latest generation digital electric CLS provides a high fidelity, realistic force-feel simulation exceeding all simulator regulatory requirements. The compact yet powerful system design is easy to maintain and utilizes COTS hardware.

## INSTRUCTOR OPERATING STATION (IOS)

The TRU Simulation™ IOS combines powerful components and features with an intuitive user interface to enhance the instructor's ability to effectively manage the simulator. Two COTS touchscreen displays are used to control and navigate the IOS. The IOS also supports maintenance functions such as QTG testing, operational readiness tests, and troubleshooting. A wireless tablet, known as the Remote Instructor Control Unit (RICU), allows the instructor to control the IOS from anywhere in the simulator.

## INTEGRA SIMULATOR CONFIGURATION OPTIONS



## SIMULATOR OPTIONS

In addition to the core simulator components found in the Integra Horizon™ simulator you can choose from a variety of options to enhance device capabilities based on unique requirements.



### CUSTOM-MODELED AIRPORTS

Select any of the world's airfields included in the modeled airport database. Desired airports can be added on request.



### CUSTOM VISUAL SCENES

Create unique scenes to address any number of scenarios. While the possibilities are nearly limitless, examples include:

- Off-airport landing on non-maintained surfaces, sloped terrain or confined area
- Search and rescue operations
- Smoke and fire scenes
- Emergency Medical Services (EMS)
- Oil and gas (Offshore)
- Tours
- Surveillance
- Night Vision Goggles (NVG)
- Nap of the Earth (NOE)
- Cargo/Long line vertical reference
- Military and defense

### DEBRIEF SYSTEM

TRU Simulation's™ Debrief System (DBS) makes simulator training session debriefing more effective. The system can capture and combine information from the avionics as well as audio and video of the actual session using mounted camera(s). When the training session is complete, the IOS-controlled system transfers video, audio, moving map, navigational charts, instrument displays and more to the debrief station outside of the simulator for playback.

### LESSON PLAN SYSTEM

Consistently manage a training session's various scenarios with TRU Simulation's™ Lesson Plan System (LPS). Using the lesson plan builder, instructors can easily create lesson plans for each training session that include a predetermined sequence of events and activities, making training session management easier than ever.

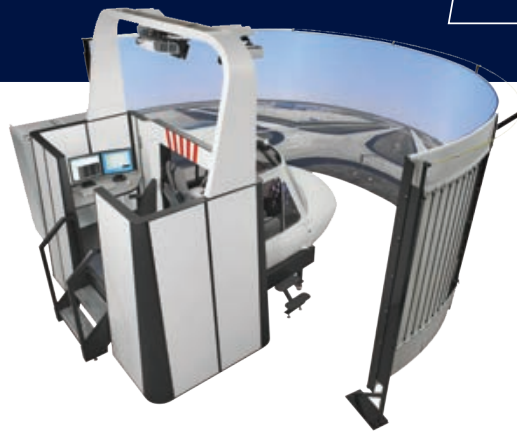
# SIMULATOR DETAILS

There are a few factors to set up the Integra Horizon™ simulator for success and TRU Simulation™ is with you every step of the way, from space and floor measurements to timeline and budgets.

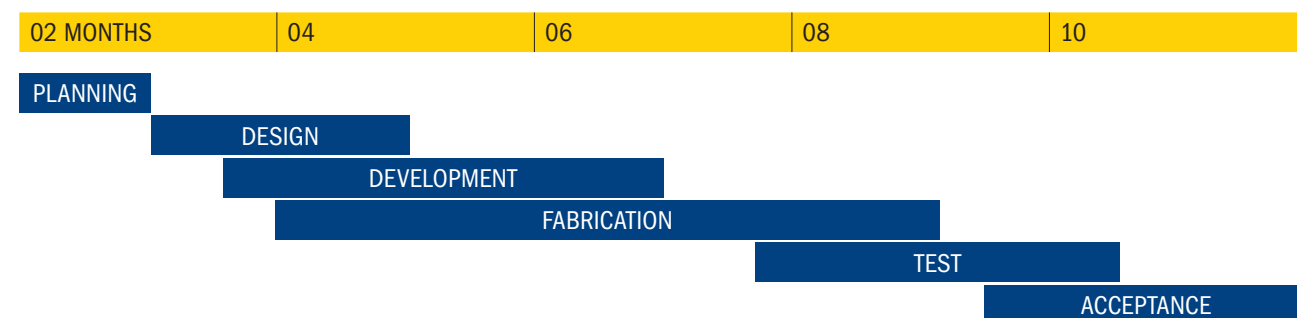


## SIMULATOR ROOM

Simulator room sizes vary greatly depending on the type of FTD. The most basic FTDs with small visual system and no motion system can fit virtually anywhere in an existing facility. More complex FTDs with larger visuals and motion systems require up to 24ft (7.3m) horizontal clearance and 15.7ft (4.8m) vertical clearance.



## PROJECT TIMELINE



## PRICE RANGE

The price range for TRU Simulation's™ Integra Horizon™ simulator typically runs between \$800,000 USD for the most basic flat panel trainer and up to \$5 million USD for a full motion FTD. While simulator components such as the addition of a motion system or enhanced visual system makes up much of the cost variations, the type of avionics and certification level of the device can also affect price. Other factors that drive pricing are similar to those that drive aircraft prices such as optional avionics add-ons. In addition, optional simulation software and/or hardware can add to the cost of a simulator.

## PRICE RANGE OF TRU PRODUCTS

Depending on Aircraft, Avionics, & Visual Solution

- Odyssey Horizon Full Flight Simulator \$8-14M USD
- Integra Horizon Flight Training Device \$800K-5M USD

## TRU'S ROTORCRAFT PRODUCT LINEUP

	INTEGRA HORIZON	ODYSSEY HORIZON	
	FAA FTD 5 EASA FNPT II	FAA FTD 7 EASA FTD 2/3	FAA/EASA FFS Level D
Price	\$\$	\$\$\$	\$\$\$\$
Field of View	60" HD Televisions (various configurations)	200° X 80°	240° X 80°
Motion	None	6 DOF Mini-Motion	Primary: 6 DOF 62.5" actuators Secondary: 6 DOF mini-motion
Control Landing	Active	Active	Active
Enclosed Cockpit	No	Yes	Yes
Simulator Room Size (L X W X H)	13.5ft x 14.8ft x 8.2ft (4.1m x 4.5m x 2.5m)	24ft x 24ft x 15.7ft (7.3m x 7.3m x 4.8m)	53ft x 53ft x 38ft (16.2m x 16.2m x 11.6m)
Typical Training Purpose	Procedural Training	Initial/Recurrent Training	Initial/Recurrent Training & Checking

# LET'S WORK TOGETHER

TRU Simulation™ collaborates with you to select the right simulator solution – or combination of solutions – to fit your organization.

## 240+

*QUALIFIED, SUPPORTED DEVICES*

## 120+

*CUSTOMERS WORLDWIDE*

