



**PRE**SAGIS  
| MAKE IT **REAL**

# **SIMULATION** **FLIGHTSIM**

**CREATE. SET. SOAR.**

\ **FlightSIM** is the industry-leading high-end COTS for creating high-fidelity, high-quality flight dynamics simulations.

**FlightSIM** is a professional tool that primarily offers an intuitive UI-based interface to create and configure fixed-wing aircraft flight dynamics models and systems. This powerful software allows you to simulate virtually any fixed-wing aircraft suited for a flight training or research environment.

## BENEFITS



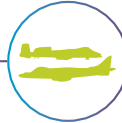
### INTUITIVE UI FOR MULTI-DISCIPLINARY TEAMS

Easily create or edit your aircraft models and systems using the enhanced FlightSIM UI. Choose from a selection of tools to compare, view, and modify your aircraft profiles, all without having to write a single line of code.



### FLEXIBLE INTERFACE TO ADD DATA PACKAGES IN ANY FORMAT

Freedom to add your data package, regardless of the format, with the FlightSIM interface.



### AIRCRAFT SYSTEMS SIMULATION

Simulation and configuration of Automatic Flight Control Systems (AFCS), landing gear characteristics, radio navigation equipment, and many more aircraft systems.



### RAPID INTEGRATION

Connect to any simulation framework out-of-the-box through CIGI, HLA, DIS. Integrate FlightSIM with any third-party software such as MATLAB® and X-Plane®.



## WHY FLIGHTSIM?

From building and evaluating simulators, training devices, and cockpits to developing procedural trainers, FlightSIM offers developers fast development times, quick customization, and rapid integration into a given simulation framework. This is achieved through an expanded set of tools that help you build fidelity-critical simulation applications.

An intuitive interface lets you easily tailor flight simulation and systems by entering aerodynamics, weights and balance, ground interactions, and environmental parameters into windows and dialog boxes rather than writing software routines.

FlightSIM lets you specify subsystems behavior, including flight management systems, autopilot, and flight controls.

Maximize FlightSIM by easily integrating virtual and/or real hardware devices and user-development simulation models and allow unparalleled interoperability and integration.



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## FLIGHTSIM SYSTEMS OVERVIEW



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FLIGHTSIM

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# FLIGHTSIM FEATURES

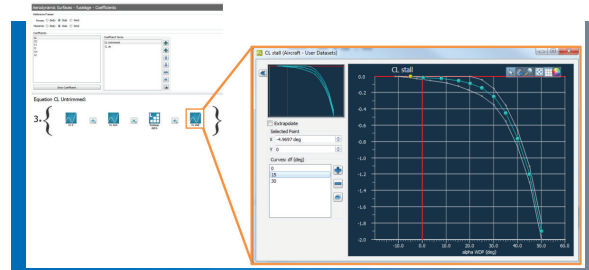
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## AERODYNAMICS MODELING CAPABILITIES

Conceive and deploy a complete 6 DOF aerodynamic model for the real-time simulation of any type fixed-wing aircraft:

- With OEM data: FlightSIM allows you to create a high-fidelity flight dynamics model
- With limited or no OEM data: you can create your flight dynamics model using one of the included aircraft models with FlightSIM

Create as many distinct aerodynamic surfaces for your aircraft model using any frame of reference to define your aerodynamic coefficients.



AERODYNAMICS MODELING CAPABILITIES

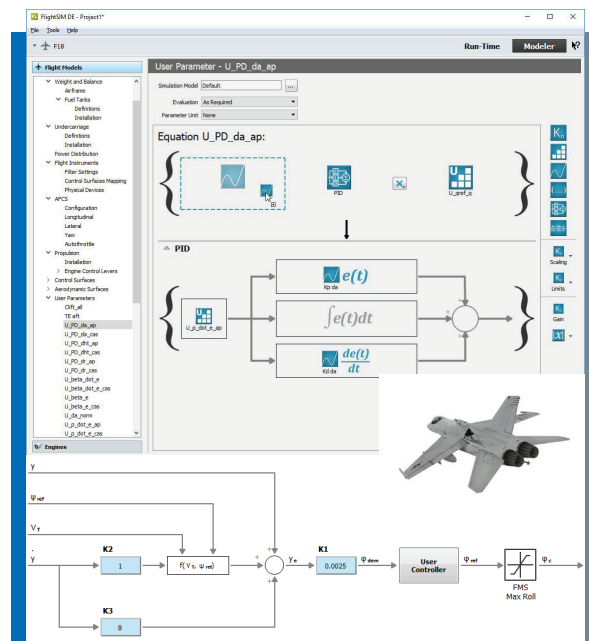
## DEVELOP AND MAINTAIN YOUR OWN FLIGHT CONTROL LAWS

Specify each flight control law that converts pilot and autopilot inputs into flight control surface deflections using the enhanced equation editor.

The built-in AFCS system can be used to create and tune your inner and outer loop control laws. Use the FlightSIM Linearization tool to obtain the aircraft's natural oscillation frequencies in order to help you design the aircraft's flight control system.

## TEST AND VALIDATE YOUR MODELS

Test aircraft performance, dynamics, and handling characteristics under controlled simulated conditions. Rehearse and replay actual or customized flight tests.

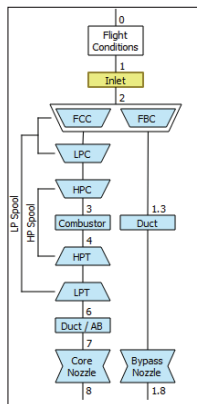


DEVELOP AND MAINTAIN YOUR OWN FLIGHT CONTROL LAWS

## WIDE CHOICE OF ENGINES TO MATCH YOUR PERFORMANCE

Install up to 8 engines on your aircraft model including Turbojet, Turboprop, Turbofan (Thermodynamic), Piston, and Performance models. Model your own engine, or start from the library of engines included with FlightSIM to begin building your engine model.

With the absence of detailed technical data, use the Performance Engine to create your custom engine using known performance data.



The Turbofan model includes a complete thermodynamic simulation as well as simulated engine starting sequences.



TEST AND VALIDATE YOUR MODELS

# FLIGHTSIM DETAILS

## SIMULATE AIRCRAFT SYSTEMS MALFUNCTIONS

Malfunction functionality is accessible out-of-the-box to simulate a variety of system malfunctions including electrical failures, hydraulic failures, and engine out.

## CONFIGURE ENVIRONMENTAL CONDITIONS

Simulate atmospheric conditions such as altitude layer temperatures, pressures, and lapse rates, as well as mean winds. Use the turbulence and windshear models to accurately simulate adverse weather phenomena.

## FULLY DOCUMENTED API

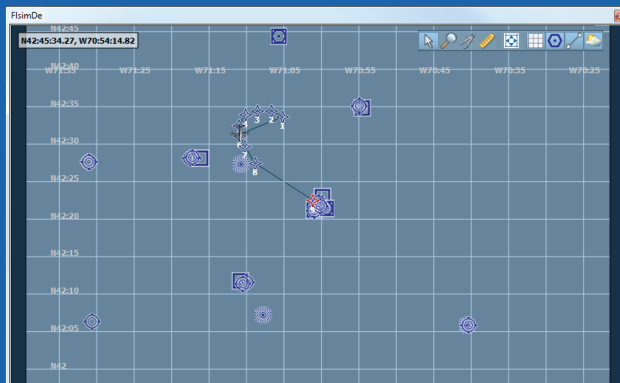
FlightSIM allows users to take the full control the simulation in order to customize or replace the default simulation systems.



# ADDITIONAL FLIGHTSIM FEATURES

## BUILD AND MAINTAIN YOUR NAVAID DATABASE

Based on the ARINC424 Standard, create your own NAVAID database. Support for multiple receivers (DME, VOR, ADF, TACAN, ILS) to interact with NAVAIDS stations.



## INTERACT WITH MOVING PLATFORMS

Ability to define your landing area as a moving platform with finite dimensions.

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