

iAircraft 2.0.4.0 Update Summary

1 Fixes / Minor Enhancements

Minor enhancements included in the 2.0.4.0 update are:

- iAircraft is now available with the QNX 6.5.0 compiler compatible library in addition to the QNX 6.4 compatible library for real-time simulation on a real-time rtX target.
- The iaAdiSixdof block now has inputs for mass and inertia properties.
- The iaAdiSixdof block now has an input for a thrust-induced moment.
- Corrected dynamic pressure computation of iaAdiAerodynamicsSmallJet block
- The iaAdiLandingGear block includes dynamic response models for in-line and side friction forces; and a tiller control for taxi.
- The integrated example for the small jet has the following updates:
 - An automated landing system based on inputs computed by the new Localizer Deviation and Glide Slope Deviation blocks.
 - An ADept ground control panel for taxi, steering, braking.
 - Autopilots to capture and track Glide Slope and localizer signals
 - A constant wind direction and magnitude control from the ADept Control Panel
 - Aerodynamic forces and moments are computed using the new iaAdiAeroInterpolate blocks to demonstrate using multi-dimensional function tables for characterizing a particular aircraft's aerodynamic response
 - Based on example Glide Slope and Localizer autopilots, the jet tracks to the runway along the localizer and glide slope compensating for a crosswind.
 - Effects of ground proximity on the aerodynamic lift and drag forces, and pitching moment.

2 Major Enhancements

Major enhancements included in the 2.0.4.0 update are:

- A new block in the Avionics/Systems category for Glide Slope (GS) deviation measurement measures the aircraft range from the GS antenna and the perpendicular distance to the glide slope.
- A new block in the Avionics/Systems category for measuring Localizer (LOC) deviation computes the aircraft range from the LOC transmitter and the perpendicular and angular deviation from LOC/Runway centerline
- A new aerodynamic look-up block supports function tables for characterizing aircraft aerodynamic coefficients with respect to multiple independent variables.
- A new aerodynamic force and moment block for computing the overall force and moments generated by the aircraft aerodynamics; transforming between reference frames as necessary
- A new mass and inertia block computes the aircraft inertia properties and center of mass position based on point mass definitions for pilots, passengers, payload, and fuel.