IntelinAir

SAFESMART RD-100 UAV

Lightweight multi-rotor, designed for academic research and development

Drones Built for the Academic Researcher

Flight Control & Navigation Research

Focus on science and innovation from the start with an integrated, ready-to-go system

With MATLAB/Simulink toolbox, rapidly implement and test custom guidance, navigation, control algorithms

Predictable automatic flight and reliable take-offs and landings; maintain control in high winds or inclement weather

Swap cameras and payloads without retuning the controller

Teaching & Education

Hands-on learning tools to support instruction in aerodynamics, flight control, multirotors, and robotics

SafeSmart technology is easy to fly both manually and automatically

SafeSmart Robust Adaptive Control

supports stable and safe flight even in the most unfavorable conditions; based on technology validated by NASA and the U.S. Air Force

Drones ship **ready-to-fly** with easy-to-use ground control software, communication links, batteries, and cables. Camera and gimbal optional

Flight control software developed in **MATLAB/ Simulink** and compiled into onboard firmware using autocoding – no need for manual C coding

Fly both **indoors** and **outdoors**

ACCELERATE YOUR RESEARCH WITH RD-100

ACADEMIC KIT INCLUDES:

Hexarotor UAV

SafeSmart Autopilot

Ground Control Software and Communication Links

MATLAB/Simulink Toolbox

Get the RD-100

To order contact sales@intelinair.com

Powered by SafeSmart, the IntelinAir Platform Supports the Next Generation of Commercial UAS Applications

HARDWARE

Airframe / Propulsion

DJI Flame Wheel F550 Hexacopter (550mm frame width)

DJI 2212 Motors + E300 15A ESC

9.4" x 4.3" Propellers (Diameter x Pitch)

Thunder Power LiPo Battery 4S 5400mAh 25C

15 min flight time (w/GoPro + Gimbal + 5400mAh battery)

Max recommended payload 800g

SafeSmart Autopilot

Microchip MCU dsPIC33 Family, 32MB Flash

Sensors: Accelerometers, Angular Rate, Magnetometer, Barometer, GPS

4 UARTs, CAN, I2C, SPI

Up to 8 high speed PWM channels with independently controlled duty cycle

SOFTWARE

SafeSmart Flight Control

Predictable, reliable flight with no retuning required even with winds, payload changes, and hardware failures

Easy to fly for beginners and seasoned pilots with autopilot-assisted manual flight

Automatic waypoint steering for user-defined flight plans

GeoFence enabled

Automatic take-off / landing

Accurate GPS position hold with controlled ascent / descent

Intelligent flight envelope protection

Automatic return to home position with low battery or loss of communication

Supports both GPS-based outdoor flight and VICON controlled indoor flight

Ground Control Software

Easy to use flight planning interface

Intuitive display for in-flight monitoring and decision-making

Seamless transition between manual and automatic flight

Support for Windows OS

Spektrum RC transmitter/ receiver for piloted control (optional)

MATLAB/Simulink Toolbox

User friendly & easy to reprogram autopilot

Integrated development environment enables quick prototyping, simulation, and deployment of new control software

Automatically generate reliable code using well established MATLAB/Simulink tools

No hassle hardware-in-the-loop test capability

Documentation and examples support prompt integration of custom algorithms and sensors

For more information visit IntelinAir.com