

# MINDS-i COMPETITION

## UAV Competition Kit

CPK-UAM2-001



### MINDS-i STEM INTEGRATED ROBOTICS: UAV COMPETITION KIT

Immerse your students in STEM with the thrill of UAV (Unmanned Aerial Vehicle) competitions. The kit introduces students to drone building and programming, with a focus on classroom, community, statewide and national competitions. It includes a UAV frame, replacement parts, and a full library of sample programs to quickly get started. This fun, team-based setting inspires students to pursue STEM-based careers.

### SPARK AND SUSTAIN STUDENTS' INTEREST IN STEM

MINDS-i Robotics engages students in an energizing STEM learning environment with easy to build, program, and modify robots. Technologically advanced rovers and drones perform impressive real-world tasks that build excitement for STEM careers. The curriculum encourages collaborative problem-solving and the open-source Arduino® C++ programming language fosters endless creativity. With outstanding technical support, teachers are empowered and students are inspired to build whatever they envision in their "mind's eye."

### MINDS-i COMPETITIONS

MINDS-i competitions merge classroom learning with real world experience. Students learn the practical skills necessary to pilot a UAV and the knowledge of how it operates on all levels.



SAFETY DUCT

POWER MODULE

DRONE MODULE

RC CONTROL

BRUSHLESS MOTORS

SPARE PARTS

FIND YOUR MINDS-i SALES REPRESENTATIVE AT:

[mindsieducation.com](http://mindsieducation.com) »

[info@my minds i.com](mailto:info@my minds i.com) »

## UAV COMPETITION KIT: A SIMPLE SOLUTION TO APPLIED UAV LEARNING WITH MINDS-i

1. Quick entry into drone building and programming with our step by step illustrated instructions and full library of sample programs
  - a. Calibration - Set up internal sensors including: Accelerometer, Gyro, Compass, Barometer
  - b. Included safety features allow safe flight, indoors and out
  - c. Safety Ducts - Made from impact resistant materials to keep you flying
2. Instructions include steps to build a standard "X" or stretch "X" frame design with a total of 5 variations
3. The simple design allows the end user to customize the frames, to best suit the challenge or task
4. Adjustable tuning allows frame shape, size and layout to be almost limitless
5. Able to be upgraded to function with GPS and Telemetry

## ARDUINO® PROGRAMMING SOFTWARE & MEGA 2560 HARDWARE

- » 8 Radio Input Channels
- » 8 Motor Output Channels
- » 9 Analog Input Channels (with ADC)
- » Serial, SPI & I2C Communication Ports
- » 256 KB Flash Memory & 16 MHz
- » Full Set of Sample Code in Library
- » Windows 10, OS X & Linux Ready
- » Analog Ports can be used to Operate Servos, Motors & Sensors
- » 3 Axis Accelerometer
- » 3 Axis Gyro
- » 3 Axis Compass
- » Barometer

