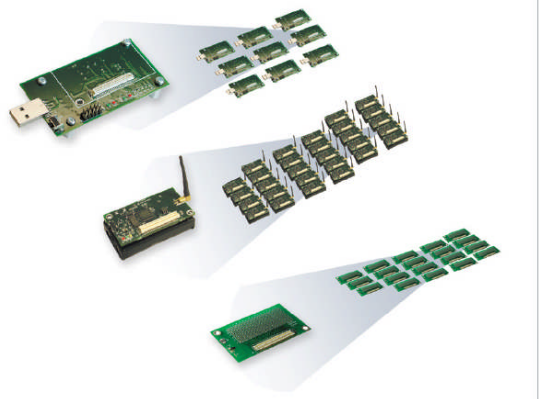
# CLASSROOM KIT

FOR WIRELESS SENSOR NETWORKS

Classsroom Kit



- Wireless Sensor Network Kit Designed Specifically for the Classroom or Teaching Lab
- Hardware & Software for Fast Lab Setup and Application Development
- Comprehensive Set of Teaching Materials
- MoteWorks™ Sensor Network Software Platform Based on TinyOS
- Reliable Networking Software for Self-healing, Self-forming Mesh Network (XMesh)
- Windows Based User Interface (MoteView)
- Easy Classroom Deployment
- Low-cost Introduction to Next Generation Technology

ACEINNA actively supports academic programs in wireless and sensor technologies. Instructors in multiple departments are teaching various courses for wireless sensor technology based on ACEINNA products.

Wireless sensor hardware and modules, in conjunction with the MoteWorks™ TinyOS based software platform, are ideal for the classroom. Classroom kits allow students to easily develop and build prototype sensor networks individually or in groups.

ACEINNA's IRIS, MICAz and MICA2 motes are the hardware platform of choice for a large number of wireless sensor network research papers published globally, as well as large-scale testbed deployments.

The kit also provides access to in-depth teaching materials, based on ACEINNA's world-renowned training program, which is proven with thousands of ACEINNA's customers globally.

approach of hardware, mesh networking software and training materials allow educators to quickly develop and set up a comprehensive class and lab for leading edge wireless sensor network technology.

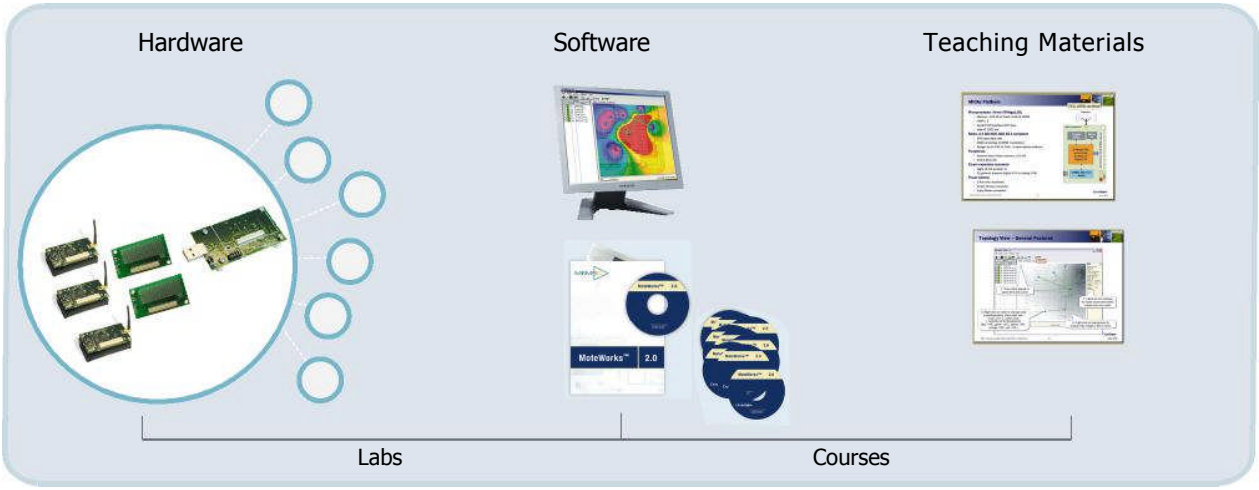
The classroom kits are beneficial for the typical teaching lab or sensor class project, getting students up and running quickly and economically. Students will benefit from comprehensive hands-on training involving all aspects of both the hardware and software applications.

In addition to these standard kits, a variety of custom configurations are also available. Please contact ACEINNA for additional details. Information on several prominent Universities which have programs dedicated to WSN is available at: http://aceinna.com/solutions/research.html

## Ordering Information

| Model | Description |
|---|---|
| WSN-EDU2400CA | MICAz Classroom Kit - 2.4 GHz |
| WSN-EDU2110CA | IRIS Classroom Kit - 2.4 GHz |

## Classroom Kit Architecture




## Hardware

**Lab Station Equipment**

**a. Processor/Radio Board:** IRIS/MICA modules enable the low-power wireless sensor network measurement system, available in 2.4 GHz.

**b. Sensor Board:** MDA100 sensor and data acquisition board includes a precision thermistor, a light sensor/photocell and provides a general prototyping area.

**c. USB PC Interface Board:** MIB520 Gateway provides a USB Interface for data communications.

| Kit Contents |
|---|
| 10 Lab Stations Include: |
| • 30 Processor/Radio Boards |
| • 20 Sensor Boards |
| • 10 Gateways |
| • 10 Seats MoteWorks License |
| • 1 Teaching Materials CD-ROM |

## Software

**MoteWorks™**

Development of custom sensor applications is enabled through ACEINNA's MoteWorksTM software platform, included in the classroom kit.

**Sensor Devices:** Network stack (XMesh) and operating system, standards support (802.15.4), over-the-air-programming and cross development tools.

**Server Gateways:** Middleware for connecting wireless sensor networks to enterprise information and management systems (XServe).

**User Interface:** Client application for remote analysis and monitoring, management and configuration of the sensor network.

## Teaching Materials

**Curriculum Tools**

Included in each classroom kit is a CD-ROM containing the files for the presentations used in our world-renowned training courses. These materials may be modified and integrated into lectures and labs as the course curriculum requires.