

# STARTER KIT

FOR WIRELESS SENSOR NETWORKS

- Out-of-the-box, Starter Kit for Wireless Sensor Networks
- Packaged, Pre-programmed Wireless Sensor Nodes for Temperature, Humidity, Barometric Pressure and Ambient Light Monitoring
- FCC and CE Certified\*
- Reliable Networking Software for Self-forming, Self-healing Mesh Networks (XMesh)
- Gateway for Connecting Wireless Sensor Network with PC or Internet
- Windows® Based User Interface for Visualization and Analysis of Network and Sensor Data
- Support for Different ISM Frequencies
  - 2.4 GHz, 802.15.4/ZigBee
  - 868/916 MHz



## The MEMSIC Starter Kit

provides an easy and cost-effective solution to get first-hand experience with wireless sensor networks either in the 2.4 GHz or 868/916 MHz ISM bands. This entry-level kit provides all the components needed for rapidly deploying a basic wireless sensor network. The sensor nodes and gateway are pre-configured with MEMSIC's reliable, self-forming, self-healing mesh networking software (XMesh).

The MoteView application for Windows-based PCs provides an intuitive graphical user interface to monitor and manage the wireless sensor network. By displaying network topologies, charts and graphs of sensor readings, as well as configuring sensor nodes, MoteView lets the user understand the sensor data and network while allowing easy configuration of sensor nodes.

## MoteWorks™

The development of custom sensor applications is enabled through MEMSIC's MoteWorks™ software platform, which is available as an option with the kit. MoteWorks™ is specifically optimized for low-power battery-operated networks and provides support for:

- **Sensor Devices:** Network stack 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.
- **User Interface:** Client application for remote analysis and monitoring, management and configuration of the sensor network.

## Ordering Information

Model	Description
WSN-START900CA	MICA2 Starter Kit - 868/916 MHz
WSN-START2110CA	IRIS Starter Kit - 2.4 GHz

\* FCC/CE certified for 2.4 GHz. Certification pending for 868/916 MHz.

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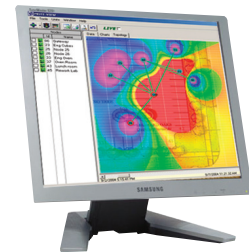
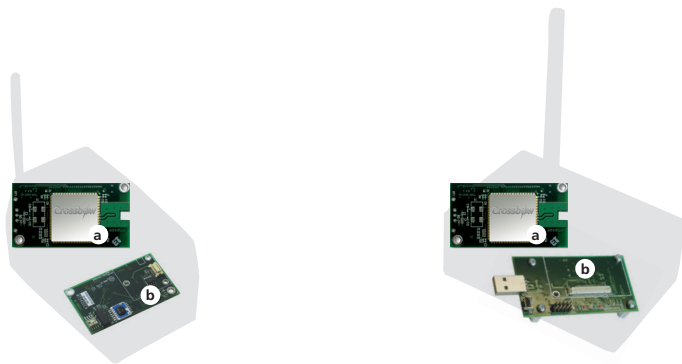
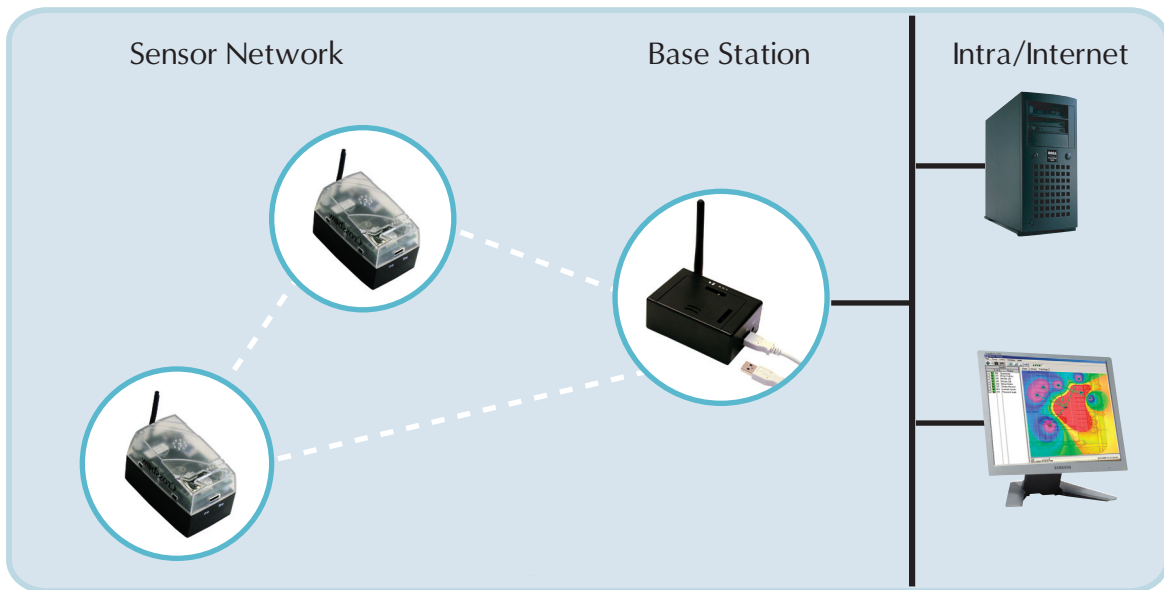
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# Network Architecture



## Sensor Node

### a. Processor/Radio Board:

IRIS/MICA modules to enable the low-power wireless sensor networks measurement system. Available in 868/916 MHz or 2.4 GHz.

### b. Sensor Board:

MTS400 multi sensor board including temperature, humidity, barometric pressure and ambient light sensing capabilities.

## Base Station

### a. Processor/Radio Board:

IRIS/MICA module functioning as a base station when connected to the USB PC interface.

### b. USB PC Interface Board:

MIB520 Gateway provides a USB Interface for data communications.

## Monitoring Software

### MoteView Client:

Monitoring Software for historical and real-time charting; which also provides topology map, data export capability, mote programming and a command interface to sensor networks.

### Kit Contents

2 Sensor Nodes (SN 21140 / SN 9040)

1 Base Station (BU 2110 / BU 900)

1 WSN Kit CD

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