



# Application Engineering Services

## Sentilla can jump start your energy management projects

Whether you have an idea for an energy management application or want end-to-end support for your already designed application, Sentilla's Application Engineering team can help.

Using our services, you can easily and efficiently deploy your energy management applications and get it to market quickly. We provide a full suite of consulting services--from feasibility discussions to prototyping, modeling, development, deployment, and training. Engaging Sentilla's Application Engineering team enables you to maximize your internal resources, leverage our expertise, and deploy your solution economically and quickly.

### Services

Our Application Engineers can assist you from the planning through deployment stages of your project. Here are some of the services we offer:

#### Planning and Proof of Concept

- **Application concept feasibility studies** – We'll tell you if Sentilla technology can solve your problem.
- **Proofs of concept technology demonstrations** – We can quickly build prototypes that demonstrate how our technology can work for you.
- **White papers** – We can provide a formal, high-level overview of our application concept feasibility study that shows how our technology can solve your problem.

#### Development and System Integration

- **Software application development and review** – We'll combine your industry-specific expertise with our design, development and deployment expertise to develop and review your energy solutions.

- **Electronics Design** – We can build custom electronics, including circuitry, sensors, power supply, and other components.
- **Custom hardware enclosures** – We can develop custom hardware enclosures to suit your unique application deployment needs.
- **Field Trials** – We can bring build and execute a limited deployment in the field to determine the suitability of our technology for you.

#### Deployment

- **Onsite field deployment consulting services and tools** – Initial deployment, prototyping and debugging
- **Remote deployment support** – Long-term consulting post-prototype, to support your continuing development and deployment
- **Training** – Onsite support and training--we'll get your developers up to speed using the Sentilla platform.

## Success Stories

Sentilla's Application Engineering has already helped several customers achieve their energy management goals. Here are two real-world examples of what Sentilla Application Engineering has done.

### Developed and Deployed an Environmental Monitoring Solution for an Industrial Manufacturer

A large-equipment manufacturer was under pressure to monitor the environmental resources of their 250,000 square foot facility and determine the optimal use of their resources. They were working in a cold laboratory and couldn't understand why their energy bills were so high. With only six weeks to develop an application, the Sentilla Application Engineering team was asked to come up with a solution to help them measure temperature and humidity. Specifically, they:

- Designed hardware enclosures that interfaced with the right sensors
- Wrote software applications to monitor temperature and humidity
- Built the data infrastructure
- Programmed a server
- Designed a web portal to view the data
- Deployed, tested and implemented over 100 pervasive computers

**The Results:** When the motes were deployed the mote network, gross leakages were reported in the customer's laboratory. With this data, the company was able to fix the leak and see a significant savings in utility costs.

### Energy Optimization at commercial facility

At a recent trade show, Sun Microsystems asked Sentilla to design a solution that analyzed conference attendee behavior and correlated it to the energy utilization at the convention hall. In just one month, Sentilla designed, developed, and deployed an energy management solution to accommodate this request.

How it was done:

- On session room door frames, Sentilla mounted small pervasive computers that used infrared technology to count people coming in and out of the rooms.
- Sentilla deployed these throughout the convention center to measure electricity usage, lighting, humidity, and temperature.
- Business rules analyzed the environment at each pervasive computer. Those rules were updated daily, wirelessly, over the air.
- Sentilla designed a web portal to view the data and provided a dashboard where the information was correlated and summarized for monitoring and reporting.
- Sentilla tested and deployed approximately 200 pervasive computers throughout the convention.

**The Results:** Sentilla's solution measured the movement of attendees as they entered and exited sessions, and gathered environmental data including temperature and lighting. Using this information, Sentilla devised a direct correlation between the flow of people and environmental conditions. Sentilla's system made resource utilization improvements based on the analytics.

For additional information, visit [www.sentilla.com](http://www.sentilla.com) or email [sales@sentilla.com](mailto:sales@sentilla.com)