

AtlaSoft Middleware 1.5

Product Brochure



Atlas™ Sensor Network Products



AtlaSoft Middleware 1.5

Integrate Once, Deploy Everywhere

Each AtlaSoft version 1.5 License Pack includes:

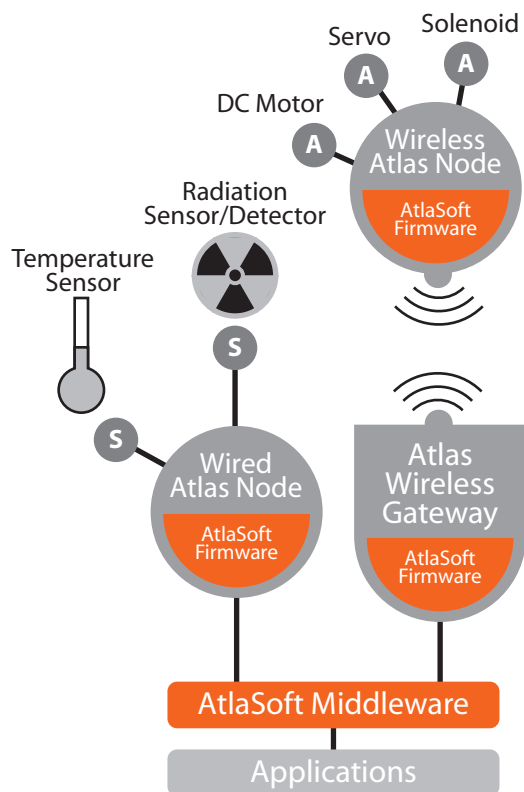
- AtlaSoft Middleware 1.5 Server Edition
- 100 Device, Sensor, and Actuator License Block
- Atlas Management Console
- Device Service Bundles and Repository Access
- Sample Application with Source Code
- Atlas User Guide

AtlaSoft™ Middleware

Creating service-oriented applications has never been easier. Using Atlas hardware and the AtlaSoft Middleware version 1.5, feature rich sensor and actuator network-based applications are developed in hours, not days.

AtlaSoft is the central software platform that enables the fast, reliable, and scalable development of applications that sense and control the physical world. This platform adds plug-and-play functionality to regular sensors and devices: connect them using any network technology (such as Zigbee, WiFi, or Ethernet), switch them around as needed, Atlas will detect when each device is online and convert it into a software service.

Developing on the Atlas platform empowers programmers to effortlessly interface with these software services, create new applications using familiar tools, and feed information into existing enterprise solutions. With AtlaSoft managing the low-level details of device management, programmers are able to perform their duties with no prior knowledge of sensor hardware. AtlaSoft even supports remote programming, meaning applications developed in the office can be pushed to a sensor network deployed on another floor, in a factory across the country, or on a cellular-enabled tractor trailer traveling down the Interstate.



Example Atlas Network Architecture

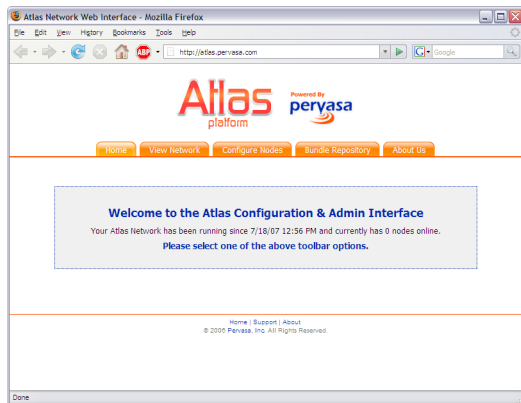


Included Sample Application



Atlas Management Console

The Atlas Management Console is a web-based application for managing Atlas devices and the Atlas network. The console allows for configuring and monitoring of individual Atlas nodes, viewing of network attached sensors and actuators, as well as access to license management.



Atlas Management Console

>> Device Configuration

Each platform or device connected to the network shows in the management console. Since many nodes require a different configuration, device specific options can be changed and easily downloaded from the console onto the platform.

>> Middleware and Firmware Updates

Control and manage middleware and individual device firmware updates directly from the management console.

>> Device Service Bundle Repository

From within the management console, all device service bundles can be updated from local or remote bundle repositories.

>> License Management

Add or remove AtlaSoft licenses. This allows for the management of licenses across multiple AtlaSoft installations.

>> Network Viewer

Quickly see all sensors, actuators, and Atlas devices that are connected to the network.

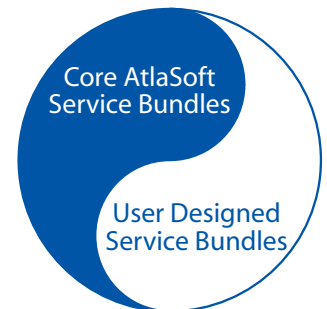
AtlaSoft Licensing

Standard licensing blocks support 100 sensors, actuators, and Atlas devices. Each device attached to the Atlas network will use one license for the entire time it is connected. Should a device be disconnected from the network, the license being used becomes available to other devices. To obtain additional licenses, visit www.pervasa.com.

Service Bundles

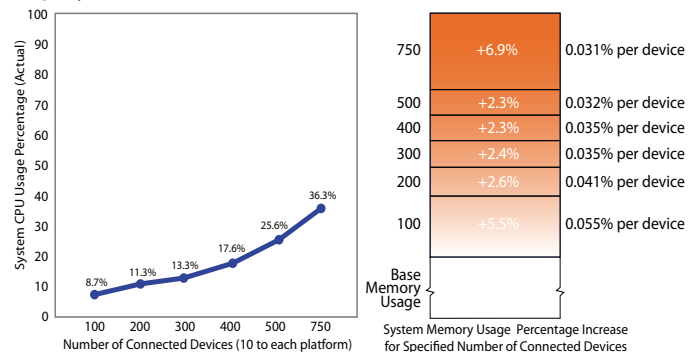
The real power of the AtlaSoft Middleware is in the device service bundles. Bundles are loaded by the middleware and are used by the developer to easily access sensors and actuators.

The AtlaSoft Middleware is made up almost entirely of bundles. The core set of middleware bundles as well as the user implemented or downloaded bundles work together to communicate data into and out of the network. This cohesiveness enables user applications.



Scalability

Atlas-based solutions are proven scalable. From case studies and internal testing, to the projects of partners and customers, Atlas can manage any size M2M or sensor network deployment.



The middleware runs on any platform that supports Java. From enterprise grade servers to set top or residential boxes. The graph above shows system performance on an XScale[®] class machine as connected devices increase.

AtlaSoft Middleware

Atlas Development Kits offer researchers and practitioners a hassle-free sensor and actuator network. This network allows for rapid and effortless development of sensor and actuator based systems and prototypes. All varieties of Atlas Development Kits can be used as standalone rapid prototypes or together to build an entire network.

About Atlas

Atlas is a combination of software and hardware components that together make developing sensor and actuator based systems possible. The software middleware, AtlaSoft, serves as the server backend and provides an environment on top of which software applications are built. The AtlaSoft framework enables software representations of sensors and actuators, and gives the developer the tools necessary to create extensible applications using any connected device.

Atlas hardware devices communicate with AtlaSoft to deliver data to and from applications. The transport medium – Ethernet, 802.11 b/g, ZigBee or USB, for example – is abstracted away by the middleware. Reading sensors or performing actuation is as simple as calling the proper functions. This shift in developer focus away from low level implementation details accelerates application development.

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Typical Atlas Applications

The range of Atlas products creates the perfect research or system integration tool for many disciplines and industries.

- Pervasive Computing
- Smart Homes and Smart Spaces
- Civil Structure Health Monitoring
- Industrial Monitoring and Control
- Machine to Machine Communication (M2M)
- Remote Sensing and Data Acquisition
- Fleet and Asset Tracking
- Homeland Security
- Healthcare
- Robotics

About Pervasa

Pervasa is a developer and supplier of innovative technologies and services in the fields of M2M and sensor networks. Founded in 2006 and based on University of Florida research, the company specializes in products that enable the rapid development of robust and feature rich applications that are able to sense and control the physical world.

