

RFID Anywhere

Enabling intelligent, event-driven RFID and sensor networks

KEY FEATURES

- Reduces the complexity and cost of developing and deploying intelligent RFID and sensor networks
- Provides logic and management to organize smart sensors into intelligent networks
- Offers a scalable architecture to meet the growing needs of enterprise deployments
- Simplifies the management of distributed sensor networks using profiles and groups with centralized administration
- Delivers aggregated and enriched data to the extended enterprise, including mobile devices
- Enables the transformation of raw data into valuable business information
- Provides tools and a simulation environment to simplify development tasks
- Delivers Location Information System to add location awareness and business intelligence to the sensor network by providing context-sensitive, real time views of enterprise assets
- Offers an extremely small footprint suitable for embedded, mobile and distributed deployments
- Implements the highest level of security for user authentication, role-based authorization and network communication leveraging existing standards

Radio frequency identification (RFID) and sensor technologies are rapidly becoming critical tools for turning asset location and environment data into valuable business information. Companies in all industries - healthcare, manufacturing, retail and transportation, among others - know that creating intelligent, event-driven networks of RFID and sensor devices offer them greater visibility and control of business assets and processes, thus increasing productivity, profits and competitive advantage.

Still, today's developers and system integrators face numerous challenges in providing their companies and customers with efficient, cost-effective solutions that leverage and integrate RFID, sensor and location tracking data.

Today's obstacles include:

- Many diverse device types, with differing functionality, usage and interfaces
- Emerging, but still fragmented, standards
- The need to manage and monitor distributed sensor networks
- Hardware in many locations throughout the enterprise
- Abundance of raw, unprocessed data generated by sensor networks
- Inability to simulate or troubleshoot production environments
- Difficulty in adding business intelligence to asset location data

RFID Anywhere™ integrates business logic and processes with a variety of automatic data collection and sensor technologies, including passive and active RFID readers, RFID printers, barcode scanners, mobile devices, PLCs, location tracking systems, environmental sensors and feedback mechanisms. This powerful software infrastructure simplifies the development, deployment, configuration and management tasks for highly distributed, multi-site, intelligent sensor networks, and abstracts the interaction with the network of devices. By using RFID Anywhere, sensors are able to work together as an intelligent network by combining, organizing and coordinating these technologies through a common management structure, advanced feature set and event-driven development framework.

RFID ANYWHERE

- Supports distributed configurations and edge processing, allowing multiple locations to collect and process sensor data even if the rest of the enterprise is unavailable to receive it
- Implements business logic and filters data at the edge through an event-driven architecture, ensuring fast response times and allowing only the most valuable and useful data to flow to the enterprise
- Aggregates all components under one common management interface, so you can view and manage all configuration properties regardless of the component type or sensor functionality
- Exposes a service-oriented architecture (SOA) layer to simplify application development and enterprise integration
- Provides a runtime environment that can host multiple business processes and rules at the same time, allowing multiple business scenarios to be addressed with a single solution

SYSTEM REQUIREMENTS

- Windows XP Professional SP2 or Windows Server 2003 including:
 - .NET Framework 1.1 SP1
 - WSE 2.0 SP3
 - MSMQ
 - IIS
- Single CPU or greater
- 512 MB of memory or greater

To learn more about RFID Anywhere, and to join the free RFID Anywhere Insider Program, which provides access to a wealth of technical content and a development version of RFID Anywhere, visit www.ianywhere.com/RFID

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UNMATCHED RANGE OF FEATURES

RFID Anywhere provides the features needed to enable intelligent RFID and sensor networks out-of-the-box.

Service-oriented, pluggable architecture - Simplifies the integration of sensor data into enterprise systems, including concurrent feeds into multiple existing applications. The advanced underlying architecture enables business logic or support for new hardware to be easily added to an existing system.

Intelligent network of sensors - Creates a network of RFID hardware, environmental sensors, location tracking systems and other devices that enables process automation and efficient network operation, including advanced, built-in capabilities such as RFID reader coordination through time slicing and GPIO.

Broad hardware support with abstraction layer - Implements low-level interfaces to a wide range of hardware families including passive and active RFID readers, RFID printers, barcode scanners, mobile devices, PLCs, location tracking systems, environmental sensors and feedback mechanisms. Exposes a powerful and easy-to-use development model through software abstraction and location transparency.

Multiprotocol RFID tag support - Provides support across all product features for EPC, ISO, and custom tags, offering unmatched flexibility for business logic and hardware/tag selection and tag encoding/decoding.

Simulation capabilities to assist development and planning - Enables developers to perform load and special-case testing on existing networks and applications early in the project, even before RFID readers and other sensor hardware have been acquired.

FLEXIBLE DEVELOPMENT OPTIONS

RFID Anywhere allows developers and integrators to choose the most effective way to develop business logic based on architecture requirements, network topology, available skill sets and existing infrastructure.

Custom Business Modules - Included is a Visual Studio .NET extension to create powerful and flexible business logic to coordinate the sensor network and integrate with existing systems by handling events and controlling hardware in real-time through an easy-to-use API

Application level Events - Define standard RFID tag activity reports for EPC tags without coding and easily feed these reports into enterprise systems

Report Engine MP - Integrate XML reports based on the activity of EPC, ISO and custom RFID tags into the enterprise

SOA Report - Complete service-oriented architecture (SOA) layer, including Web Services interfaces to custom business logic and device controllers, that exposes logic and provides integration with minimal coding

Applications for mobile devices - Build application logic that can run directly on mobile devices including handheld and forklift RFID readers using a cross-device, event-driven API that handles device interaction and provides asynchronous data transfer over the network

Variety of integration options - Business logic output or alerts can be sent to enterprise applications through pre-built messaging system connectors. Transports include TCP, UDP, JMS, SMTP, MSMQ, IBM Websphere MQ, Sybase QAnywhere, Web Services and file creation

CONTEXT AWARE LOCATION TRACKING

RFID Anywhere's Location Information System (LIS) offers a revolutionary asset tracking infrastructure that provides much-needed business context to asset location data, such as asset temperature or other environmental information.

Range of collection points - Integrate and combine a variety of sensor technologies to locate and track assets by calibrating locations and associating fixed data sources with coordinates to provide location data

Generating location and context data - Persist, query and represent asset location and context graphically or via reports

Accessing Information - Service Oriented Architecture (SOA) allows location information to be accessed by any application via Web Services, and alerting capabilities allow information to be 'pushed' when user-defined alert conditions are met

CENTRALIZED NETWORK MANAGEMENT

RFID Anywhere's Enterprise Manager provides the ability to view and control the distributed sensor network from a central location.

Configuration - Use groups and profiles for policy enforcement and repeatable configurations

Provisioning - Easily deploy and update business logic, software and device firmware on remote systems

Monitoring - View and respond to the health of the entire sensor network application via Web Services, and alerting capabilities allow information to be 'pushed' when user-defined alert conditions are met

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