Corporate Overview

Real-Time Communications Platform for the Industrial Internet of Things
Accelerating the Industrial Internet of Things

Data-Centric Infrastructure for Intelligent Machines

The Industrial Internet of things is an emerging communication infrastructure that interconnects machines and data to build intelligent systems and applications never before possible. Using embedded sensors and software, machines connected via the Industrial Internet have the analytical intelligence to self-diagnose and self-correct, so they can operate reliably, react to real-world changes in their environment and provide more sophisticated service to their users. These complex systems clearly need performance, reliability, and scale.

Your Systems. Working as One.

RTI Connext is a high-performance and highly reliable interconnection platform and serves as the core nervous system for the Industrial Internet of Things. RTI Connext connects data and applications across devices, systems and networks, to intelligently share information and enable systems to work together as one. It also offers a level of performance, reliability and scalability that is unmatched. RTI offerings are based on the DDS standard, the most advanced technology for the world’s most important distributed systems.

RTI Connext DDS
Leading DDS implementation of the Object Management Group (OMG) Data Distribution Service (DDS) Standard

RTI DDS is the foundation of the RTI Connext product line. The DDS standard is the most advanced technology for distributed systems and the prevailing standard essential for effective delivery, interoperability and scaling of the Industrial Internet of Things:

- Market-leading OMG DDS
- Full library source code
- Linux and Windows binaries

RTI Connext DDS Professional
Fast and Scalable Communications Software

RTI Connext DDS Professional leverages a powerful data-centric approach to address the challenges of big data in motion, Machine-to-Machine (M2M) communication and System-of-Systems integration for the Industrial Internet of Things.

- Interoperable across languages, operating systems, CPU families and network types
- Well-defined component interfaces for rapid integration
- Low latency and high throughput
- Deterministic even under load and at scale
- Reliable multicast for efficient data distribution
- Peer-to-peer architecture with no message brokers and servers
- Non-stop availability with live upgrades and no single point of failure
RTI Connext for the Industrial Internet of Things

There are several protocol standards addressing the Industrial Internet of Things challenges. RTI Connext™ DDS (Data Distribution System) is the one that most directly addresses the development of intelligent distributed machines. Connext DDS can deliver data at physics speeds to thousands of recipients with strict control of timing, reliability, failover, and language and OS translation. Examples of complex DDS applications include Air Traffic Control systems, large Wind farms, and complex medical devices.

RTI Services: Industry-Best Expertise

Our RTI Professional Services team is made up of the best and brightest experts in critical systems development. Building on our Connext solution, we have deployed some of the largest and most complex distributed systems in the world. RTI will train your team, match your system requirements to a data distribution design and provide project development support in order to mitigate your project risk, increase productivity and ensure quality in your final deliverable—often on a shortened schedule.

RTI customers span the breadth of the Industrial Internet of Things, including medical, energy, mining, air traffic control, trading, automotive, unmanned systems, industrial SCADA, naval systems, air and missile defense, ground stations, and science. The total value of system designs that trust RTI for their fundamental architecture exceeds $1 trillion.

Connext DDS Micro
Small-Footprint Messaging Software for Resource-Constrained Applications

RTI Connext DDS Micro provides a small-footprint modular messaging solution for resource-limited devices that have minimal memory, Flash, CPU power or no operating system. Connext DDS Micro minimizes the amount of code required and reduces development costs.

- Small memory footprint
- User-configurable feature set through build options
- Support for low-power CPUs
- Scalability from embedded 16-bit microcontrollers to multicore 64-bit CPUs
- Pre-built support for Linux (x86), Windows, FreeRTOS (ARM), VxWorks (PowerPC) and devices without OS (ARM)

Connext DDS Cert
Certifiable Messaging Middleware for Safety-Critical Systems

RTI Connext DDS Cert reduces the time, cost and risk required to develop, integrate and certify safety-critical distributed applications. It provides a small-footprint modular messaging solution for resource-limited devices that have minimal memory, Flash, CPU power or no operating system.

- Ability to meet stringent safety certification standards
- Reusable certification evidence available for DO-178C Level A
- Small memory footprint
- Support for low-power CPUs
- Scalability from embedded 16-bit microcontrollers to multicore 64-bit CPUs
Big Data? No problem.

There’s a transformation in the way the world interconnects and functions. The Industrial Internet of Things is growing and must function across existing platforms such as cloud, mobile, and enterprise software, and expand to newer Industrial Internet of Things nodes and devices. Managing your data—integrating disparate systems, incorporating legacy applications, ensuring scalability, and planning for the future—can be a challenge. RTI makes it an advantage. RTI’s messaging software provides the architectural foundation to keep your data moving so you have the data you need—precisely when you need it.

RTI’s performance, reliability and interconnection experience across platforms, devices and industries is unparalleled. RTI has worked with the most experienced Industrial Internet architects and innovators across leading industries. Together we can play an important role in delivering systems that solve today’s problems and define the future.

RTI in the Industrial Internet of Things

About RTI

RTI provides the real-time communications platform for the Internet of Things. Our RTI Connext™ messaging software forms the core nervous system for smart, distributed applications. RTI Connext DDS allows devices to intelligently share information and work together as one integrated system.

Our customers span the breadth of the Internet of Things, including medical, energy, mining, air traffic control, trading, automotive, unmanned systems, industrial SCADA, naval systems, air and missile defense, ground stations, and science. The total value of system designs that trust RTI for their fundamental architecture exceeds $1 trillion.

We are committed to open standards, open community source and open architecture. RTI provides the leading implementation of the Object Management Group (OMG) Data Distribution Service (DDS) standard.

As the world’s largest embedded middleware provider, RTI is privately held and headquartered in Sunnyvale, California.