

## Siemens SIMATIC WinAC

### RTX Customer Overview

Based in Germany and employing more than 450,000 people, Siemens is one of the world's largest electrical engineering and electronics companies. Founded more than 150 years ago, Siemens has influenced a wide range of industries including information and communications, automation and control, power, transportation, medical, and lighting. Siemens manufactures and sells a wide variety of Programmable Logic Controllers (PLCs). These PLCs are designed to meet the needs of all applications, ranges, and connectivity requirements. Even with this extensive family of products, Siemens still recognizes the need for PC-based solutions outside of the traditional PLC paradigm.

The Siemens logo, consisting of the word "SIEMENS" in a bold, blue, sans-serif font.

### The Challenge

PCs running automation software are increasingly being used for applications that typically cannot be handled by the traditional PLC. While standard operating systems are fine for some, in a manufacturing environment where a specific action must take place every two milliseconds without fail, a one-millisecond delay due to a non-real-time OS will ruin the entire run. Further, automation and control functions demand very deterministic performance since there can be problems if the control system is not as fast as the process. Because any background applications or system operations running in Windows can easily interrupt a critical automation or control process, Siemens needed to make its SIMATIC WinAC product running in Windows work in a highly deterministic, hard real-time environment.

### The IntervalZero Solution

RTX not only delivered hard real-time capability, but also made the software transition much easier. The extensive library that comes with RTX allowed for a smooth port from the Windows environment to the RTX environment. RTX provided Siemens with a solution that was practically off-the-shelf; there was little to change of the existing code.

In researching its options for delivering hard, real-time Siemens considered using VxWorks, Linux RT, and QNX but decided they were cost prohibitive as they would have required too much rewriting of the software.

Siemens has used RTX to insure "hard deterministics" in its SIMATIC WinAC product for many years and plans to continue using it. RTX has kept up with all Windows upgrades, easily transitioning from NT to XP, thereby helping Siemens stay up-to-date for their Windows users. Further, the success of WinAC RTX has increased to the point that Siemens will soon focus development exclusively on the RTX product for PC-based control.

## For More Information

To learn about IntervalZero's Embedded Products or to schedule a demo, please contact us at [sales@intervalzero.com](mailto:sales@intervalzero.com).

## About IntervalZero

IntervalZero Inc. – formerly Ardence, a Citrix Company – develops Embedded software products that deliver real-time capability and that meet the needs of the Embedded technology market.

IntervalZero simplifies the creation of Embedded systems by taking advantage of the Windows Win32 API development environment to deliver both real-time, deterministic hardware control and an excellent end-user experience.

Solutions that rely on IntervalZero's Embedded software are deployed world-wide – primarily in Industrial Automation, Military/Aerospace, Medical Device, and Test & Measurement.

IntervalZero's Embedded software products include RTX, ETS and Select. RTX delivers real-time capability for direct control of embedded hardware and relies on Microsoft Windows to deliver the world-class Windows user experience. ETS is the smallest-footprint, stand alone, real-time operating system (RTOS) that supports the Win32 API. Select enables multi-purpose device functionality on a single operating system as well as instant on/off capability that minimizes boot time and ends long shutdowns.

Founded in 1980 as VenturCom, IntervalZero is headquartered in Waltham, MA, and operates across North America, Europe and Asia. More information can be found at [www.IntervalZero.com](http://www.IntervalZero.com).



# IntervalZero

266 2nd Avenue, Waltham, MA 02451

[IntervalZero.com](http://IntervalZero.com)

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