



Software Engineering Platform

The RTEdge™ Platform is a new generation of Model-Driven Development toolset that uses proof-based engineering approaches to enhance the development of hard real-time, mission-critical applications.

With the RTEdge™ Platform, you can specify, design, implement, build and debug embedded applications using state of the art modeling techniques. Using a concise language based upon a subset of UML 2.0 and AADL and backed by solid mathematical foundations, RTEdge™ provides a framework to analyze your system to prove accuracy, completeness and correctness of critical timing and functional requirements. This formalism exposes potential runtime delays or errors and reduces the scope and complexity of target testing.

Features:

Analysis of real-time deadlines	Visualization of flows of control
Determination of Worst-Case Response Times	Generation of code
Requirements traceability through DOORS	Debugging at the model level
Support for team development	Live runtime data monitoring
Schedule hard & soft real-time activities	Resource utilization reporting

ORDERING INFORMATION

Part Number: **PRTEDN1001**

Contact: **sales@edgewater.ca**

Telephone: **(613) 271-1101**

Fax: **(613) 271-1152**

Pricing: **Please call**

Availability: **Shipping now**

"Proof-based" Engineering:

- Express software using strict language constructs
- Constrain software in time and function with clear requirements
- Use mathematical analysis to prove compliance without exhaustive testing

Static Analysis:

Flow Analyzer:

- Identify all flows of control in the system
- Visualize control paths through Flow & Sequence Diagrams
- Perform conformance checking between specification and implementation

Schedulability Analyzer:

- Assists in the capture of target platform activity execution times
- Calculates Worst-Case Response Times for all flows of control in the system
- Determines whether specified deadlines are always met
- Flags those deadlines that may be exceeded
- Reports utilization figures for all elements that consume processor resources
- Based on rigorous mathematical principles using only the information provided by the user

Interactive Testing:

- Inject inputs and data into running applications
- View and modify variables at runtime
- Validate functional and temporal behaviour through live performance monitoring
- Fully scriptable interface

Specification Capture:

- Traceability between RTEdge™ models and system requirements through DOORS®
- Specification of interfaces via Protocols and Signals
- Layout of system architecture via Capsules
- Specialize and extend specifications through interface inheritance
- Define required control flows between two endpoints
- Specify time deadlines between endpoints

Design Modelling:

- Create and visualize behaviour with State Machines
- Visualize and manipulate components through different diagram views
- Refine functionality through Capsule inheritance
- Define user datatypes and functions
- Browse elements through the Model Navigator
- Specify resource usage of external tasks
- Verify model correctness against built-in constraints
- Specify physical properties of hardware elements

Code Generation:

- Generation of C++ production code
- Generated code matches the model exactly
- User type and function names are persisted in the generated code

ORDERING INFORMATION

Part Number: **PRTEDN1001**

Contact: **sales@edgewater.ca**

Telephone: **(613) 271-1101**

Fax: **(613) 271-1152**

Pricing: **Please call**

Availability: **Shipping now**