

# Speedgoat Real-Time Systems for xPC Target

Simulink® and xPC Target™, together with Speedgoat's turnkey real-time systems, create a complete real-time software and hardware environment for rapid prototyping and hardware-in-the-loop (HIL) simulation.

Innovative engineers from a broad range of industries worldwide use Speedgoat systems to interactively design, prototype, and test their Simulink models in real time with hardware under test.

## About xPC Target

xPC Target provides a high-performance host-target prototyping environment that enables you to connect your Simulink and Stateflow® models to physical systems. You can execute a model in real time by generating code with Real-Time Workshop® and downloading it to a target system running the xPC Target real-time kernel.

## Speedgoat Real-Time Target Systems

All target systems are custom-built to your performance, connectivity, ruggedness, environmental, size, and form factor requirements. Speedgoat systems can be deployed in office, lab, production, field, and vehicle environments, and are ready to use as delivered.

A typical system consists of the target machine, I/O modules, driver software, and test models. Each system is tested and optimized for use with Simulink, Stateflow, and xPC Target from MathWorks, allowing you to set up your real-time environment for rapid prototyping and HIL within hours.

## Configuring a Real-Time System: The Challenges

Evaluating and assembling the right components to build a powerful real-time target system for use with xPC Target takes careful planning. The performance, connectivity, and compatibility of the final real-time target system can be affected by many factors, and involve many interrelated design decisions. Specifying the hardware can also distract engineers from their primary design goals. Critical considerations include:

**Performance.** Selecting the right components, such as the CPU and chipset, is critical to maximize the performance of xPC Target. Speedgoat ensures that the specified components, and the system as a whole, deliver the best real-time performance.

**I/O connectivity and compatibility.** Speedgoat ensures that your I/O modules match your application. All required I/O types are covered by the smallest number of I/O modules, which reduces cost and saves I/O expansion space.

**Life cycle and availability.** To protect your system investment, Speedgoat makes every effort to select components with long product life cycles. This approach provides long-term availability of components for constructing duplicate systems.

**Warranty and support options.** Speedgoat protects your purchase by providing timely technical support, an enhanced warranty, and repair services for your system. Speedgoat ensures that any I/O modules in the system will work with Simulink and xPC Target.

## Online Resources

- Speedgoat real-time systems  
[www.speedgoat.ch/products](http://www.speedgoat.ch/products)
- xPC Target  
[www.mathworks.com/products/xpctarget](http://www.mathworks.com/products/xpctarget)
- MathWorks system integrators  
[www.mathworks.com/products/connections/si\\_all.html](http://www.mathworks.com/products/connections/si_all.html)



## Contact Information

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