

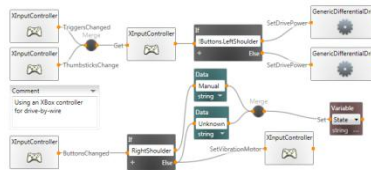
Microsoft Robotics Studio *Making Robotics Easier.*

Microsoft® Robotics Studio makes it easier to create robotic applications for a variety of hardware platforms. The Microsoft Robotics Studio software development kit includes a simple, but powerful runtime platform, easy to use authoring and simulation tools, as well as tutorials and sample code to help you get started.

End-to-End Development Platform

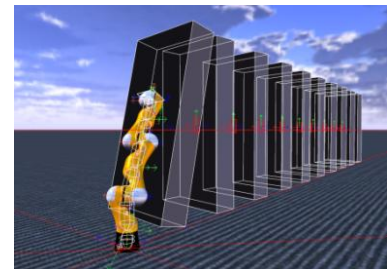
The Microsoft Robotics Studio software development kit enables developers to create applications for a wide-variety of robot hardware.

- **Easily create applications using a visual programming environment.** The Microsoft Visual Programming Language (VPL) enables anyone to create and debug robotics programs very easily. Just drag and drop blocks that represent services, and connect them up. You can even take a collection of connected blocks and reuse them as a single block elsewhere in your program.



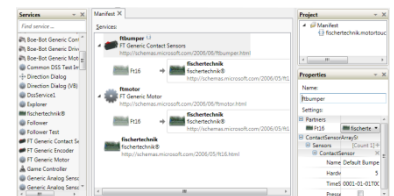
VPL makes it easy to create applications.

- **Simulate applications in 3D physics-based virtual environments.** Simulate your robotics applications using realistic 3D simulated models. The Microsoft Visual Simulation Environment includes AGEIA™ PhysX™ Technology from AGEIA Technologies Inc., a pioneer in hardware-accelerated physics, enabling real-world physics simulation for robot models. PhysX simulations can also be accelerated using AGEIA hardware.



The Visual Simulation Environment enables you to create and run applications in a realistic physics-based 3D virtual world.

- **Easily configure your applications for different hardware platforms.** Configure services through a simple, visual drag and drop interface.



The Manifest Editor makes it easy to assemble and configure application services.

- **Interact with robots using Windows or Web-based interfaces.** Create applications that enable controlling a robot using Window-based interfaces or with a Web-browser. For example, using HTML and JavaScript you can easily remotely monitor a robot's cameras and sensors across the Web.

Lightweight asynchronous, services-oriented runtime

Microsoft Robotics Studio includes an advanced services-oriented software platform.

- **Makes asynchronous programming simple.** The Concurrency and Coordination Runtime (CCR) library makes it simple to write programs to handle asynchronous input from multiple robotics sensors and output to motors and actuators.
- **Services oriented application design.** The Decentralized Software Services (DSS) runtime supports a simple services oriented application model, enabling you to create program modules that run as dynamically inter-operable units that can run either on a robot or on connected PCs and communicate using a simple, open protocol.
- **Reuse modular services using a composable model.** High-level functions (such as a navigation service or sensor fusion) can easily use lower level services (such as sensor and motor services), providing for reusability of code and a better design for handling failure and updating your applications.

Scalable and extensible platform

The Microsoft Robotics Studio programming model can be applied and extended to a wide variety of robot hardware platforms,

enabling users to transfer their skills across platforms.

- **Easily extend Microsoft Robotics Studio functionality.** Anyone can easily add to or extend the functionality of Microsoft Robotics Studio by providing software or hardware services. A growing number of hardware and software vendors are making their products compatible with Microsoft Robotics Studio.
- **Supports both remotely connected (PC-based) and robot-based (autonomous) application scenarios.** Remotely connected scenarios enable you to communicate from a PC to a robot through a serial port, Bluetooth®, 802.11, ZigBee®, CAN, or other RF and wired interfaces. Applications can also run directly on PC-based robots running Windows® Vista, Windows® XP, Windows® XP Embedded, Windows® Embedded CE 6.0 and Windows Mobile® 6, enabling fully autonomous operation.
- **Develop using a wide range of programming languages.** Applications can be developed using a selection of programming languages, including those in Microsoft Visual Studio® and Microsoft Visual Studio Express (C#, C++, and VB.NET), as well as scripting languages such as Microsoft IronPython.

For More Information

Visit the Microsoft Robotics Studio Web site at microsoft.com/robotics to learn more about more about Microsoft Robotics Studio.

DOWNLOAD MICROSOFT ROBOTICS STUDIO TODAY!

Microsoft Robotics Studio is licensed for non-commercial use at no charge. Non-commercial use is defined as using the software for your own personal use and not for internal business operations or revenue generation purposes. That means if you are student, educator, academic researcher, or hobbyist looking to try out or use the software without the objective of making money or running your business, the software is available for download for free.

Commercial use licenses are available for purchase for \$399 (US) from the Web site.

Systems Requirements

Application development is supported on the following operating systems:

Windows Vista; Windows XP; Windows Server 2003 R2 (32-Bit x86); Windows XP 64-bit* Windows Server 2003 R2 x64 editions*

*Visual Simulation Environment not supported

Runtime deployment is supported for the following operating systems:

Windows Vista; Windows XP; Windows XP Embedded, Windows Embedded CE 6.0, Windows Mobile 6.0, Windows Server 2003 R2 (32-Bit x86); Windows Server 2003 R2 x64 editions; Windows XP 64-bit

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