

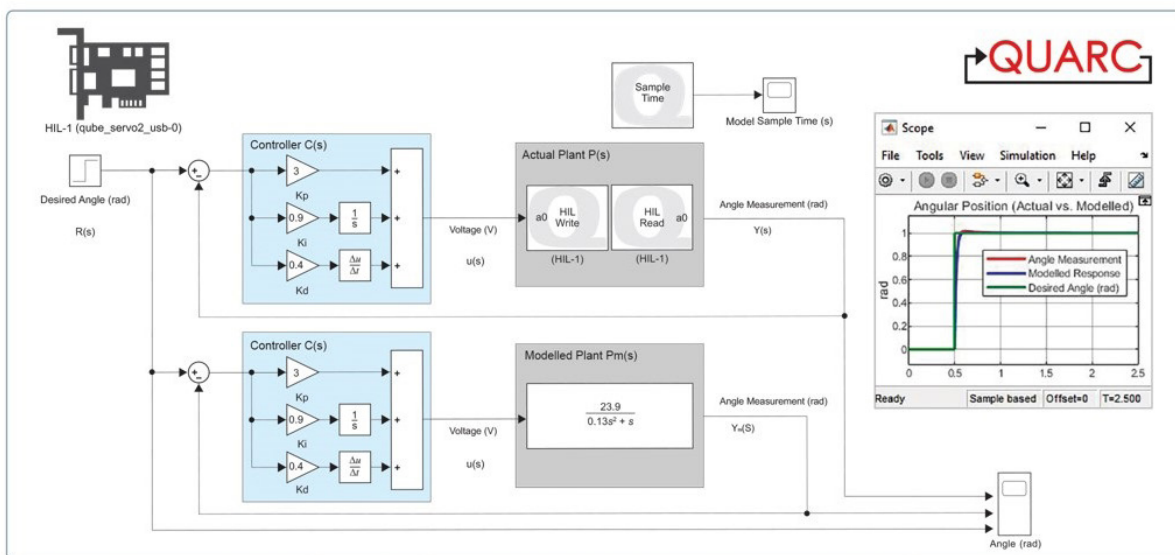
QUARC™



QUARC is the most efficient way to design, develop, deploy and validate real-time applications on hardware using Simulink®

Thousands of academic institutions worldwide use QUARC to accelerate their teaching and research activities. With QUARC, educators don't need to worry about interfacing to hardware or deterministic performance. They can use the intuitive graphical interface of Simulink® to give students a systematic understanding of the design of mechatronics, robotics, and control systems and let them interact with these systems in real time. The customizable QUARC-based curriculum included with all Quanser teaching products helps students bridge the gap between theoretical models and algorithms, and the real world.

For researchers, QUARC offers the performance they need to characterize and validate algorithms in simulation and on hardware. QUARC makes developing algorithms fast and reliable, thanks to an extensive set of research-grade libraries for communications, multi-threaded execution, image and video processing, and more. With QUARC, researchers can deploy their algorithms to a wide variety of local and remote platforms with the push of a button, without having to worry about languages or cross-compilers. QUARC quite simply lets you focus on your research while it takes care of the rest.



QUARC HOST

Simulink Development Environment (SDE)

- Open Architecture
- Graphical Development Environment
- Rapid Control Prototyping
- Software Interfacing

QUARC TARGETS

- Multiple/Concurrent/Remote
- Real-Time Performance
- Real-Time Communication
- Hardware Integration
- Robotics and Autonomous Applications

LICENSING OPTIONS

QUARC Essentials

Take full advantage of Quanser's course resources to rapidly deploy an experiential teaching lab.

- Seamless integration with Simulink® including external mode, parameter tuning, signal monitoring, data logging
- Deterministic performance including multithreading (multi-rate) and asynchronous threads
- Simple hardware interfacing through Quanser Hardware-In-the-Loop (HIL) API and blocks
- Host device support including joystick, mouse, and keyboard
- Rapid control prototyping utility libraries
- Support for Quanser Interactive Labs (QLabs) platform
- Synchronous/asynchronous and blocking/non-blocking communications
- Persistent stream connectivity
- Network protocols including TCP and UDP
- Hardware protocols including serial, SPI, I²C

QUARC Complete

Catalyze ambitious engineering solutions, from transformational labs to prolific research.

- All features and capabilities of QUARC Essentials
- Image processing and video compression/display capabilities
- Access to localization camera data from NaturalPoint® OptiTrack and Vicon®
- Automated cross-compilation and deployment to the QBot, QCar, and QDrone
- Library of application primitives for autonomous vehicles and robotics
- Access to the Quanser QArm and haptic devices
- Interface with the 3D Systems Phantom® and Force Dimension haptic devices
- Dynamic reconfiguration capabilities

The following options are available. Please [contact us](#) for details.

- 1- Multiple Years Licensing.
- 2- Laboratory Wide Licensing.
- 3- Industrial Robot Support Toolbox.

About Quanser:

For 30 years, Quanser has been the world leader in innovative technology for engineering education and research. With roots in control, mechatronics, and robotics, Quanser has advanced to the forefront of the global movement in engineering education transformation in the face of unprecedented opportunities and challenges triggered by autonomous robotics, IoT, Industry 4.0, and cyber-physical systems.

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