



QUANSER
INNOVATE. EDUCATE.

QStudioRP™
Rapid Control Prototyping

NOW YOU ARE IN CONTROL!



Rapid Control Prototyping with QStudioRP

At Quanser, we view rapid control prototyping (RCP) as the process of critically refining and tuning control strategies ...doing it as quickly, easily and cost-effectively as possible. If your end product incorporates complex control algorithms or strategies, we can improve your productivity, reduce your development time and speed your time to market. We offer powerful hardware-in-the-loop (HIL) application tools that extend far beyond your simulations.

Utilize the QStudioRP solution for shorter design cycles and a faster time to market!

Applications:

- Aerospace
- Automotive
- Military
- Research
- Robotics
- Manufacturing
- Medical

Quanser's customers include:

- Fairchild Controls
- Intel
- Northrop Grumman
- Schlumberger
- NASA

QStudioRP Products

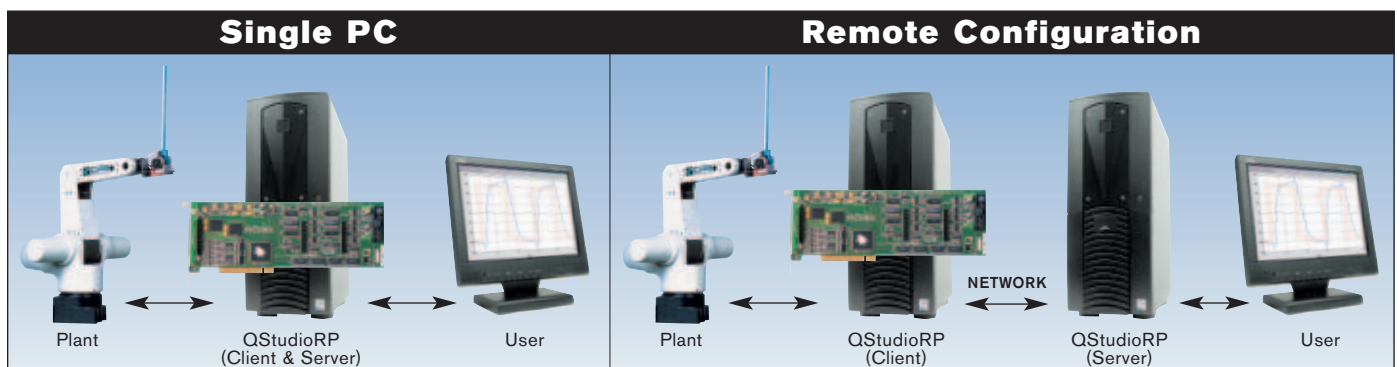
Interested in a flexible, leading-edge rapid control prototyping environment? QStudioRP is a robust set of hardware and software tools designed to facilitate the design, implementation and rapid prototyping of control systems. Quanser offers three comprehensive packages:

- QStudioRP Optima I
- QStudioRP Optima II
- QStudioRP Kit

“Quanser’s systems are ideal for hardware-in-the-loop prototyping and accelerated design schedules. We successfully and repeatedly use the Quanser systems to demonstrate and prove our new control strategies.”

Dr. Haik Biglari, Director of Electronics and Controls, Fairchild Controls Corp.

Multiple Configurations Are Possible

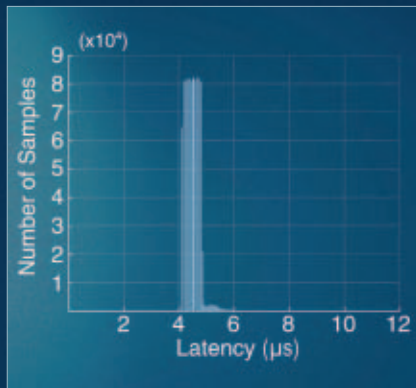


Why choose QStudioRP?

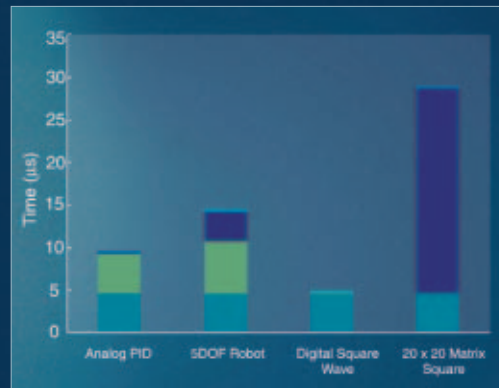
Quanser customers understand value and appreciate affordable, state-of-the-art engineering solutions available to every control engineer on the project. With our easy-to-use rapid control prototyping products, your productivity is increased and development time is decreased - all of which saves you money.

“Hard real time on a PC”

Tight Latency, Tight Control



Control Loop Examples



* Current optimized configuration as of 03/2004 specs. Performance will improve as newer PC technology becomes available. Configuration description available at www.quanser.com/qstudiorp



Image shown is Quanser Q8 HIL control board

Here's what you get from QStudioRP:

QStudioRP is a single-PC solution offering a remarkable level of real-time performance. The graphs above clearly show that with QStudioRP you get tight latency performance which delivers the control you need.

COST SAVINGS.

“Pay less for greater performance, enable more workstations”

- Since cost-effective QStudioRP is a PC-based desktop solution, you can now afford to equip more engineers with RCP workstations.

TIME SAVINGS.

“Let the control engineer focus on control!”

- Quanser is the only supplier in the industry to manufacture, install, configure and optimize their own products. This makes Quanser a “one-stop shop,” making your work simpler. With QStudioRP on every controls engineer’s desktop, your rapid prototyping becomes even more rapid!

FLEXIBILITY.

“Control design without constraints”

- The migration path from simulation to HIL to real-time control code is quick and easy.
- All I/O capability is expandable. You get great performance from as many Quanser HIL control boards** as your PC can hold.
- WinCon’s design architecture allows for single or multiple-PC configurations, enabling versatile deployments.

FAMILIARITY.

“Design in a recognizable environment without learning new tools”

- Windows, MATLAB, Simulink and VenturCom RTX offer a familiar working environment as they are recognized industry standards. Our commercial-off-the-shelf (COTS) components work with the tools you use every day.

** A HIL control board is a data-acquisition and control board specifically designed for HIL applications



Complete Solutions

Quanser delivers complete solutions by providing all the elements at one time, including your TMW products. As a TMW VAR (value added reseller), we make it easy for the customer who wants a turnkey system, has a dedicated project or is starting a new venture.

■ QSTUDIO RP OPTIMA I

- High-performance PC (includes Intel Pentium 4 Processor with Hyper-Threading Technology)
- Quanser Q8 or Q4 HIL control boards
- Quanser WinCon real-time control software
- The MathWorks MATLAB/Simulink/RTW software
- Microsoft Windows XP/2000 and Visual C++
- VenturCom RTX RTOS

■ QSTUDIO RP OPTIMA II

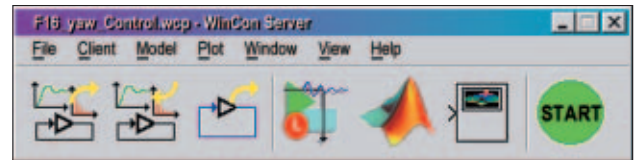
For the customer who is familiar with control system design and already possesses MATLAB/Simulink, we add to your existing license with this mid-level package. Its performance is identical to QStudioRP Optima I and includes:

- High-performance PC (includes Intel Pentium 4 Processor with Hyper-Threading Technology)
- Quanser Q8 or Q4 HIL control boards
- Quanser WinCon real-time control software
- Microsoft Windows XP/2000 and Visual C++
- VenturCom RTX RTOS

■ QSTUDIO RP KIT

If you're a customer who has in-house expertise or who doesn't need an optimized PC, we have a package addressing your needs. It includes:

- Quanser Q8 or Q4 HIL control boards
- Quanser WinCon real-time control software
- VenturCom RTX RTOS



Key Technical Features

- Integrated MATLAB/Simulink/RTW environment
- Fully compatible with all standard Simulink control blocks, including S-functions
- Full RTOS performance under Windows 2000 Professional or XP Professional
- On-the-fly parameter tuning and plotting from Simulink
- Run and tune real-time controllers independent of TMW software
- Full data acquisition trigger and record capabilities
- All processing performed by your desktop's CPU
- Fully supported by Quanser Technical Assistance

Quanser's Commercial Solutions

Since 1990, Quanser has been a world leader in real-time control design and implementation. While many engineering professionals associate the Quanser name with innovative academic and research-based solutions (and with more than 1,000 clients worldwide using Quanser products, it's easy to see why), the company can proudly boast of its extraordinary products for industry.



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With Quanser the possibilities are infinite

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