PRODUCTS AND LAB SOLUTIONS
Answering the most challenging academic questions with innovative technology and methods

Quanser is the global leader in the design and manufacture of lab solutions and products that has transformed the way educators teach the theory, application, and implementation of control, robotics, and mechatronics. Over 2,500 universities and institutions rely on Quanser labs and solutions to help them attract, educate and graduate a new generation of engineering leaders – expanding their presence and reputation on the global academic scene. The Quanser approach of innovation, collaboration and education has produced a number of notable technology firsts that pioneered many critical contemporary trends:

- Efficient validation platform for control research and the commercial realization of the inverted pendulum
- High-performance real-time control on common microcomputers
- Research-focused quadcopter preceding the drone revolution by a decade
- Generalized haptic platform for force-feedback telerobotics
- Intelligent, affordable robotic therapy platform for stroke patient rehabilitation
- Mobile-first knowledge platform optimized for engineering content

Guiding principle - the transformational lab

Creating a more enriching and advanced research and learning experience has always been the overarching goal. One that is collaborative, multi-disciplinary and progressive. One that faithfully brings to life the mathematics and theories of engineering and are fully consistent with today’s education movements.

- Sophisticated technological platforms capable of realistic, complex, even ambitious applications, while fostering innovative pedagogy
- Immersive, engaging, challenging experiences that motivate vigorous research and study
- Turnkey, flexible, low-maintenance, well-supported and affordable

Ultimately success is capturing the excitement of engineering and conveying it in the classroom to help every student reach his or her potential
**ENGINEERING TRAINER BOARDS**

*For NI ELVIS*

- Mechatronic Sensors Board
- Mechatronic Interfacing Board
- Mechatronic Systems Board
- Physics and Dynamics Board
- DC Motor Control Board
- Rotary Pendulum Board
- VTOL Board

- Energy Conversion Board
- HVAC Board
- Myoelectric Board
- Analog Electronics Lab

- Interface Board
- Intro Board
- OpAmp Board
- BJTs Board
- MOSFETs Board
- Diodes Board
- Mechatronic Actuators Board with NI ELVIS

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**MOTION CONTROL**

**QUBE-Servo 2**

- Inertia disk
- Tool-less quick connect interface
- Encoder angle sensed inverted pendulum

**Rotary Platform**

- Rotary Flexible Joint
- Rotary Flexible Link
- Gyro/Stable Platform
- Adjustable stainless steel gears
- High quality DC servomotor with tachometer

**Linear Platform**

- Linear Inverted Pendulum
- Linear Servo Base Unit with single, double, and flexible inverted pendulums also available.
- Linear Flexible Joint
- Linear Flexible Joint with inverted pendulum also available.
- Seesaw
- Seesaw with inverted pendulum also available.
- 2 DOF Inverted Pendulum
- Pendulum easily attaches to the front shaft of the Linear Servo Base Unit
- Multi-DOF Torsion
- High quality aluminum chassis with precision-crafted parts

**High Fidelity Linear Cart**

- HFLC High Fidelity Linear Cart with single, dual, double, and triple inverted pendulums also available.
AEROSPACE CONTROL AND DYNAMICS

2 DOF Helicopter

3 DOF Helicopter

3 DOF Stationary Quadcopter

3 DOF Gyroscope

IMU with accelerometer and gyroscope

DC motor with encoder and tachometer

Pitch encoder

Continuous 360° yaw rotation

Yaw encoder

User-controllable tri-color LED

Available with QFlex 2 USB or Embedded interfacing panel

Quanser AERO

ACTIVE SUSPENSION

Coupled Tanks

Active Suspension

INDUSTRIAL APPLICATIONS

Magnetic Levitation

3 DOF Crane

Coupled Tanks

Active Suspension

Heatflow Experiment

Products pictured are not to scale. Additional workstation components may be required. For full product information and system configurations, visit www.quanser.com

STRUCTURAL VIBRATIONS

Shake Table I-40

Hexapod

XY Shake Table III

Shake Table II

Active Mass Damper (Additional Add-on)

Precise and accurate positioning using high-resolution encoder

Easy integration of Quanser or user-built structures, third-party sensors and actuators

Ball-screw mechanism for robust actuation

Single axis operation, dual-axis operation achievable using two Shake Table II units

INDUSTRIAL APPLICATIONS
**ROBOTICS**

**Manipulator Robotics**

Intuitive control design using Simulink block diagram environment and QUARC control software

Real-time sensor measurements

Robotic manipulator simulation and 3D visualization

Two-finger gripper

4 DOF Serial Manipulator

QBall 2

Protective carbon fiber cage

Brushless motors with 10-inch propellers

Adjustable camera and depth sensor

On-board computer and DAQ

Data acquisition card with accessible I/O headers

2-wheeler platform with built-in sensors

QBot 2

For complete product information, visit www.quanser.com or download the app.

**Mobile Robotics**

2 DOF Serial Flexible Link

2 DOF Serial Flexible Joint

6 DOF Robotic Platform for Research

6 DOF Denso Open Architecture Robot

4 DOF Robotic Package for Education

**Telerobotics and Haptics**

OMNI Bundle

HD² High Definition Haptic Device

Telepresence System

The Unmanned Vehicle Systems Lab consists of unmanned aerial and ground vehicle(s), multi-camera system and control station with software.