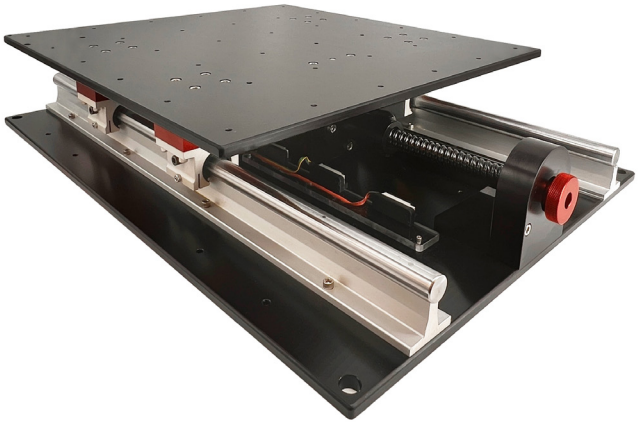
QUANSER
INNOVATE · EDUCATE

SHAKE TABLE II

Bench-scale single-axis motion simulator

The Quanser Shake Table II is a mid-size, open architecture, single-axis motion simulator ideal for teaching and doing research in structural dynamics, earthquake engineering, and other topics related to structural, earthquake, and civil engineering. Users can apply sine waves, chirp signals and scaled earthquakes, such as the Northridge, Kobe, and El-Centro supplied, to study their effects on buildings, bridges, and various materials. Additional earthquake profiles can be downloaded from the PEER Ground Motion Database and scaled down for replaying on the Shake Table II. By combining two Shake Table II systems, users can perform bi-directional shaking experiments, or work with higher payloads.

Features



Accurate
Precise positioning using high-resolution encoder and low-backlash ball-screw actuator

Customizable
Customizable for xy motion. Easy integration of sensors, actuators, user-built or Quanser test structures

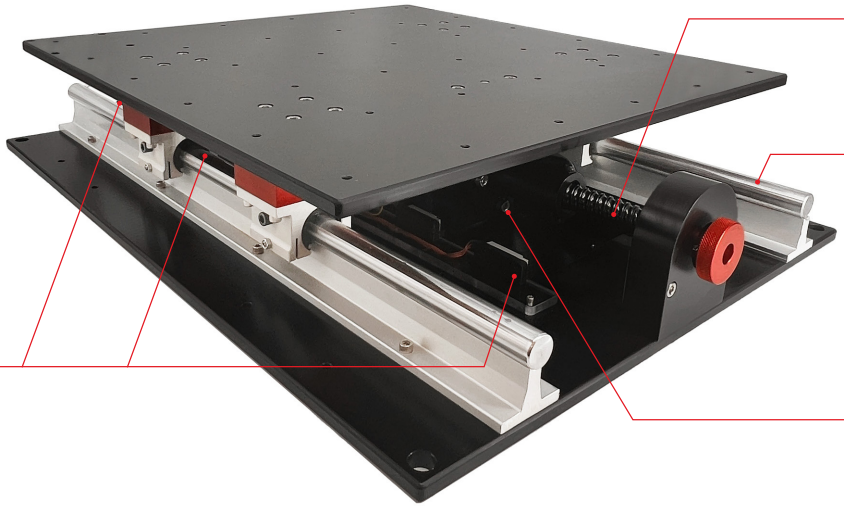
Simple Operation
Safe, reliable, easy operation with standalone software, and low maintenance

Flexible
Scaling and playback of earthquake data supported

Workstation Components

Motion simulator	Shake Table II
Data acquisition devices	Quanser Q8-USB
Amplifier	Quanser AMPAQ-PWM amplifier
Control design environment	Standalone Shake Table II software QUARC Software for Simulink - Integration license
Test structure (optional)	One- or two- floor Active Mass Damper with VoltPAQ-X1 or VoltPAQ-X2 amplifier

Product Details



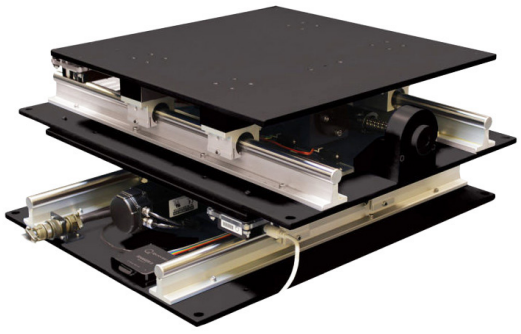
Device Specifications

Dimensions (L x W x H)	61 cm x 46 cm x 13 cm
Total mass	27.2 kg
Top stage dimensions (L x W)	46 cm x 46 cm
Maximum travel	± 7.62 cm
Maximum acceleration with 7.5 kg payload[1]	2.5 g
Maximum velocity	0.399 m/s
Operational bandwidth[1]	10 Hz
Lead screw encoder resolution (quadrature)	8192 counts/rev
Effective stage position resolution	1.55 µm

XY configuration with two Shake Table II units

Maximum travel (X and Y)	± 7.62 cm
Maximum acceleration with 7.5 kg payload	1.0 g (X), 2.5 g (Y)
Maximum velocity (X and Y)[1]	39.9 cm/s

[1] Please contact Quanser for full operational bandwidth specifications



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.