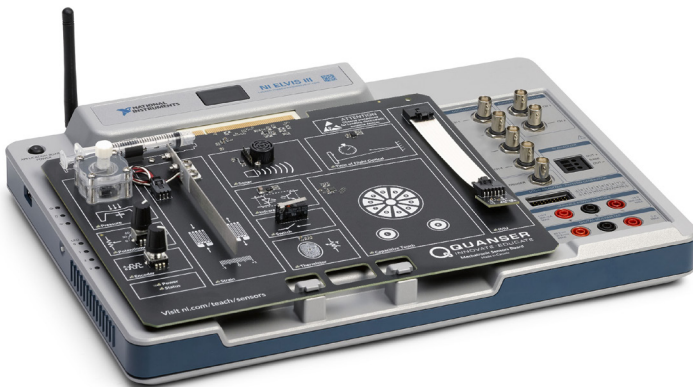


QUANSER MECHATRONIC SENSORS BOARD

Introduce Students to Sensors and their Applications

A critical component of any mechatronics course or program is an understanding of the theory and application of sensors used in mechatronic systems. The Quanser Mechatronic Sensors Board introduces students to various sensors that measure pressure, strain, temperature, contact, distance, angular displacement, and dynamics. Included curriculum covers basic measurement techniques, theoretical performance, specifications, and common design considerations. Designed exclusively for the NI ELVIS III platform and LabVIEW™, the board also exposes students to industry-grade measurement and calibration fundamentals.

Features



NI Part No. 786518-01
NI ELVIS III sold separately



11 Sensors

Including temperature, strain, pressure, distance, encoder, proximity, touch, and IMU



Ready to use

Includes comprehensive ABET-aligned course resources and LabVIEW files



Easy Operation

Measure using pre-installed sensors



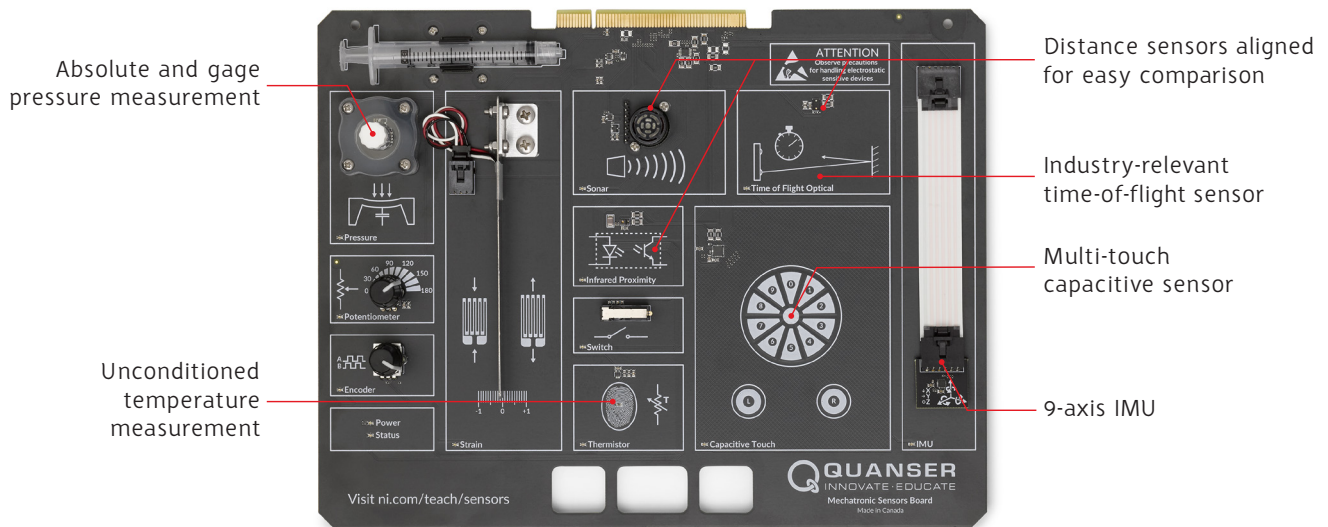
Accelerate Discovery

Learn the fundamentals of measurement, calibration, and sensor applications

Courseware

- Sensor behavior
- Filtering and statistical analysis of raw sensor data
- Deflection and natural frequency measurement using strain gage
- Pressure transducer calibration
- Angular displacement measurement
- Encoder decoding
- Long and mid-range distance measurement
- Proximity detection
- Switch debouncing
- Temperature calibration and measurement
- Capacitive touch sensing
- Roll, pitch, and yaw measurements using an IMU

Product Details

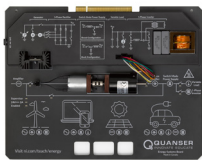


Device Specifications

- Pressure transducer
- Thermistor
- Ultrasonic distance
- Potentiometer
- Time-of-Flight sensor
- Infrared proximity sensor
- Snap-action switch
- Strain gage
- IMU: 3-axis gyro, 3-axis accelerometer, 3-axis magnetometer
- Capacitive touch sensors: 9 segment scroll pad, 2 single-touch buttons
- Encoder: Quadrature (A and B signals)

ACCELERATE DISCOVERY WITH THE NI ELVIS III PLATFORM

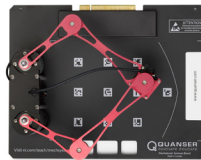
For the full range of Quanser application boards, visit www.ni.com



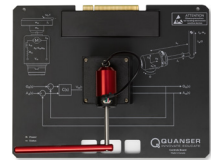
Energy Systems



Mechatronic Actuators



Mechatronic Systems



Controls

About Quanser:

Quanser is the world leader in education and research for real-time control design and implementation. We specialize in outfitting engineering control laboratories to help universities captivate the brightest minds, motivate them to success and produce graduates with industry-relevant skills. Universities worldwide implement Quanser's open architecture control solutions, industry-relevant curriculum and cutting-edge workstations to teach Introductory, Intermediate and Advanced controls to students in Electrical, Mechanical, Mechatronics, Robotics, Aerospace, Civil, and various other engineering disciplines.

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