



PI's Digital Motion Controller Suite Keeps Growing

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PI PRESS RELEASE

PI Expands Its Family of Digital Piezo Nanopositioning Controllers

Integrating different drive technologies from traditional servo and stepper motors to highly specialized piezo-ceramic scanners is easy.

February 2018, Auburn, MA – Industry leader in motion control and nanopositioning solutions PI (Physik Instrumente) L.P. has expanded its successful E-709 family of low-cost digital piezo nanopositioning controllers with a new plug-in module for the C-885 PIMotionMaster modular controller system.

Modular System, up to 20 Cards per Rack

The PIMotionMaster system allows the combination of different drive technologies, controlled through one interface via one software package. For example, stepper motor stages, closed-loop servo motor positioners, and fast piezo-driven nano-focus devices can now be operated from one controller. Up to 20 control cards can be plugged into one 19" rack.

Digital Servo Controller with Piezo Power Amplifier and Software

The latest piezo control module, the E-709.1CC885, supports functions including wave generator, data recorder, auto zero, and I/O triggers. With a sensor update rate of 10kHz, two notch filters and linearization algorithms based on 5th-order polynomials it provides exceptionally accurate motion with sub-nanometer precision. The E-709 card combines a power amplifier (-30 to 130V output), signal conditioning circuitry for capacitance sensors and a digital servo. Piezo controllers with digital servo offer the advantage of higher linearity, and easy access to advanced features in comparison to conventional analog piezo controllers. A comprehensive software package is included: drivers for LabVIEW, dynamic libraries for Windows and Linux, MATLAB, MetaMorph, μ Manager, Andor iQ. Interfaces include USB, SPI, RS-232, and analog.

Watch how easy start-up is

https://www.youtube.com/embed/p5ETTb_wKeQ?rel=0

Specifications, Datasheet, More Information

<https://www.physikinstrumente.com/en/products/controllers-and-drivers/piezo-controllers/e-7091cc885-digital-piezo-controller-module-for-c-885-pimotionmaster-605201/>

Plug & Play for Multiple Types of Motors and Drive Systems

After the modules are installed in the rack, individual axis configuration and movement is easily set-up using the included PIMikroMove software, a comprehensive Windows GUI that does not require programming knowledge for commissioning or direct operation.

Modules are currently available for PI translation/rotation stages equipped with:

- DC motors
- 3-phase motors
- Stepper motors
- Piezo flexure positioners
- Piezo ultrasonic motors
- PiezoWalk® nanopositioning motors
- Piezo inertia motors

Applications

Fields of applications include precision motion control in automation, nanopositioning, photonics, semiconductor testing, laser machining.

Standard and Custom

PI has in-house engineered solutions with over 4 decades of experience working with customers to provide products that meet application demands, and can quickly modify existing product designs or provide a fully customized OEM part to fit the exact requirements of the application.

About PI

PI is a leading manufacturer of air bearing stages, piezoelectric solutions, precision motion control equipment, and hexapod parallel-kinematics for semiconductor applications, photonics, bio-nano-technology, and medical engineering. PI has been developing and manufacturing standard & custom precision products with piezoceramic and electromagnetic drives for 4 decades. The company has been ISO 9001 certified since 1994 and provides innovative, high-quality solutions for OEM and research. The PI group employs more than 1,000 people worldwide in 15 subsidiaries and R&D / engineering centers on 3 continents.

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