AEROTECH In Motion

Dedicated to the Science of Motion — *January 29, 2008*

FEATURES

SUBSCRIBE/UNSUBSCRIBE

SUBSCRIBE/UNSUBSCRIBE to the Aerotech E-Newsletter.

CONTACT US

Aerotech, Inc.
Phone: 412-963-7470
Email: sales@aerotech.com
Web: www.aerotech.com

Aerotech Ltd.
Phone: +44-118-9409400
sales@aerotech.co.uk

Aerotech GmbH
Phone: +49-911-9679370
sales@aerotechgmbh.de

Aerotech KK
Phone: +81-47-489-1741
sales@aerotechkk.co.jp

TRADESHOWS

MD&M West
Anaheim Convention Center
Anaheim, CA
Booth 1797
January 29-31, 2008
http://www.mdmwest.com

Machine Building Drives & Automation
National Expo Centre
Birmingham, UK
Booth 2000
February 13-14, 2008
http://www.devicelink.com/expo/macbuild08/index.html

Advanced Litho
San Jose Convention Center
San Jose, CA
Booth 2009
February 26-27, 2008
http://spie.org/advanced-lithography.xml

AEROTECH QUICK LINKS

Motion Solutions for Academic and Industrial R&D

Develop and test advanced product innovations with Aerotech's high-performance single- and multi-axis motion control and positioning systems.

Economical Choices for Advanced System Control

Benefit from high performance at a low cost by employing Aerotech's mechanical-bearing ball-screw stages in conjunction with Aerotech motion controllers. The ATS115 and ATS165 linear stages are an economical solution for lab applications. The Ensemble™ stand-alone multi-axis controller provides one to ten axes of synchronized motion in a distributed network of discrete drives, while the Ensemble Epaq is a stand-alone controller with up to six axes of motion control in one integrated package.

Spectroscopy, Laser Processing, and Micromachining

Ripple-free, high-speed, accurate positioning is a benefit of Aerotech's mechanical-bearing linear motor stages. The low-profile ALS130 and nanotranslation ANT-LX direct-drive, crossed-roller stages are ideal for spectroscopy, micromachining, and inspection.

Outstanding accuracy, position repeatability, and in-position stability require high system resolution. Npaq® is the rack-mountable servo amplifier solution for Aerotech's Automation 3200 motion system. It can be supplied with both linear and PWM amplifiers and, with optional on-board encoder multiplication, can provide 2.5 nm resolution.

Solutions for Ultra-High Precision Applications

Ultra-precise scanning and positioning require Aerotech's air-bearing linear motor stages. The ABL2000 provides excellent pitch/yaw characteristics and velocity control. Use the ABL2000 for imaging, semiconductor, and other challenging applications.

The Ndrive® HL linear power amplifier is available with the ABL2000 for low noise, is perfect for high-bandwidth requirements, and maintains superb linearity with zero crossover distortion.

Rapid Prototyping, Pick and Place, and Inspection

The AGS1000 and AGS10000 gantry systems are designed for high-speed pick and place, automated assembly, vision inspection, and dispensing stations. In addition, Aerotech's Position Synchronized Output (PSO) option provides versatile, on-the-fly synchronization of a laser's pulse and power output with the motions of any machine controlled by Aerotech motion controllers. Integrated high-speed

AEROTECH In Motion

Dedicated to the Science of Motion — *January 29, 2008*

SUBSCRIBE/UNSUBSCRIBE

SUBSCRIBE/UNSUBSCRIBE to the Aerotech E-Newsletter.

CONTACT US

Aerotech, Inc.
Phone: 412-963-7470
Email: sales@aerotech.com
Web: www.aerotech.com

Aerotech Ltd.
Phone: +44-118-9409400
sales@aerotech.co.uk

Aerotech GmbH
Phone: +49-911-9679370
sales@aerotechgmbh.de

Aerotech KK
Phone: +81-47-489-1741
sales@aerotechkk.co.jp

TRADESHOWS

MD&M West
Anaheim Convention Center
Anaheim, CA
Booth 1797
January 29-31, 2008
http://www.mdmwest.com

Machine Building Drives & Automation
National Expo Centre
Birmingham, UK
Booth 2000
February 13-14, 2008
http://www.devicelink.com/expo/macbuild08/index.html

Advanced Litho
San Jose Convention Center
San Jose, CA
Booth 2009
February 26-27, 2008
http://spie.org/advanced-lithography.xml

AEROTECH QUICK LINKS

Knowledge Base - FAQs
Engineering Reference
Software & Manual Downloads
CAD Downloads
Job Listings

PSO makes the Automation 3200 motion controller the perfect controller to couple with Aerotech's high performance gantry systems, while Nservo provides an economical method to retrofit any existing system that uses analog servo amplifiers to the performance and flexibility of the Automation 3200 digital platform.

Custom Solutions for Custom Applications

Our extensive experience with large payload, high vacuum, and cleanroom applications qualifies us to provide custom-engineered systems to meet your needs.

Fast Delivery Service (FDS)

Many of the products featured here are available through Aerotech's Fast Delivery Service (FDS). FDS provides customers with quick turnaround times on popular Aerotech stages, motors, and controllers. Learn more about this service on our website, or by contacting your local sales office.

Please GO HERE to discuss your motion application with an Aerotech Application Engineer.

Latest Software Releases

This section lists the latest revisions of Aerotech software, providing a handy method of checking to see that your Aerotech software, and hence your Aerotech system, is working at peak efficiency. All Aerotech software is available for instant download from our website — just click the software title! An entry in red means the software has been updated since our last newsletter.

Software	Version	Description
A3200 Digital Automation Platform	Version 2.19	Nmotion® SMC Libraries and Utilities, Ncontrol® Software Developers Kit, Nview® HMI, Windows Help Files
Soloist Single-Axis Controller	Version 2.09.000	Development Tools, Libraries, Help Files, and Manuals
Ensemble Multi-Axis Controller	Version 1.01.002	Development Tools, Libraries, Help Files, and Manuals
U600 HMI	Version 6.00.136	Windows® HMI
U600 SDK	Version 6.00.136	U600 Software Developers Kit
U600 LIB	Version 6.00.136	Windows® Help File, U600 Libraries and Utilities
U500 PC-Bus-Based Controller	Version 5.22	Windows® HMI and Windows® Help File
U511 Stand-Alone Controller	Version 5.22	Interface Software and Windows® Help File

AEROTECH In Motion

Dedicated to the Science of Motion *January 29, 2008*

SUBSCRIBE/UNSUBSCRIBE

SUBSCRIBE/UNSUBSCRIBE to the Aerotech E-Newsletter.

CONTACT US

Aerotech, Inc.
Phone: 412-963-7470
Email: sales@aerotech.com
Web: www.aerotech.com

Aerotech Ltd.
Phone: +44-118-9409400
sales@aerotech.co.uk

Aerotech GmbH
Phone: +49-911-9679370
sales@aerotechgmbh.de

Aerotech KK
Phone: +81-47-489-1741
sales@aerotechkk.co.jp

TRADESHOWS

MD&M West
Anaheim Convention Center
Anaheim, CA
Booth 1797
January 29-31, 2008
http://www.mdmwest.com

Machine Building Drives & Automation
National Expo Centre
Birmingham, UK
Booth 2000
February 13-14, 2008
http://www.devicelink.com/expo/macbuild08/index.html

Advanced Litho
San Jose Convention Center
San Jose, CA
Booth 2009
February 26-27, 2008
http://spie.org/advanced-lithography.xml

AEROTECH QUICK LINKS

Knowledge Base - FAQs
Engineering Reference
Software & Manual Downloads
CAD Downloads
Job Listings

Motion Control and Positioning Library

This resource provides a short summary and a link to articles, tutorials, white papers, and other materials that discuss problems and solutions involving motion control and positioning equipment and systems.

Articles

Micropositioning Meets Mechatronics
Compared to traditional methods, the mechatronic design approach is more of a holistic approach to product design, where the tradeoffs between different functional components (software, hardware, user interface, etc.) are carefully considered for their impact on overall performance. Read the full article HERE.

Motion Control Requirements for Hermetic Seam Welding
A discussion of the motion control platform in regard to hermetic seam welding of sophisticated electronic devices implanted in the human body. Read the full article HERE.

Digitizing a Century of Astronomical Images
Aerotech's ABL9000 air-bearing stage is put to use to efficiently digitize more than 500,000 photonegatives. For more information on this article, click HERE.

Two-Photon Polymerization: A New Approach to Micromachining
Femtosecond lasers enable microfabrication with resolution beyond the diffraction limit. Read the full article HERE.

Aerotech Pushes Mechatronics Envelope with Motion Systems
An interview with Dr. Robert Novotnak discussing how mechatronics is employed in high-precision motion control. Read the full interview HERE.

Precise Triggering of External Events Based on Axis Position
An axis-based trigger in the controller can significantly improve part quality, reduce cycle time, and eliminate processing problems. This article discusses Aerotech's unique PSO (Position Synchronized Output) option. Read the full article HERE.

Linear Motors Application Guide
A tutorial guide to the history, design, and application of linear motors. Get the PDF HERE.

Air Bearings Aid Assembly of Flat Panel Displays
Many manufacturing processes for flat panel displays (FPDs) require precision motion control for feature generation and inspection. Aerostatic bearings are an excellent choice for many of these processes. Read the full article HERE.

Applications Dictate Gimbal Selection
The choice between direct-drive and gear-driven gimbals and optical mounts presents an opportunity for a comparison of the pros and cons for each. Read the full article HERE.

Search the Aerotech Article Archive

Standards Organizations

1394 Trade Association
http://www.1394ta.org

ISA, the International Society for Measurement and Control
http://www.isa.org

IEC
http://www.iec.ch

ISO
http://www.iso.org