

## FEATURES

Cylindrical Laser Processing  
Visit Aerotech at ICALEO 2008  
Latest Software Releases  
Motion Control and Positioning Library

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## TRADESHOWS

**MOTEK 2008**  
Landesmesse Stuttgart GmbH  
Messepiazza  
70629 Stuttgart, Germany  
Booth 9117  
September 22-25, 2008  
<http://www.motek-messe.com/en/1361>

**Semicon Europa**  
Stuttgart Tradefair Centre  
Stuttgart, Germany  
Hall 1, Booth 127  
October 7-9, 2008  
<http://www.semiconeuropa.org/index.htm>

**ICALEO 2008**  
Pechanga Resort & Casino  
Temecula, CA  
October 21, 2008  
<http://www.icaleo.org>

## AEROTECH QUICK LINKS

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

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## Most Accurate, Highest Throughput, Integrated Systems for Cylindrical Laser Processing



*The LaserTurn® series cylindrical laser processing systems offer three platforms – LaserTurn® 1, LaserTurn® 2, and LaserTurn® 5 – optimized for different price/performance.*

The LaserTurn® series of highly integrated motion subsystems dramatically improves your cylindrical laser processing applications. Tightly integrated system elements combined with advanced direct-drive, noncontact motor and directly coupled feedback technology provide maintenance-free operation with the highest level of system accuracy and compatibility over the operating lifetime of your system.

LaserTurn's optimized form factor minimizes system footprint while combining automated material handling functionality with high performance direct-drive linear and rotary motion — creating the most accurate, highest throughput laser machining system available today.

Visit our website for more information on the LaserTurn® series, or contact an Aerotech [Application Engineer](#) today to learn how Aerotech motion systems can provide you with a competitive advantage.



*The LaserTurn® series is available with a 3-jaw gripper with 25 mm aperture, or with precision collets that support 0.1 mm to 30 mm diameter materials.*

## LaserTurn Series Benefits and Features

- **Three platforms optimized for different price/performance points**
- **Automatic pneumatic-activated tool holding**
- **3-jaw gripper with 25 mm aperture for I.D. or O.D. gripping**
- **Precision collets support 0.1 mm to 30 mm diameter materials**
- **Travels up to 300 mm**
- **30 mm maximum clear aperture for product feedthrough**
- **Direct-drive stages with nanometer-level resolution and micron-level accuracy over full travel**
- **Optional alignment bushing and gripper for complete automated subsystem**

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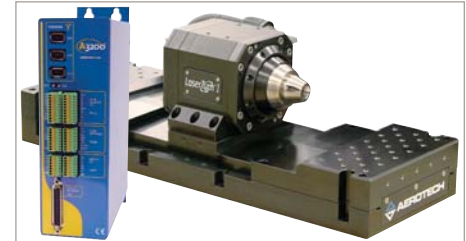
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## Visit Aerotech at ICALEO 2008

Aerotech will display and demonstrate a wide variety of motion control components, systems, and software at **ICALEO 2008** at the Pechanga Resort & Casino in Temecula, CA, on October 21. Products of interest will include:

- **Nmark SSaM** – Providing fully synchronized motion between the galvo scanner and servo axes, expanding the scanner's field of view for greater flexibility.
- **LaserTurn® 1** – Highly integrated, direct drive, cylindrical laser processing system.



See the Nmark SSaM and LaserTurn® 1 at ICALEO 2008.

Please join us for a demonstration at **ICALEO**, schedule an appointment with an Aerotech [Application Engineer](#), or view products on our [website](#).

## 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   |
|---|------------------|---|
| <a href="#">A3200 Digital Automation Platform</a> | Version 2.21.002 | Nmotion® SMC Libraries and Utilities, Ncontrol® Software Developers Kit, Nview® GUI, Windows Help Files |
| <a href="#">Soloist Single-Axis Controller</a>    | Version 2.09.002 | Development Tools, Libraries, Help Files, and Manuals   |
| <a href="#">Ensemble Multi-Axis Controller</a>    | Version 2.00.002 | Development Tools, Libraries, Help Files, and Manuals   |
| <a href="#">U600 GUI</a>                          | Version 6.00.136 | Windows® GUI  |
| <a href="#">U600 SDK</a>                          | Version 6.00.136 | U600 Software Developers Kit  |
| <a href="#">U600 LIB</a>                          | Version 6.00.136 | Windows® Help File, U600 Libraries and Utilities  |
| <a href="#">U500 PC-Bus-Based Controller</a>      | Version 5.22     | Windows® GUI and Windows® Help File   |
| <a href="#">U511 Stand-Alone Controller</a>       | Version 5.22     | Interface Software and Windows® Help File   |

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## 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

### The Need for Speed

Packaging OEMs look to advanced software solutions and linear servos to boost system performance. For more information on this article, click [HERE](#).

### Resolution Resolved

System or stage resolution is often spelled out for motion controls as well as in vendor catalogs and website specifications. However, many misinterpret what the term truly means. For more information on this article, click [HERE](#).

### Linear Motor Basics

Linear motors continue to increase in industrial applications. This article provides an overview of the linear motor types available. Read the full article [HERE](#).

### How to Select and Install Air Bearing Stages

High-precision test, measurement, and manufacturing operations often require smooth, frictionless, low-maintenance motion control systems. An excellent choice for a complete motion subsystem is a linear or rotary stage that uses an air bearing for guidance, coupled to a direct-drive motor, a high-resolution position encoder, and a digital controller. Read the full article [HERE](#).

### 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](#).

### 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](#).

### 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