

Better Throughput and Quality for High-Precision Laser Processes

Aerotech Announces New Control Function for Laser Scan Heads

PITTSBURGH, JUNE 11, 2024 – As the demand for laser processes with higher throughput is increasing across all industries, quality standards are being tightened. As a result, conventional laser scanning systems quickly reach their limits. Aerotech Inc., a global leader in precision motion control and automation, is addressing this issue by upgrading AGV laser scan head performance through a powerful controller feature, Enhanced Scanner Control (ESC). The new ESC feature for [Automation 1-GL4 2-axis laser scan head drives](#) is a totally passive control loop enhancement that ensures higher accuracy during the most dynamic motion.

Aerotech's 2-, 3- and 5-axis laser scan heads all benefit from this feature, which enables higher accelerations with less tracking error so users see significant enhancement in laser process throughput.

"The ESC feature increases the performance of all AGV laser scan head products without the user needing to change the trajectory or how the motion is commanded," said Bryan Germann, Aerotech's product manager for light manipulation. "Our customers need to push their scan head products to faster and more dynamic limits without decreasing precision. This upgrade enables productivity increases because units per hour can increase with no drop in quality."

A wide range of laser applications are already benefiting from ESC, including:

- **Percussive laser drilling for electronics & semiconductor applications:** ESC delivers increased hole drilling efficiency with strict hole profile quality requirements.
- **Laser cutting and micromachining of display glass for automotive and mobile applications:** Increasing cutting velocity without sacrificing on-edge quality means higher throughput and steady quality yields.
- **Laser welding of medical devices:** Higher frequency wobble motion during welding profiles enables higher weld quality and minimizes post processing.

About Aerotech

Since 1970, Aerotech Inc. has been the global industry leader in precision motion control and automation. From standard positioning technologies and control systems to custom-designed automation systems, our products support research and industrial organizations worldwide. Aerotech solutions enable manufacturing, testing and inspection processes on a micrometer and nanometer scale for the world's best-known technology companies in industries such as aerospace, consumer electronics and medical devices.

Media Contact: Amy McGrath +1.412.963.7470 amcgrath@aerotech.com