

FOR IMMEDIATE RELEASE

New Microtronic WaferWeight Precisely Monitors Semiconductor Wafer Mass During Macro Defect Inspection

Hawthorne, NY – July 9, 2025 – Microtronic, maker of advanced macro defect inspection systems and software, has announced a convenient and highly precise way to monitor the weights of semiconductor wafers at the same time as defects are being inspected – all on a single tool. This patented capability is called *WaferWeight* and it integrates fully into Microtronic's *EAGLEview™* line of high-speed macro defect inspection systems. It can be added to the latest *EAGLEview 6* and also to previous models of the tool.



"Wafer mass metrology has become increasingly important as semiconductor processes have become more complex and sensitive," said Microtronic CEO Reiner Fenske in making the announcement.

“Today’s fabs would like to be able to measure the wafer mass changes that occur during processing, especially in deposition, etch, plating, backgrinding, bonding, TSV, and similar steps. However, previous wafer weight measurement methods have been slow and expensive, requiring a separate tool. Now, *WaferWeight* allows fabs to track wafer mass quickly, accurately, and economically – concurrently with macro defect inspection. Our *EAGLEview* can do defect inspection and wafer weighing both at the same time, on a single system.”

“And throughput speed plays an essential role in this process,” Fenske added. “In order to monitor changes in wafer weight, fabs really need to obtain data from every single wafer in every single lot. It is the exceptional speed of the *EAGLEview* that makes this possible. Which is why many top-tier fabs around the world have already chosen to incorporate our *WaferWeight* capability.”

The new *WaferWeight* measurements may have a resolution as low as 0.1mg. This allows precise tracking of changes in wafer mass between process steps – and also between different wafers in a lot. Monitoring wafer weight at various points throughout processing can be invaluable for discovering certain process problems that cannot be detected visually. A wafer weight change that exceeds allowable ranges can immediately flag an issue that needs further inspection or correction. Comprehensive wafer weight information can also be included in SPC systems to enhance the precision and quality of a fab’s process monitoring overall.

WaferWeight information can all be stored in *EAGLEview*’s powerful *ProcessGuard*[™] software. This system maintains a database of information on every wafer run through the tool – by lot, date and time. It can automatically randomize wafers and track incoming and outgoing slot positions of every wafer. *ProcessGuard*’s integrated *Slot-Positional Analysis Tool* can plot and compare a range of wafer information, including wafer weight. It can provide wafer weights and pre/post process weight deltas for every slot position.

For additional information on *WaferWeight*, *ProcessGuard*, and *EAGLEview*, please contact Microtronic or visit www.microtronic.com.

About Microtronic

Founded in 1994 and headquartered in Hawthorne, NY, Microtronic designs, builds and delivers advanced systems and software for automated macro defect inspection and data management for semiconductor wafer processing. The company’s industry-leading macro defect inspection system, *EAGLEview*, is distinguished by unprecedented speed, which enables it to automatically macro-inspect 100% of every wafer in every lot, without needing recipes. It produces high-resolution full-wafer color images with macro defects identified and categorized, and it stores all the information in its powerful

ProcessGuard data management system, which can inform all of the fab's processing steps and inspections.

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