electroglas

"Plus" Upgrade
for 4080, 4090 and 4090µ

EXTENDED PERFORMANCE HIGH-VOLUME AND LEADING-EDGE MANUFACTURING

Higher test cell utilization and hands-off operation for the lowest cost of test

- **Enhanced Motion System Accuracy** +/- 3µm
- **Quickly test at different temperatures.** Proprietary Electroglas thermal technology allows testing to resume rapidly after changing temperatures.
- **Damage-free probing of Cu, low K and SOI wafers with soft touchdowns.** The new MicroTouch™ feature allows the user to control the velocity of the Z stage just before contact and during overtravel to reduce probe damage to low-k dielectrics, circuitry under bond pads, and aluminum capped copper pads.
- **Robust wafer alignment.** Improved auto focus and lighting algorithms combined with new pattern recognition techniques enhance the reliability of auto-align in mixed contrast environments.
- **High-speed probe card alignment.** New probe card alignment techniques align the most advanced probe cards 75% faster than traditional techniques.
- **Fine-pitch probing.** The enhanced thermal layering characterization of the motion system and automatic system calibration makethe 4090µ+ ideal for testing today's leading edge devices with fine pitch pads.

4080 upgraded to 4080+ shown with optional hot/cold chuck

The "Plus" upgrade is a new enhancement available for Electroglas probers. The "Plus" upgrade enables high test cell utilization for thermal applications, simplifies probing operations, increases throughput, and expands application capabilities with soft touchdown features for advanced copper and low-k dielectric devices. These productivity and capability enhancements were developed for the 4090µ+ and are available as an upgrade to existing Electroglas 4080, 4090, and 4090µ probers.

Test Managers Are Driven To Reduce Rising Test Costs

A greater portion of the total chip manufacturing cost is now spent on test as devices become more complex and smaller. Test floor managers are tasked with driving down the cost of test and operating their test floors as efficiently as possible.

Improved Test Cell Efficiency and Increased Capabilities

The "plus" upgrade increases test cell availability by maintaining excellent alignment of probe pins to bond pads without operator adjustments. For example, the temperature of the probing environment is constantly changing and the effects of this change can be seen on the probe-to-pad positioning within a wafer and across the lot. The "Plus" version automatically addresses this problem, without operator adjustments, and without the throughput decrease associated with waiting for the environment to stabilize. The system automatically senses temperature changes of system components and then adjusts the probes-to-pad contact as required.

Extended Performance for 200mm Productivity: Soft Touchdown Capability

As the "plus" upgrade improve performance, it also expands existing capabilities with superior accuracy for testing fine pitch devices. Additionally, the "plus" version provides a new feature, MicroTouch™, which decreases the impact force as the probe pins contact the bond pads to reduce pad damage to Cu, low K and SOI wafers.

Fine pitch capability

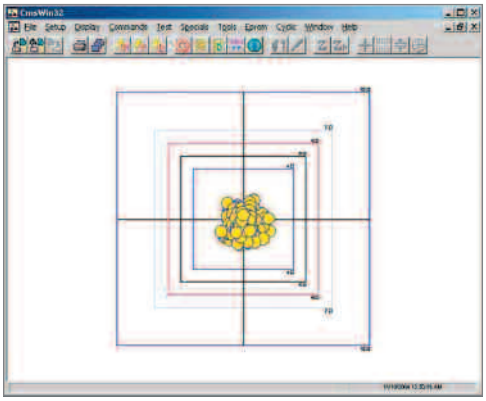
Using the same proven platen motor technology, with frictionless air bearings, performance accuracy is increased by 25% enabling customers to probe pads as small as 30 microns. During an upgrade, a Prober Accuracy Measurement System (PAMS) is used to measure and generate correction for errors at multiple temperatures.

Thermal compensation

During a temperature change over, testing with the "Plus" version can begin quickly after the chuck reaches the set point, even while components within the prober are still expanding or contracting. All of this is accomplished with the wafer on the chuck and without alignment tools or operator intervention. This provides a significant increase in tester utilization and cost savings.

Reduced assists

Operation of the "Plus" version has been significantly simplified and automated, making it easier and faster for operators to use. The "Plus" version allows operators to efficiently start probing and walk away while the prober automatically completes all necessary tasks to setup and align the probe card and wafers. Each of these automation steps has been redesigned for robustness to increase the time between assists (MTBA). When combined with self-calibration featuress, this improved automation slashes the operator and technician time needed to adjust probers and perform manual operations.



+/-3 micron motion system accuracy

The Next, Easy Step

For more information on how the "Plus" version can lower your test cell costs and probe your most advanced devices, contact your Electroglas sales representative at (800) 538-5124 or visit *www.electroglas.com*.

SYSTEM INFORMATION

The "Plus" Upgrade is available for 4080, 4090, and 4090µ probers. An upgraded 4080 does not fully equal a 4090µ+ but provides equivalent productivity enhancements.

Other Electroglas products and solutions, including Electroglas' prober software products and the SORTmanager Test Floor Management Software family, can enhance or expand on the capabilities of Electroglas 4000 Series probers.

What's Included

- Advanced Vision System (AVS) for much faster alignment
- Latest released version of EGCommander™ with continued new features and benefits
- Refurbished PZ9 Z-Stage with 70% better accuracy
- New memory PCB with internal high speed communication allowing product files to be loaded in seconds
- New system computer
- New Motion Control Circuit Boards enabling .8 micron Z-resolution and MicroTouch™
- Remapped platen motor with up to 50MB of data vs. 48 KB originally

Note: *Upgrade can be performed on-site to reduce down time of equipment. See your Electroglas sales representative for details.*

ELECTROGLAS, INNOVATIVE TOOLS FOR TEST

Electroglas is Focused on Advancing Innovative Technologies to Meet Evolving Challenges in Semiconductor Test.
Test is all about ensuring device quality and manufacturing performance. In the high-volume manufacturing environment of our customers, our innovative products provide substantial value and help lower the overall cost of test.

Electroglas delivers high-speed tools for wafer probing and package test that are reliable, accurate and production proven. Today, we are focused on overcoming our customers' evolving test challenges, partnering with them to develop solid solutions for wafer probing, prober-based test handling, and test management that will drive greater efficiencies in their wafer and device testing processes. Our customers have rapid, direct access to our worldwide team of experts for service and advice.

Wafer Probers for Any Test Environment; With Shipments of Over 15,000 Systems
Electroglas' probers have been meeting a variety of probing needs for more than 40 years. These automated systems consistently deliver accurate, reliable wafer probing for high volume, low cost manufacturing, as well as leading edge, multi-die, bumped wafer, in-line parametric test and fine-pitch probing applications.

Prober-Based Test Handlers for Today's Latest Packaging Technologies
Electroglas' test handlers are built upon proven prober technology to give chip-makers a fast, flexible handling solution for today's final test challenges. Strip test handlers deliver unprecedented throughput for testing a wide variety of popular package types in panel or leadframe format. Filmframe handlers have unique capabilities for testing Wafer Level Packages (WLP), Known Good Die (KGD) on diced wafers, Microelectro-mechanical Systems (MEMS), and ultra-thin wafers.

Test Floor Management Software for Web-Based Process Analysis and Control
Electroglas test floor management software provides a unique, networked solution to connect wafer probers and test handlers to the broader testing infrastructure, allowing the chipmaker to better manage overall test effectiveness with accurate and efficient tools for monitoring, analyzing and improving important processes.

All Products Backed by Global Service for Fastest Response
Electroglas' customer service centers are located worldwide for rapid-response field service and local spare parts support. Electroglas demonstrates its commitment to total customer satisfaction through service excellence backed by factory-based technical support, applications development and training.

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