



Upgrade Kits

Introduction

The Upgrade Kits include an advanced Allwin21 AW System Control with touch screen Graphic User Interface (GUI) and a new PC with Allwin21 real-time control Software. Most upgrade kits include new main control board, new wafer heating functions with Allwin21's Advanced RTP technology, fixed cassette station instead of the original elevator, and robust 3-Axis integrated robotic wafer handling (instead of the original). The kits are easy to incorporate (plug-and-play) into the original systems. Onsite installation available for most of kits as well (so all facilities connections can stay in place). Each upgrade kit will enhance the entire systems' operation and allow for far better Process Repeatability, Stability, and Uniformity.

Software Key Features

- Real time graphics display, process data acquisition, and analysis.
- Advanced Temperature Control for RTP and other "lamp-based" wafer heating systems.
- Precise parameters profiles tailored to suit specific process requirements.
- Consistent wafer-to-wafer process cycle repeatability.
- Programmable comprehensive calibration of all subsystems from within the software. This allows faster, easier calibration, leading to enhanced process results.
- Recipe creation. It features a recipe editor to create and edit recipes to fully automate the processing of wafers inside the process chamber.
- Validation of the recipe so improper control sequences will be revealed.
- Storage of multiple recipes, process data and calibration files so that process and calibration results can be maintained and compared over time.
- Passwords provide security for the system, recipe editing, diagnostics, calibration and setup functions
- Simple and easy to use menu screen which allow a process cycle to be easily defined and executed.
- Troubleshooting features which allows engineers and service personnel to activate individual subassemblies and functions. More I/O, AD/DA "exposure".
- The control board inside the machine that translates the computer commands to control the machine has a watchdog timer. If this board loses communication with the control software, it will shut down all processes and halt the system until communication is restored.
- Closed-loop process parameters control.
- GEM/SECS II function (Optional).
- Advanced Allwin21 EOP function (Optional)

Why Upgrade Used Process Equipment

- 1) Low cost solution of obsolete components and parts.
- 2) Increase stability of the original system.
- 3) Add network function (GEM/SECS II) for Fab/Lab integration
- 4) PC control for data storage.
- 5) Friendly GUI operation.
- 6) More precise control.
- 7) Better performance (Repeatability, Uniformity, Stability)
- 8) Easier maintenance, calibration and troubleshooting.



Main Upgrade Kits

| Equipment Model | Image | Upgrade Kits | |
|---------------------------------|-------|------------------------------------|---|
| | | New PC Controller with AW Software | Integrated Solid Robotic Wafer transfer |
| Heatpulse [®] 210 | | Yes | N/A |
| Heatpulse [®] 410 | | | |
| Heatpulse [®] 610 | | | |
| Perkin-Elmer [®] 4XXX | | Yes | N/A |
| Perkin-Elmer [®] 24XX | | | |
| Matrix [®] 10X | | Yes | |
| Matrix [®] 20X | | | |
| Matrix [®] 30X | | | |
| Matrix [®] 40X | | | |
| Tegal [®] 901e | | Yes | |
| Tegal [®] 903e | | | |
| Gasonics [®] Aura 1000 | | Yes | |
| Gasonics [®] AE 2001 | | | |
| Gasonics [®] Aura 3010 | | Yes | |
| Gasonics [®] L3510 | | | |
| Lam AutoEtch [®] X90 | | Yes | N/A |
| Branson/IPC [®] 3000 | | Yes | N/A |