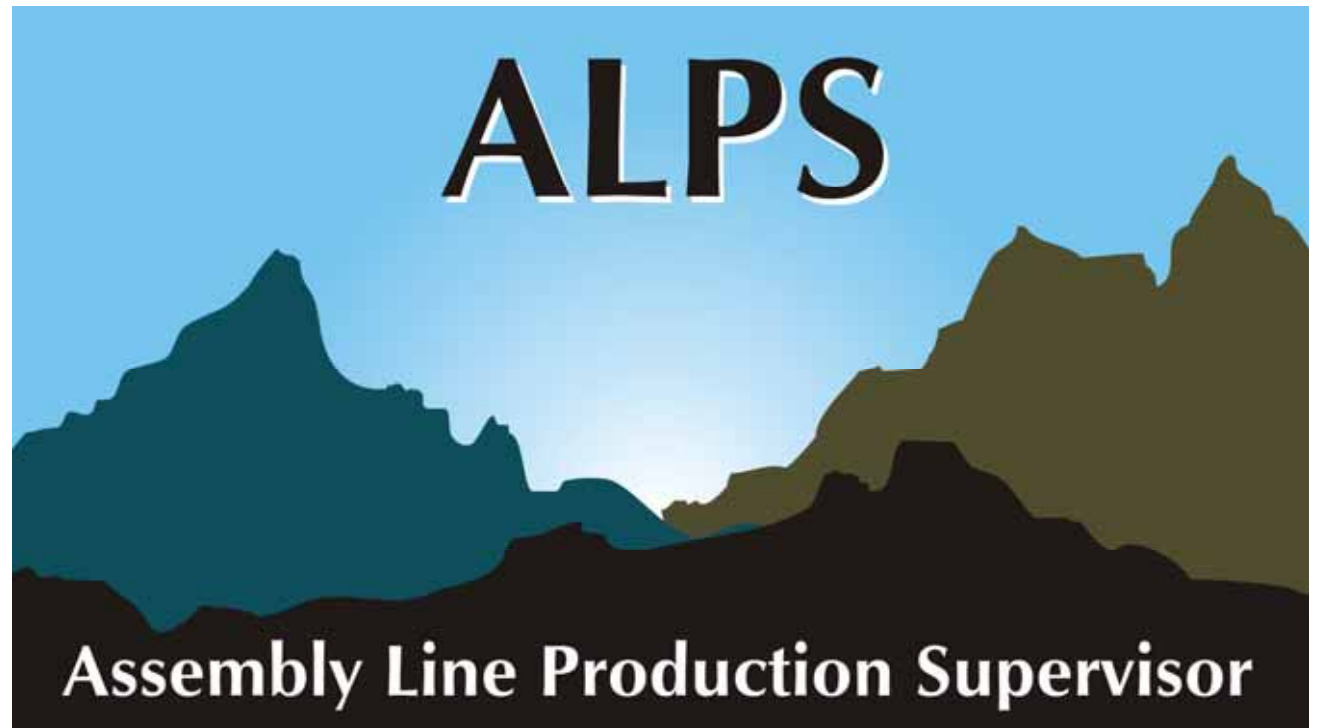
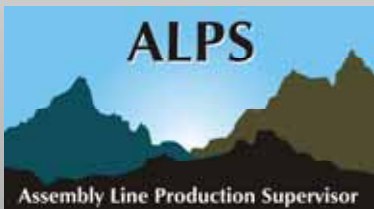
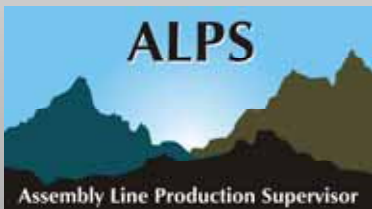


ALPS 2 Business Benefits



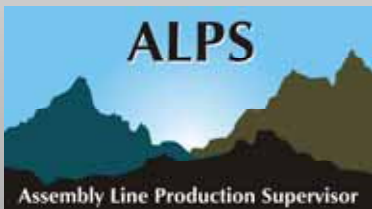
ALPS 2 Features

- **Professional independent software vendor**
 - Recognized as industry benchmark
 - Keeping pace with information technology
 - Fast response to new requirements
- **Provides a unified system**
 - For all equipment
 - Simplify operator training and reduce human error
 - For all wafer maps
 - >350 format converters available. 1-2 days (typical) for new format converters at no cost
- **Using a reliable centralized database**
 - Off-line production preparation
 - Automated import and verification of wafer maps before production
 - E-mail notification of errors
 - Flexible scheduling of wafers, e.g. for “hot lots”
 - Lot management and statistics, e.g. devices per bin code, per lot
 - Guaranteed data integrity, e.g. no duplicate WaferIds
 - No lost data
 - Wafer map history retained
 - Wafer and lot archiving
- **To simplify equipment setup and operation**
 - Specify common data per product type
 - Reference dies, bins to process, bin code translation,...
 - Map visualization and editing
 - Real-time die pick display
 - Identify reference die coordinates
 - Zoom feature for very small devices
 - Advanced map editing features
 - Split maps for cut (halved, quartered, ...) or broken wafers



ALPS 2 compared to Alternatives

- **Centralized database**
 - Protect your mission critical production data in a secure reliable database rather than a file system
 - No more lost or corrupted maps. Verify early, store securely.
 - Central storage of map status and history
 - Decentralized access (production lines, offices etc.) to all maps and production data
 - Allow last-minute scheduling of wafers and equipment
 - Benefit from IT infrastructure. Server hardware and software, automated backup schedule, etc.
- **Equipment Integration**
 - Wide range of equipment interfaces already available
 - Excellent working relationships with equipment vendors
 - Cost for new equipment interfaces amortized over entire industry
- **Supply Chain Integration**
 - Wide range (>400) of map format converters. New converters built in (typically) 1-2 days.
 - Transfer between plants via secure FTP
- **Long term continuous improvement program**
 - First licenses delivered to customers in 1995
 - Professional software development methods and practices
 - ALPS recognized as industry benchmark
 - Guaranteed reliability and performance
 - Early compliance with standards (e.g. SEMI G81, G85, E142)
 - Seamless upgrade to ALPS 3 (see ALPS 3 Value Proposition)



ALPS 2 Value Proposition

- **Eliminate mis-processing**
 - No manual steps (e.g. insert floppy disk and lot data entry)
 - Operators only need to learn one system, so less chance of errors
 - Automated error checking (e.g. Wafer/Frame orientation)
 - Bins to process and bin code translation specified prior to production
- **Increase throughput**
 - No data entry required by operator, just place cassette on equipment and start
 - Allow last-minute scheduling of wafers and equipment
- **Reduce downtime**
 - No more lost or corrupted maps. Verify early, store securely
 - Guaranteed map availability before committing wafers to production
- **Faster error recovery**
 - Real-time die pick display to verify correct operation
 - Email Notification of map import errors prior to production
 - After equipment failure
 - Save partially processed map
 - Restart wafer from next device
- **Quicker change over to new product**
 - Visualization tools to aid equipment setup (e.g. reference die selection and coordinates)
 - Automatic download of product specific settings, e.g. reference devices, bins to process, translated bin codes
 - Minimal changes required on equipment after one time setup per product
- **Handle any map size**
 - Manage, visualize (e.g. zoom) and edit all wafer and die sizes (500x500 devices per wafer or more)
 - Split maps for cut (halved, quartered, ...) or broken wafers
- **Responsive to customers**
 - Fast and reliable turn around for new map formats
 - Retrieve maps from secure FTP site per customer
 - Retain map history for reporting and analysis
 - No lost maps!
 - Early compliance with standards (e.g. SEMI G81, G85, E142)
 - Seamless upgrade to ALPS 3 (see [ALPS 3 Value Proposition](#))

