

## CyberOptics Semiconductor APPLICATION NOTE

# Applied Materials Endura/Centura Robot Teaching

### SUMMARY

Legacy robot handoff coordinate teaching methods require the chambers to be opened, fixtures attached, robot motors powered off and dowel pins inserted through holes in the fixture-blade-pedestal, and finally robot joint coordinate update. Because legacy teaching occurs at atmospheric pressure, chamber deformations caused by vacuum are not included and wafer placements may be off center resulting in wafer breakage, particle generation and non-uniform processing.

ATS can enter the tool through a cool down chamber and fits entirely within the thickness of the vacuum robot blade so it can be moved through all parts of the vacuum side. ATS sees through the blade hole to measure the offset to the pedestal hole without opening process chambers. It efficiently verifies and provides the data needed to update robot coordinates.



Typical legacy teach error



ATS Auto Teaching System

### BENEFITS

During a recent evaluation, ATS saved 20 hours of tool time and 4 wet cleans.

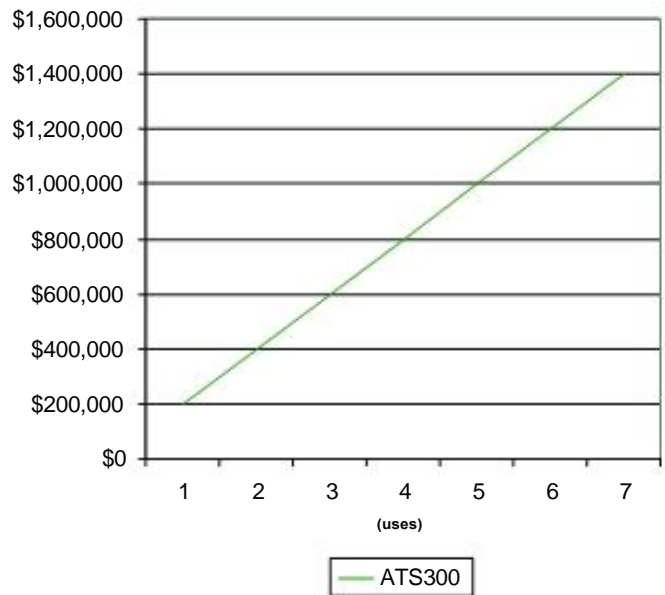
### RETURN ON INVESTMENT

Assuming 300mm tool time is worth \$10,000 per hour, \$200,000 can be saved during a single use. Chamber kit expenses can be avoided by using the ATS to isolate the problematic sub-system. Additional returns will likely be earned from increased device yields resulting from more uniform processing of centrally placed wafers.

### ORDERING INFORMATION

ATS300C for Endura 1 / Endura 2 / Centura platform tools.

### ATS Return on Investment



[CSsupport@cyberoptics.com](mailto:CSsupport@cyberoptics.com)

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