

OAI Backside Alignment Procedure

1. Load mask and substrate then calibrate per frontside procedure.
2. Unload substrate until ready to process in step 10.
3. Change Process Settings:
 - a) Process mode – Backside Alignment
 - b) Exposure time
 - c) Gap
4. Switch to Bottom Optic by flipping the toggle switch on the left side of the tool.
5. Turn on monitors and set-up tool for bottom-side alignment.
 - a) Unlock monitors by pushing “LOCK” on the panel until “UNLOCK” disappears from the screen.
 - b) Select Camera “2 ONLY” on the console. It will display in upper left corner of the monitor.
 - c) Change reticle by selecting “MODE” until desired reticle appears.
6. Focus on Mask by using focus controls left and right on front of tool. Adjust illumination as needed. Make sure optics are within the alignment windows. Use X & Y axis controls to move optics.
7. Align mask by using X & Y axis controls to place alignment marks in desired position on the monitors.
8. Move lamp housing to Expose Position in “Manual Test” page on LCD screen.
9. Align reticles to alignment marks on monitors using DVPG console for each monitor:
 - a) Select 1 or 2 for desired reticle line that you want to move.
 - b) The number selected will be displayed on lower right corner of the monitor.
 - c) Use the ←↑→↓ arrows for proper placement of the reticle lines.
 - d) Repeat this until both X & Y reticle directions are where you want them.
10. Load substrate and apply substrate vacuum.
11. Level stage.
12. Focus on substrate using focus controls left and right on front of tool.
13. Align substrate to reticles using micrometers on stage.
14. Select level of contact needed and verify alignment.
15. Select “CYCLE” when alignment is verified and you are ready for exposure.
16. Unload substrate once stage has unloaded.
17. If you are running another wafer, continue from step 10.
18. If you are finished, move lamp housing to Align Position in Manual Test page.
19. Unload your mask.
20. Default the tool back to Frontside operation by:
 - a) **Monitor** - Place monitor back to Camera 1 ONLY.
 - b) **Optics** - Flip toggle switch to bottom-side Optics.
 - c) **Recipe** - Select Frontside in Process Mode in recipe.
 - d) **X Axis** – Ensure the optics are moved out of the way to not hit the legs on the wafer chuck.
 - e) **Focus** - Place Bottom Optic focus in the home position.