Micro Writer 3
basics

http://www.youtube.com/watch?v=lY2JMaVQv7A
New tool advantages:

- High expose speed due to in-line resolution-switch option
- High resolution up to 0.6 um
- Wide field viewer
- Multi-sample expose
- Visual alignment option
- Alignment assistant
- High sample thickness compatibility
- Back side alignment
The Toolbar

Call up any of the four main panels here.

The name of the currently logged-on user, how long (in hours and minutes) they've been logged on for and their privilege level (user, supervisor or service).

Hardware status. Green indicates OK; red indicates a problem.
Align Wafer panel.

Manual control of the position (x and y) and software angular correction (theta) of the motion stage.

Real-time video display of part of the wafer.

Automatically identify alignment markers in the microscope image and lock onto them.

The wafer thickness for focusing – the user enters a rough estimate and then clicks the Autofocus button to find the exact thickness.

Digital zoom.

Set the microscope lamp intensity

Select the microscope objective

<table>
<thead>
<tr>
<th>Lens' magnification</th>
<th>Exposure resolution, um</th>
</tr>
</thead>
<tbody>
<tr>
<td>x3</td>
<td>5</td>
</tr>
<tr>
<td>x5</td>
<td>2</td>
</tr>
<tr>
<td>x10</td>
<td>1</td>
</tr>
<tr>
<td>x20</td>
<td>0.6</td>
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</tbody>
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Wide field viewer

One single field of view of the real time video microscope
The list of jobs to be exposed
The entire wafer with each job shown in outline
A detailed view of the selected job.

The quality of exposure of the selected job
The size of the selected job
Correction from the normal to the dose and focus for the selected job
The resolution and wavelength to use for the selected job

The file path of the graphical or .CIF file defining the selected job
The layer to be used from a multi-layer .CIF or .GDS file for the selected job
The position on the wafer of the selected job
Figure 4: The Expose panel

- Focus Lock status
- Resist sensitivity
- Focal correction to be made to the autofocus position
- Exposed pattern so far
- Outline of the current write-field
- Real-time focus correction
- Time remaining for the exposure: 0:00:27
- Start or stop the exposure
- Progress through exposure
- Detailed log of current activity
Prepare Pattern using 2 different jobs
Visual alignment option
Markers window

For centring square and rectangular chips

For centring circular wafers

For aligning using known design coordinates.

A memory list of commonly used alignment points

Wafer location / Second design alignment
Multi-sample expose