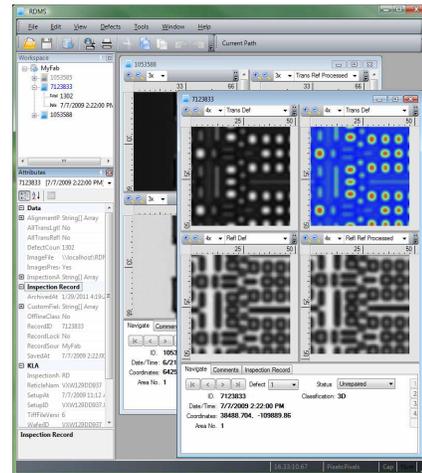


## RS-Mini: An Enterprise Class Turn Key System for Complete Mask Defect Management and Improved Mask Inspection Tool Utilization



**Union City, California, USA -** March 21<sup>st</sup>, 2011 - Reticle Labs has announced the release of **RS-Mini**; an enterprise class highly compact mask inspection defect management framework for the Mask and Wafer fabrication plant infrastructure.

Information is 'key'. Timely information in a fab environment provides substantial insight into the Mask quality, process health, steps needed to improve yield and throughput time. Ideal for mask and wafer fabs, the RS-Mini central server brings the inspection tool's terminal to the end user via a desktop application. Hundreds of users can simultaneously classify, annotate repair history, query and summarize year's worth of inspection results with images from tens of tools, as well as establish defect and process health trends in a matter of seconds. The RS-Mini, a low cost, state of the art mask defect management framework delivering a highly integrated rich user experience, fits in a compact rack mountable server blade less than 2 inches in thickness. **It acts as a search engine for tracking and managing defects, with similar user experience.**



With the RS-Mini users can **manually** and **automatically** classify defects offline thus **improving the inspection tool's utilization while also allowing a means to easily double check already classified defects.** Both transmitted and reflected light automatic defect dispositioning is supported. Repair engineers can annotate comments on every repaired and dispositioned defect in the fab. Provisions exist in the software to overlay and compare defects coordinates in repeated inspections of the same mask. Mask

fabs can share inspection results with the end customers by shipping binary records, with classification, repair histories and defect images with every mask thus improving manufacturing transparency. Process engineers can establish defect trends, quantify state of the manufacturing process and compute yield. Inspection engineers can summaries aggregate results, and monitor the performance and the health of inspection tools. Overall the RS-Mini provides a robust means to track reticles throughout the entire life cycle. The RS-Mini is capable of mimicking the inspection tools terminal on a user's desktop via a client application. It essentially brings the inspection tools terminal to any user on the network. A single RS-Mini is capable of launching hundreds of client applications.

RS-Mini features a well thought software architecture, where by inspection results from a host of vendors can be ingested. The system features automated algorithms to heuristically disposition defects, mimicking the rules followed by the inspection technicians while classifying defects.

Unparalleled in performance and cost, the RS-Mini is a must have for every mask and wafer fab. It is available for evaluation by Wafer and Mask fabrication facilities.

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## **About Reticle Labs**

Reticle Labs is a consulting firm that specializes in image processing, software development and engineering analysis. Located twenty minutes from the heart of Silicon Valley, Reticle Labs has been developing software and automation solutions to aid in the manufacturing processes for the semiconductor and storage industry. Reticle Labs develops software, perform analysis and consults in a wide range of industrial applications that require strong analytical skills in engineering physics, mathematics, computer simulation, graphics, databases and complex algorithm development.

# Reticle Labs

Bridging Physics, Mathematics & Software

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The screenshot shows the RDMS software interface with several callouts highlighting key features:

- Load from databases**: Points to the workspace tree on the left.
- Load data directly from file**: Points to the 'Load' icon in the top toolbar.
- Workspace**: Points to the main workspace area.
- Manipulate images**: Points to the 'Cartesian Map' window, listing actions like Difference, Align, Zoom, Highlight, etc.
- Filter defects**: Points to the 'Filter Defects' dialog box.
- Various images from a given defects**: Points to the image preview area.
- Annotate comments for every defect**: Points to the 'Comments' column in the defect list.
- Attributes of active inspection**: Points to the 'Attributes' panel on the left.
- Cartesian Def. Map**: Points to the 'Cartesian Def. Map' window.
- Summary of Workspace defects**: Points to the 'Summary' window.
- Classify defects**: Points to the 'Classification' section at the bottom right.

The 'Summary' window displays the following data:

RecordID	1A	1C	2	2B	2C	2I	3	3	3D	4	4	4C	Un	Tot	Time (m)	
1053585														387	387	1.0
7123833	2	7	1	12					1280					1302	190.0	
1053588														153	153	
<b>Total</b>	<b>2</b>	<b>7</b>	<b>1</b>	<b>12</b>					<b>1280</b>					<b>540</b>	<b>1842</b>	
<b>Average</b>	<b>0.7</b>	<b>2.3</b>	<b>0.3</b>	<b>4.0</b>					<b>426.7</b>					<b>180.0</b>	<b>614.0</b>	<b>63.7</b>