

# Affymetrix<sup>®</sup> Microarray Suite Version 5.1

**Affymetrix<sup>®</sup> Microarray Suite (MAS) is the core software product in the Affymetrix Software System providing instrument control, data acquisition, and data analysis for the entire GeneChip<sup>®</sup> platform.**

## Product Overview

MAS provides instrument control for the GeneChip<sup>®</sup> Scanner 3000 or GeneArray<sup>®</sup> 2500 scanner and the GeneChip Fluidics Station 400. MAS also provides array image acquisition

and analysis for all GeneChip<sup>®</sup> arrays, and provides the end user interface for the Affymetrix LIMS software for data storage and management. All MAS functionality can be quickly and easily accessed using multiple toolbar displays, enabling you to rapidly locate and analyze your GeneChip array data.

## New GeneChip<sup>®</sup> Scanner 3000

MAS 5.1 includes instrument control, image acquisition, and analysis for the new Affymetrix GeneChip Scanner 3000. The software also retains the ability to control the previous-generation GeneArray 2500 scanner.

## Statistical Algorithms for Analyzing Gene Expression Data

MAS 5.1 includes *statistical algorithms* for GeneChip expression data analysis. The *statistical algorithms* offer the following advantages:

- Associated *p*-values to indicate statistical significance for detection and Change calls.
- Confidence limits associated with expression change values.
- Tunable parameters to vary the stringency of analyses for data analysis optimization.
- Standard statistical techniques that are easily referenced.

## Expression and Image Analysis Window and Distributed Probe Array View

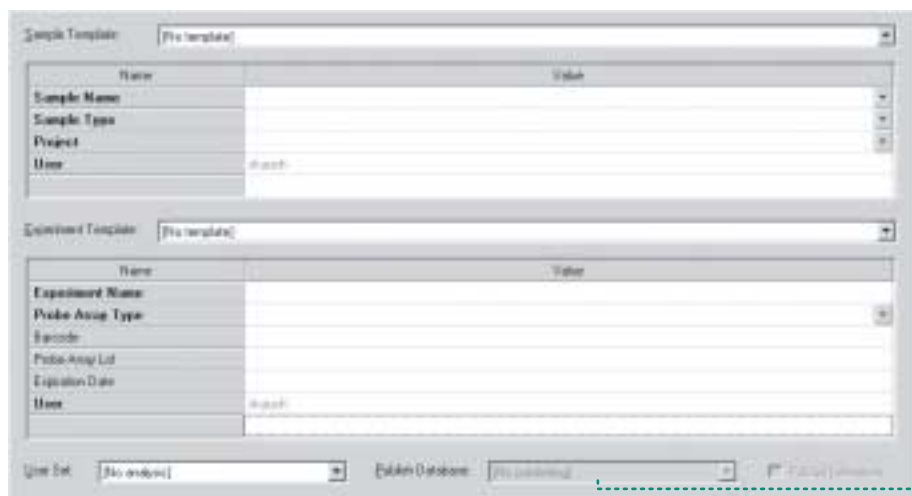
The screenshot displays the MAS software interface. The main window is titled 'Expression and Image Analysis Window' and shows a grid of probe sets. The grid has columns for 'Probe ID', 'Signal', 'Intensity', 'P-value', and 'Description'. The 'Description' column contains gene names and their functions. A sidebar on the left shows a tree view of the probe sets. A toolbar at the top contains various analysis tools. A callout box on the right points to the probe set list, and another callout points to the data table.

View probe sets that are distributed across the array

Expression Analysis Window lets you pivot your data and view alongside gene descriptions

## SOFTWARE SOLUTIONS

### Typical User Interface Display of Dynamic Sample Attributes in LIMS Mode



User-Defined Sample and Experiment Attributes (available in LIMS mode)

Option for Data Publishing when used in LIMS mode and with an associated LIMS System

### Array Image Viewing Options

Images of scanned arrays can be viewed in multiple ways, including multiple images at a time. While viewing the array image, interactive pop-up windows provide instant access to information, such as probe hybridization intensity and probe cell information, all at the click of your mouse. MAS also supports viewing of distributed probe set arrays, where all probes in a set are placed in different areas of the array.

### Complete Integration with the Affymetrix LIMS Software

MAS 5.1 can communicate directly with the LIMS software for performing several end-user LIMS tasks. When running in LIMS mode, MAS software is used to publish data, set up experiments, define sample attributes, monitor the experiment workflow queue, and access sample history information.

### Product Features

- Integrated instrument control and monitoring of the GeneChip Scanner 3000 or GeneArray 2500 scanner, and Fluidics Station 400
- Image acquisition and analysis

- *Statistical algorithms* for gene expression analysis
- Database security to prevent unauthorized access to publish databases
- Genotype (GT) Analysis Viewer for Loss of Heterozygosity Studies
- Multiple array image viewing options
- Various analysis options, including expression analysis, nucleotide analysis, SNP detection, and allele detection
- User-defined sample attributes
- Integration with the Affymetrix LIMS software
- Intuitive user interface

### Minimum Hardware Recommendations/Software System Requirements

- 500 MHz Pentium III Processor
- 128 MB RAM
- 100 GB for install with all supporting library files
- Microsoft® 2000 Professional with Service Pack 2 for both instrument control and data analysis workstations
- MDAC 2.5
- Internet Explorer 5.5
- Office XP

### Ordering Information:

Part No.	Description
690025	Affymetrix® Microarray Suite 5.1 Software – 1 seat license

Please see product catalog for other software/hardware combinations

### AFFYMETRIX, INC.

3380 Central Expressway  
Santa Clara, CA 95051 USA  
Tel: 1-888-362-2447 (1-888-DNA-CHIP)  
Fax: 1-408-731-5441  
sales@affymetrix.com  
support@affymetrix.com

### AFFYMETRIX UK Ltd

Voyager, Mercury Park,  
Wycombe Lane, Wooburn Green,  
High Wycombe HP10 0HH  
United Kingdom  
Tel: +44 (0)1628 552550  
Fax: +44 (0)1628 552585  
sales@affymetrix.com  
support@affymetrix.com


### AFFYMETRIX JAPAN K.K.

Mita NN Bldg., 16F  
4-1-23 Shiba, Minato-ku,  
Tokyo 108-0014 Japan  
Tel: +81-(0)3-5730-8100  
Fax: +81-(0)3-5730-8101  
salesjapan@affymetrix.com  
supportjapan@affymetrix.com

www.affymetrix.com

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