



Data Sheet

Affymetrix GeneChip® Operating Software (GCOS) Version 1.0

- Seamless Instrument Control
- Accurate Data Analysis
- Integrated Data Management
- Readily Upgradeable to Client-Server Configurations
- Support Gene Expression, Resequencing, and Genotyping Applications

Affymetrix GeneChip® Operating Software (GCOS) Version 1.0 provides seamless control of GeneChip Fluidics Stations and Scanners. In addition, GCOS acquires data, manages sample and experimental information, performs gene expression data analysis, and supports the GeneChip DNA Analysis Software (GDAS) for resequencing and mapping data analysis and report generation.

Features and Benefits

SEAMLESS INSTRUMENT CONTROL

GeneChip® Operating Software (GCOS) enables users to operate the GeneChip Fluidics Stations 400 and 450, GeneChip Scanner 3000, and GeneArray 2500 Scanner. Instrument operations and errors are automatically tracked in the instrument status window for convenient troubleshooting. GCOS automatically captures barcodes and tracks experimental information to minimize the risk of mixing samples with incorrect probe array types.

AUTOMATIC AND ACCURATE DATA ANALYSIS

GCOS automatically acquires and analyzes image data and computes an intensity value for each probe cell. For gene expression applications, GCOS provides single or batch analysis of expression arrays. Using

the GCOS Statistical Expression algorithm, transcripts are quantified and array data are compared to provide relative expression level changes.

For resequencing and mapping applications, GCOS enables users to access array intensity data within GeneChip DNA Analysis Software (GDAS) for further data analysis, allele calling, and report generation. For more information, please refer to the GDAS data sheet.

INTEGRATED DATA MANAGEMENT

The GCOS process database enables tracking and archiving of experiments, samples, arrays, image, intensity, probe analysis data, and other crucial information for easy project management. Researchers can also create multiple GCOS Publish Databases for gene expression data mining, and each database is password protected. Expression

Figure 1: From image analysis to gene expression analysis to data management, GCOS provides an integrated solution which is seamless and user friendly.

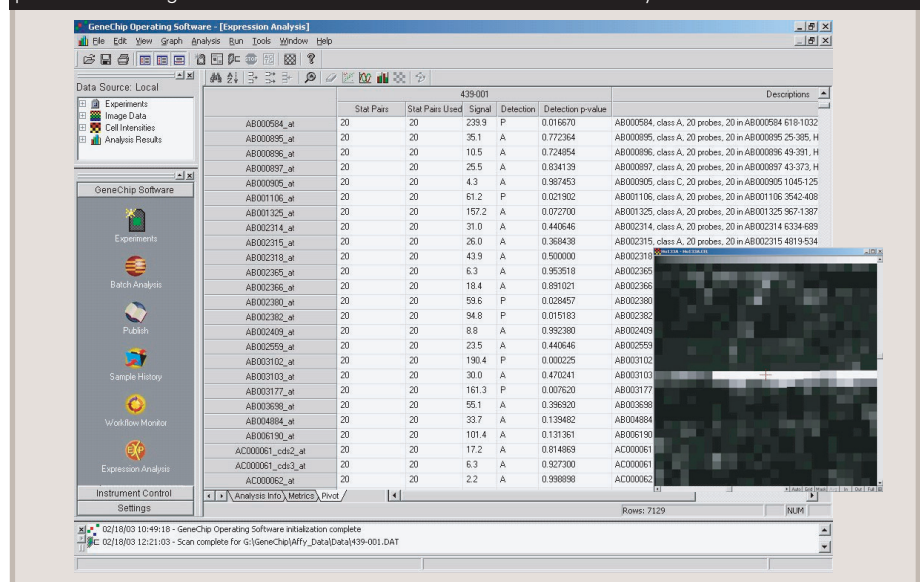
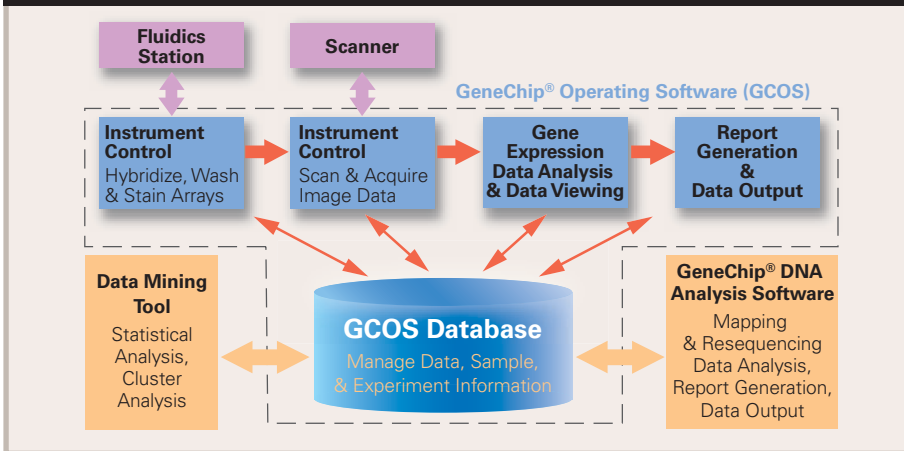


Figure 2: The workflow diagram highlights the key components of GCOS for instrument control, data processing, and management. The software workflow is completely integrated for seamless and automated operations, and is compatible with downstream data analysis using the DMT and third-party software products.



data in the Publish Database are organized in the Affymetrix® Analysis Data Model (ADM) database schema, which can be accessed and exported using Affymetrix Data Mining Tool (DMT) software.

The GCOS database is completely embedded so that users can enjoy the benefits of integrated data management without supporting a separated database product. As an option, GCOS can be upgraded to the GCOS Server client-server configuration for large scale data management, enhanced security, and network-based database access. Please see the GCOS Server data sheet for more information.

MINIMUM AND RECOMMENDED COMPUTER REQUIREMENTS

- Minimum Requirements
 - 500 MHz Processor
 - 40 GB Available Hard Disk Space
 - 128 MB RAM
 - Microsoft® Windows® 2000 Professional with Service Pack 3
 - Internet Explorer 6.0
- Recommended Requirements
 - 2 GHz Pentium 4 Processor
 - 80 GB Hard Disk
 - 1 GB RAM
 - Microsoft® Windows® 2000 Professional with Service Pack 3
 - Internet Explorer 6.0

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Ordering Information

Affymetrix GeneChip® Operating Software (GCOS) Version 1.0

690036 Affymetrix GeneChip® Operating Software Version 1.0
– Initial Annual License

Specifications




Instrument Support	<ul style="list-style-type: none"> • Affymetrix GeneChip® Fluidics Station 400 & 450 • GeneChip Scanner 3000 • GeneArray 2500 Scanner
Affymetrix Software Compatibility	<ul style="list-style-type: none"> • Support GeneChip DNA Analysis Software (GDAS) for mapping and resequencing data analysis • Support Affymetrix® Data Mining Tool software for statistical and clus analysis
Database Engine	<ul style="list-style-type: none"> • Microsoft Data Engine
GCOS Database	<ul style="list-style-type: none"> • Process Database • Publish Database • Gene Information Database
Database Management	<ul style="list-style-type: none"> • GCOS Manager • GCOS Administrator
Algorithm	<ul style="list-style-type: none"> • Affymetrix Statistical Expression Algorithm

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