



GeneChip® Command Console® Software

GeneChip® Command Console® Software (AGCC) provides the following benefits:

- **Flexible workflow for cartridge arrays and array plates**
- **Integrated instrument control**
- **Simplified data organization**
- **Easy integration and customization for software developers**

Introduction

GeneChip Command Console Software provides an intuitive set of tools for instrument control and data organization used in the processing of GeneChip Arrays and Array Plates. Command Console Software produces probe cell intensity data (CEL file generation) and enables sample and array registration, data organization, instrument control, as well as automatic and manual image gridding. Besides these core features, Command Console Software's flexible platform enables customized, automated, and integrated workflows with a variety of laboratory information management systems (LIMS).

Command Console Software supports the full range of Affymetrix assays by enabling seamless integration with downstream primary analysis applications, such as Expression Console™ Software and Genotyping Console™ Software. In addition, sample attribute and array data can be directly imported into any of the more than 30 GeneChip-compatible™ applications, allowing you to select from a variety of analysis methodologies.

Key to this ability is Affymetrix' commitment to an open informatics platform that uses industry-standard file formats for sample annotations and open file formats to access GeneChip Array data. Inside GeneChip-compatible analysis applications, sample attributes and array data are merged with automated downloads of library files and NetAffx® annotations, which provides streamlined data analysis workflows unmatched by any other microarray platform.

Features and benefits

Flexible workflow

Command Console Software provides multiple methods for processing arrays, from sample registration through the production of probe cell intensity data. Samples can be registered with or without attributes, as individuals or in batches, with minimal

information through Quick Register, or programmatically through external software code. Sample information can be created, edited, or appended at any point in the workflow. The software provides controls to process probe arrays through instrumentation as single arrays or batches.

Integrated instrument control

Command Console Software serves as the instrument control software for all Affymetrix instrumentation, including the GeneChip® Fluidics Station 450 (FS450), all versions of the GeneChip® Scanner 3000 (GCS3000), and the GeneTitan™ and GeneTitan™ Multi-Channel (MC) Instruments for array plates.

GeneChip Array cartridges, registered via their Affymetrix barcode, can be processed manually or automatically through instrumentation. Command Console Software easily processes batches of array cartridges through the wash and stain steps by supporting up to eight fluidics stations per computer workstation. This consolidates the control of all stations into a single user interface and the application of wash and stain protocols to all probe arrays with a single step. This is especially convenient when running maintenance protocols.

In addition, Command Console Software provides walkaway convenience when controlling an AutoLoader-enabled GCS3000. Instrument log files and array audit files provide records for tracking and quality control.

For the ultimate in automated workflows, Command Console Software provides control of the GeneTitan Instruments. The GeneTitan Instruments combine a hybridization oven, fluidics processing, imaging device, and integrated robotic handling for completely automated processing of array plates.

Integration and customization

The Affymetrix Developers' Network program provides many resources for software developers wishing to integrate with or customize the GeneChip processing workflow.

The Developers' Network site provides file format definitions, source code, application programming interfaces (APIs), software developers' kits, web-based training seminars, and developer-specific technical support for Command Console Software and other Affymetrix software applications. To learn more about available resources and to find options for integrating with the GeneChip System, visit the Developers' Network at <http://www.affymetrix.com/support/developer/index.affx>.

Figure 1: Command Console Software is composed of four main modules: Portal, Fluidics Control, Scan Control, and Viewer. Each module has a specific function in the workflow.

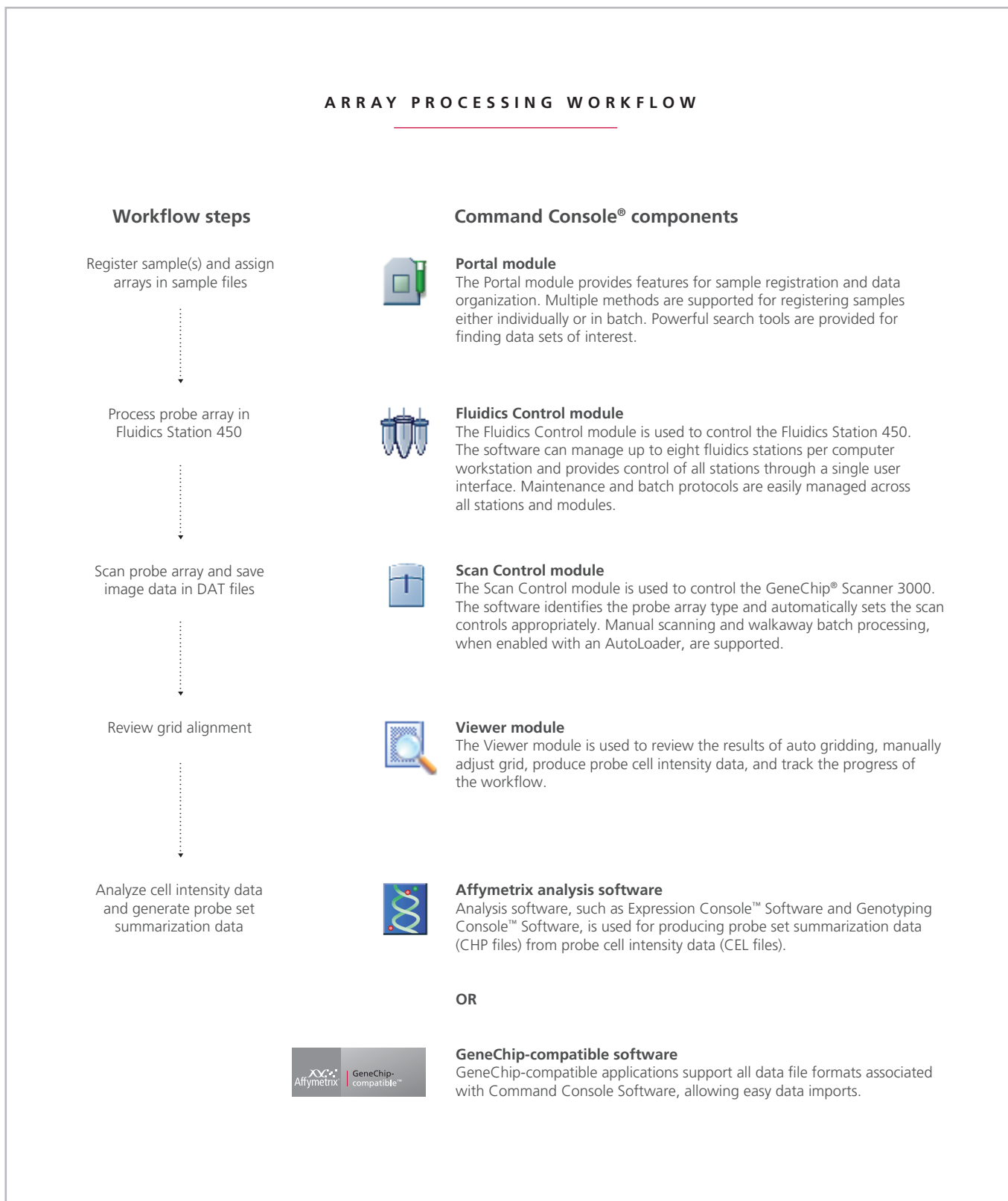
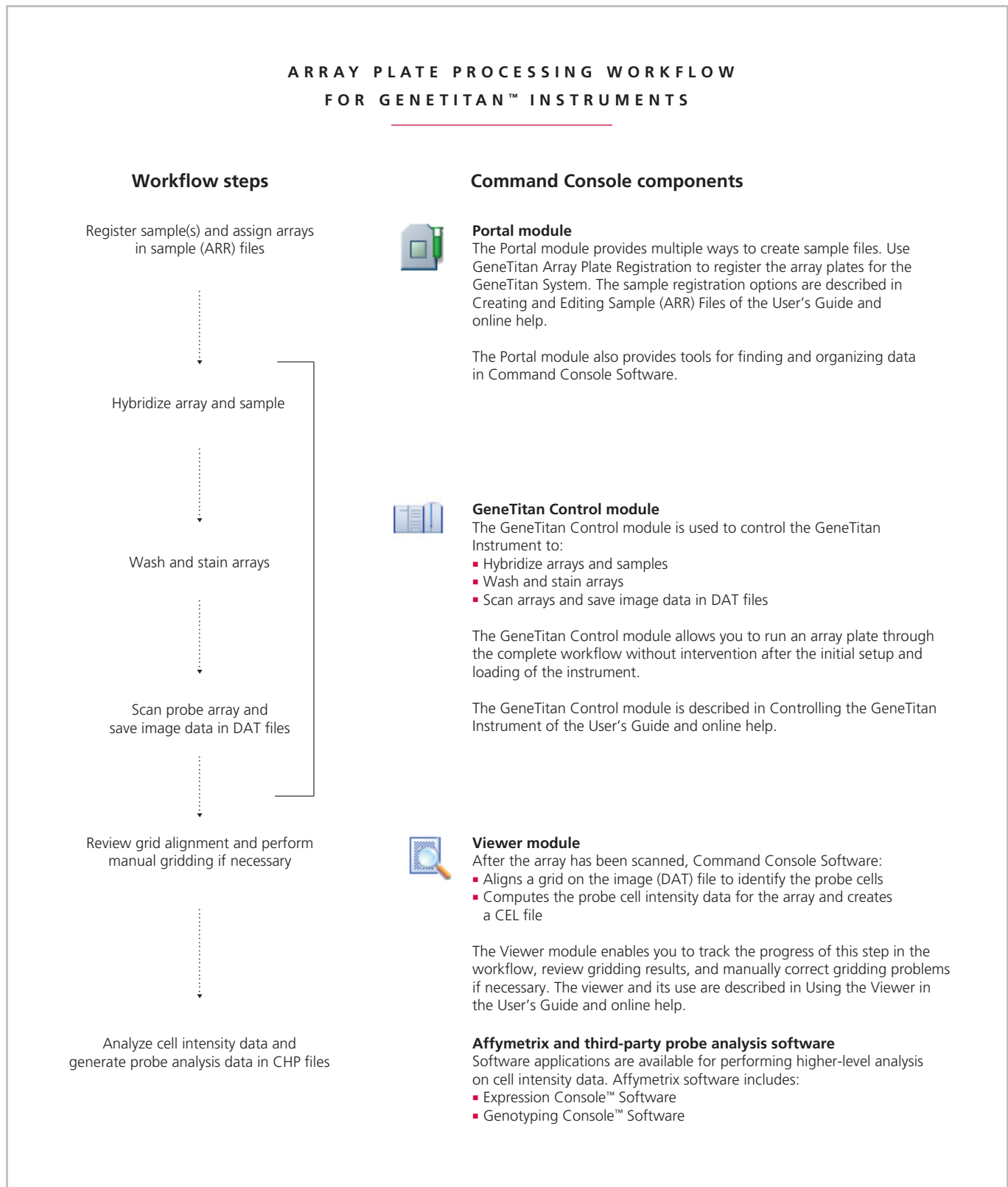


Figure 2: Command Console® Software workflow for the GeneTitan™ Instruments.





Availability

Command Console® Software is available to all GeneChip data users.
The software can be downloaded at www.affymetrix.com.

System requirements

Instrument control workstations

- Microsoft® Windows® XP Service Pack 3
- Processor speed: 3.0 GHz dual or dual-core processor
- 2 GB memory
- 500 GB hard drive
- Internet Explorer 6 or higher, or Firefox 2.0

Data analysis workstations

- Windows XP Service Pack 3 or Windows Vista
- 3.0 GHz processor
- 1 GB memory (2 GB recommended)
- 500 GB hard drive
- Internet Explorer 6 or higher, or Firefox 2.0

System recommendations

- Microsoft® Excel® 2003 or 2007

*Batch functionality is accomplished through the use of tab-delimited files.
An appropriate file editor is required; we suggest Microsoft Excel.*

Supported instruments

GeneTitan™ Instrument
GeneTitan™ MC Instrument
GeneChip® Fluidics Station 450 (FS450)
GeneChip® Scanner 3000 (GCS300)

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