

## Sole Source Specification for Axon GenePix® Pro 7.0

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From the industry-leader in performance, the Axon GenePix® Pro 7.0 from MDS Analytical Technologies is the only software available today that provides:

### Features & Benefits

#### *Imaging*

- Multiplex scanning with independent settings for multiple arrays on one slide.
- Array spinner to cycle through different image settings, linked results and scatter plots.
- Image sets saved in single-image or multi-image TIFF format.
- Scan area displayed in both microns and pixels.
- Export color images in 24-bit JPEG format.
- Four-channel image analysis with user-configurable color palettes.
- Third-party image registration, manual or automatic.
- Image rotation.
- Entire array rotation for single or multiple blocks.
- Automated block and feature alignment for circular, irregular or square features (e.g. NimbleGen arrays).
- Automated software barcode reading directly from any scanned image.
- Linear and area measurement tools.
- Lasso selection of feature-indicators on the image.

#### *Analysis*

- Multiple analysis results – batch procedure for multiplex images
- “Analyze All” automatically extracts the data from multiple images, analyzes and displays the obtained data as multiple analysis results file.
- Laser settings dialog to select the pixel size and the wavelength per image channel.
- Independent calculations of multiple results files and scatter plots per scan area.
- Batch Analysis automates spot finding and data extraction.
- Multiple methods of background subtraction: local, global, negative controls, morphological opening and closing.
- Global alignment algorithms determine the translation, rotation and skew of blocks of features. This works well in single arrays as well as with multiplexed arrays on one slide
- Feature Viewer and Feature Pixel Plot for detailed feature assessment.
- Multiple methods of ratio calculation: Ratio of Medians, Ratio of Means, Median of Ratios, Mean of Ratios, Regression Ratio, Log<sub>2</sub> Ratio of Medians.
- Manual and automatic feature flagging for quality control and normalization with user-defined criteria.
- Customizable flags for easy image analysis.
- Normalization of images and numerical data.

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### *Visualizations*

- Array spinner to cycle through multiple results as well as through scatter plots.
- Blocks and Scan regions displayed at the same time for easy visualization and image assessment.
- The analysis of multiple scan areas on one array generates a separate set of result files and data visualizations for each area.
- Display background pixels on the image.
- Automatically generate Histogram or Scatter Plot of any analysis measurements, including regression and standard deviation lines.
- Images, graphs, and results can be printed and/or copied to the Windows clipboard for easy transfer to other applications.
- Generate reports of any visualization in PDF-format.

### *Automation*

- Predefine Data Scans for Multiple Scan Areas with independent parameters.
- Automatic balancing of PMT gain for all independent scan areas.
- Control Axon GenePix 4300A and 4400A scanner models.
- Automatically set the PMT gain when scanning.
- Integrated Array List Generator easily maps feature information (e.g. name) onto array image and into Results file.
- Saved template files for hardware, acquisition, analysis and display settings.
- Full integration with web-based genomics databases.
- User-configurable scripting of all acquisition and analysis functions.
- Link directly to Acuity microarray informatics software.
- Lab Book records all hardware and software operations.

### *File Formats*

- Extended image compatibility. Images can be saved for downstream analysis with Agilent's FeatureExtraction software.
- GenePix Image Set (GIS) Files to reload saved images for multiplex analysis.
- Full support for 16-bit grayscale TIFF images.
- GenePix Results (GPR) file containing substance names, feature locations and all extracted data saved in ASCII file format for easy import into advanced analysis packages.
- Export Results in MAGE-ML format.
- GenePix Array List (GAL) files allow user-defined columns.

### *Compatibility*

- Full compatibility with Windows XP and Windows Vista for both 64-bit and 32-bit operating systems.