



Microarray instruments

GeneChip System 3000Dx v.2

The only microarray system for RNA- and DNA-based clinical tests that is cleared by the FDA and compliant with the EU *In Vitro* Diagnostic Medical Devices Regulation 2017/746 (IVDR)

The power of intuitive design and automation

Microarrays have been used to discover an impressive number of clinically informative genomic and pharmacogenomic biomarkers. However, converting promising gene signatures into clinical diagnostic or prognostic tests can be an expensive endeavor with significant development and regulatory risks. The Applied Biosystems™ GeneChip™ System 3000Dx v.2 combines advanced design improvements with high-resolution scanning and automation to dramatically improve efficiency in gene expression and genetic analysis applications.

The system includes the Applied Biosystems™ GeneChip™ Fluidics Station 450Dx v.2 and the GeneChip™ Scanner 3000Dx v.2 with a pre-assembled Autoloader Dx, which, when used together, enable complete walk-away freedom for scanning your arrays. The GeneChip System 3000Dx v.2 fits easily into a benchtop environment. Its solid-state laser eliminates the need for an external laser power supply or a special cooling system under the bench.

The outstanding performance and enhanced capabilities of the GeneChip System 3000Dx v.2 offer accurate gridding and consistent scanner-to-scanner performance, helping to improve data integrity and data sharing between clinical researchers.

Highlights include:

- Compact size for better space utilization
- High-resolution scanning from 0.51 to 2.5 μm pixelations, automatically selected by array type
- Optimal image uniformity and collection efficiency across entire scan area with proprietary Applied Biosystems™ Flying Objective lens technology
- No laser drift and reduced scanner-to-scanner variability
- Automatic adjustment of residual arc correction and x-linearity
- The Autoloader Dx facilitates complete walk-away scanning of up to 48 arrays at a time

The GeneChip System 3000Dx v.2 offers space savings and improved reliability



Reliability

- Includes a sample transport system that can operate in environments running 10,000 scans per year



Footprint






- Compact benchtop design for space utilization



The GeneChip System 3000Dx v.2 comes with Applied Biosystems™ GeneChip™ Data Collection Dx Software and runs on Microsoft™ Windows™ 64-bit operating systems. Other new software enhancements include:

- An updated user interface with remote monitoring capability
- Simplified batch registration of arrays
- Easy management of the client operating system, applications, and security for IT departments
- Notifications for network path interruptions
- Supports 14+ languages

GeneChip System 3000Dx v.2, a microarray system for clinical research and molecular diagnostics

Prepare sample	Hybridize	Wash and stain	Scan	Instrument control
Applied Biosystems™ CytoScan™ Dx Array	Applied Biosystems™ GeneChip™ Hybridization Oven 645i*	GeneChip Fluidics Station 450Dx v.2	GeneChip Scanner 3000Dx v.2 with Autoloader Dx	Workstation with GeneChip Data Collection Dx Software
				
<ul style="list-style-type: none"> • Proven microarray technology, legacy data, and path to cost-effective custom design • CytoScan microarrays support a robust workflow with reproducible results 	<ul style="list-style-type: none"> • Precise temperature and rotation control • Hybridize up to 64 Applied Biosystems™ GeneChip™ cartridge arrays in a single run • Ordered separately (not part of the GeneChip System 3000Dx v.2) 	<ul style="list-style-type: none"> • Walk-away automation of array wash and stain • Process up to four arrays on one fluidics station • Run up to eight stations simultaneously for increased throughput 	<ul style="list-style-type: none"> • Precise scanning of all GeneChip cartridge arrays • Process up to 48 microarrays in a single run with the pre-assembled Autoloader Dx 	<ul style="list-style-type: none"> • Designed for running multiple clinical assays • Features internal tracking of all assay and system components and audit controls • Monitors fluidics and scanning • Connects up to eight fluidics stations and one scanner

* The hybridization oven is general laboratory equipment. It is not IVD-certified and is available to be purchased separately.

Specifications

Scan time	5–45 minutes per cartridge, depending on array type
Sensitivity	<0.5 chromophore equivalents/ μm^2 (CPSM) at a signal-to-noise ratio of 2:1 at wavelengths appropriate to R-phycoerythrin
Excitation	532 nm, 10 mW maximum
Emission filters	570 nm longpass; 565 nm, 605 nm, 655 nm, and 705 nm longpass; 20 nm wide bandpass
Detector	Meshless photomultiplier tube, red enhanced
Displayed and saved dynamic range	16-bit (65, 535:1)
Software	GeneChip Data Collection Dx Software
Dimensions (W x D x H)	GeneChip Scanner 3000 Dx with pre-assembled Autoloader Dx: 22.5 x 31 x 44.5 in. (57.2 x 78.7 x 113 cm)
	GeneChip Fluidics Station 450Dx v.2: 28 x 16.1 x 15.8 in. (71.1 x 41 x 40.2 cm)
	GeneChip Fluidics Station 450Dx v.2: 28 x 16.1 x 15.8 in. (71.1 x 41 x 40.2 cm)
Weight	GeneChip Scanner 3000 Dx with pre-assembled Autoloader Dx: 105 lb (47.6 kg) GeneChip Fluidics Station 450Dx v.2: 80 lb (36.3 kg)
Power	Voltage: 100–240 V, current: 2-4 A, frequency: 50–60 Hz
Warranty	One-year limited coverage

Ordering information

Product	Includes:	Cat. No.
GeneChip System 3000Dx v.2	GeneChip Scanner 3000Dx v.2 with pre-assembled Autoloader Dx GeneChip Fluidics Station 450Dx v.2 Workstation with GeneChip Data Collection Dx Software	00-0334
GeneChip Fluidics Station 450Dx v.2	Single station available to be purchased separately from the GeneChip System 3000Dx v.2	00-0335

Learn more at thermofisher.com/gcs3000dx

applied biosystems