

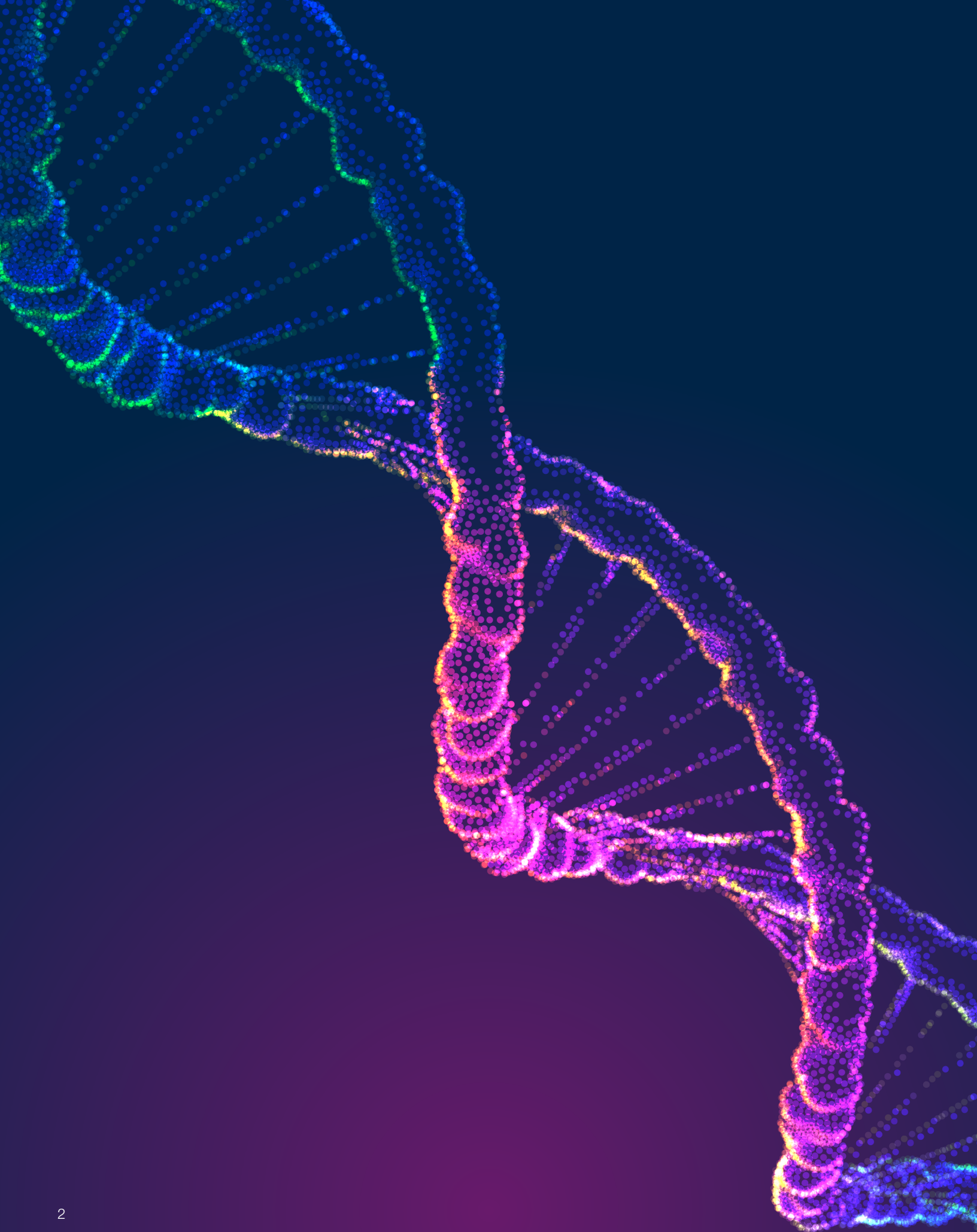


Microarray instruments

SwiftArrayStudio microarray solution

A two-day genotyping solution for
demanding genomics research applications

applied biosystems





SwiftArrayStudio solution

A complete, integrated research solution for next-day results

The Applied Biosystems™ SwiftArrayStudio™ solution combines three essential components—the Applied Biosystems™ SwiftArrayStudio™ Analyzer, the Applied Biosystems™ Axiom™ SwiftArray™ Assay, and high-performance Axiom™ arrays—to deliver fast, reliable, and scalable results. The SwiftArrayStudio Analyzer is a fully integrated instrument that automates hybridization, washing, staining, and scanning in a single platform, reducing hands-on time and streamlining array processing. The Axiom SwiftArray Assay provides a simplified, efficient workflow with consolidated reagents and minimal manual intervention, enabling sample prep to hybridization readiness in just one workday. Finally, Axiom arrays offer both catalog and customizable designs, empowering researchers across human and agrigenomic applications with accurate, high-coverage genotyping. Together, these components deliver a two-day solution that outpaces traditional workflows—helping researchers move from DNA to relevant research insights with ease and confidence.

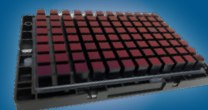
Highlights

- **One instrument, three operations**—hybridize, stain, and scan
- **Integrated user interface with command console**—no dock station required to perform instrument operations
- **Minimal touchpoints**—load arrays and reagents, and walk away
- **Fast**—scan each sample in as little as 15 seconds to get your genotyping results the next day
- **Scalable**—run one sample plate at a time or scale up to 4x sample plates*
- **High throughput**—process up to 16 plates (6,144 samples) in a 5-day work week
- **Robust**—durable interior mechanics for increased uptime

* Various workflow options are available to increase throughput in addition to batching.

The SwiftArrayStudio system offers scalable throughput, adapting from hundreds to thousands of samples per week.

96f array plate



- **Scan time:** 105 min per plate
- **Speed:** 65 sec per sample
- **Throughput:** Up to 1,536 samples/week (8-hr days)

384f array plate



- **Scan time:** 95 min per plate
- **Speed:** 15 sec per sample
- **Throughput:** Up to 6,144 samples/week (8-hr days)

Get reliable genotypes in two days

The Axiom SwiftArray Assay and workflow are fast and efficient, providing relevant insights in two days

Target prep with the Axiom SwiftArray Assay

Automated array processing on the SwiftArrayStudio Analyzer

Genotypes





Consolidated 6 hr target prep complete on day 1 by 1 FTE



No extra equipment required for array processing (hyb-scan)



Quality genotypes the next day (~30 hr)

The SwiftArrayStudio solution delivers results easier, faster, and with less hands-on time than another supplier's workflow.

	Another supplier's array solution	SwiftArrayStudio solution
Genotypes ready	On day 3	On day 2
Total hands-on time	>2.5 hr	2 hr
Liquid handling robot	Required	Not required
Automated array processing	No	Yes



1. Prepare whole-genome amplification (WGA)

Hands-on time: 15 min

- Reagents: Applied Biosystems™ Axiom™ SwiftArray™ reagents

2. Run WGA

Hands-on time: 10 min
(no robot, no staging)

- Incubation: 10 min denaturation and 2.5 hr for WGA

3. Fragment DNA

Hands-on time: 20 min

- Incubation: 20 min

4. Precipitate DNA

Hands-on time: 10 min

- Reagents: Axiom SwiftArray reagents
- Spinning: 30 min
- Drying in decanter: 5 min
- Drying in the oven: 10 min

5. Resuspend DNA

Hands-on time: 20 min

- Reagents: Axiom SwiftArray reagents
- Incubation: 10 min

6. Hybridize DNA to array

Hands-on time: 10 min

- Reagents: Axiom SwiftArray reagents
- Incubation (denature hybridization): 15 min
- Cooldown: 0 min
- Incubation in SwiftArrayStudio Analyzer: 16 hr



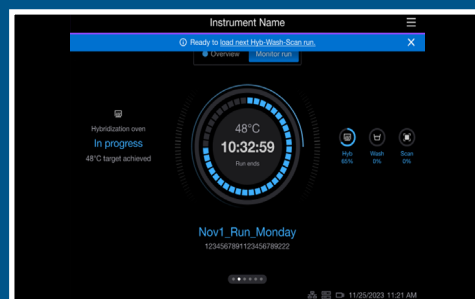
7. Wash, extend, stain, and scan in SwiftArrayStudio Analyzer

Genotypes ready midday on day 2

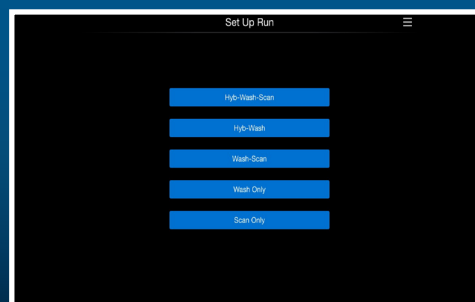
The only microarray analyzer with an integrated user touchscreen

Applied Biosystems™ GeneChip™ Command Console
at your fingertips

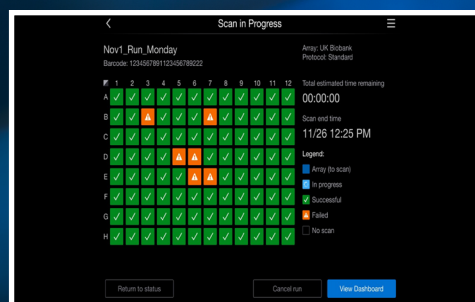
- Intuitive icons for easy operation
- Guided loading/unloading with images
- Live instrument progress and remote monitoring
- Step-by-step error recovery



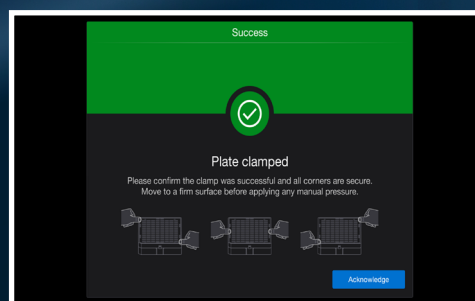
Live progress monitoring



Easy workflow selection



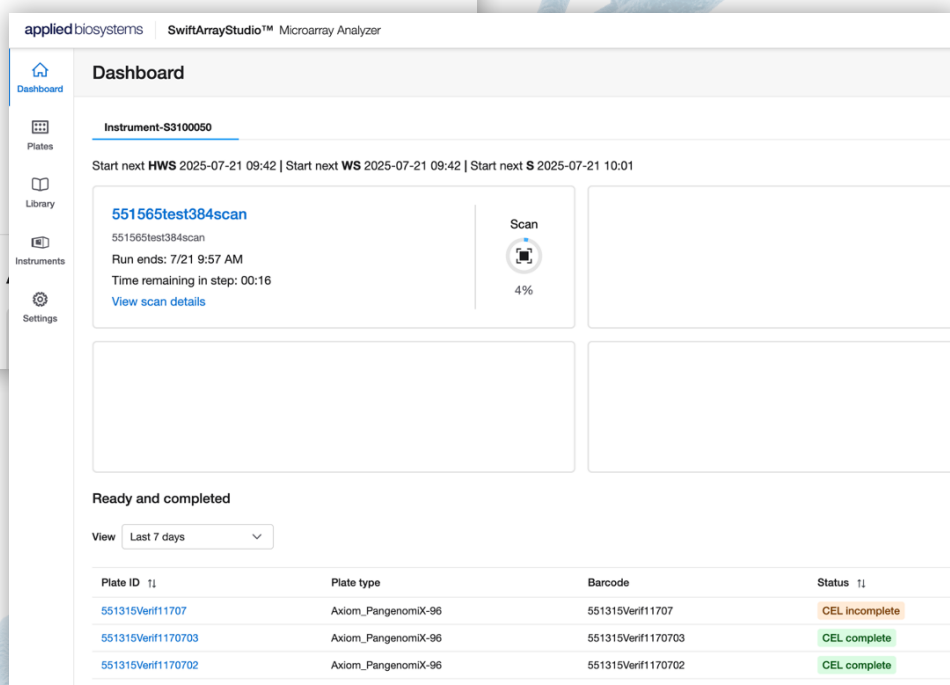
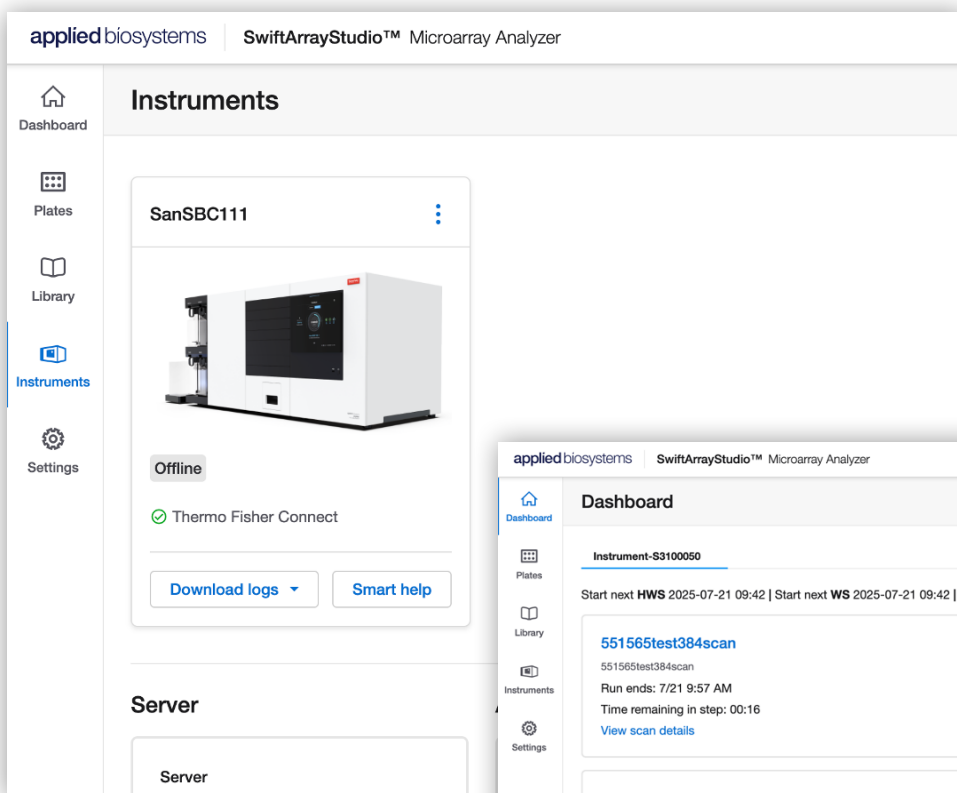
Results view



Confirmations and error prompts

Seamless data collection to help you start analyzing genotypes faster

- No computer docking station required alongside the instrument
- Web-based data collection for access anywhere
- Option to use your own server



Target prep in less than 1 day

Genomic DNA to hybridization-ready plate in one workday, with bulk reagent kit options





Simplified workflow

One operator can manually prep a sample plate within a standard 8-hour workday with the Axiom SwiftArray Assay target prep workflow. At the end of the day, load your hybridization-ready plate onto the SwiftArrayStudio Analyzer, along with the ligation and stain reagents, and walk away for the day. The instrument operates unattended overnight, saving valuable hands-on time.

With streamlined target prep, limited hands-on time, and automated array processing, you can generate robust and reliable genotypes with minimal user intervention, which helps reduce costs and processing complexity.

Easier to use

Consolidated reagents are room temperature-stable and plasticware has been improved for efficient target preparation.



Plug wash bottles directly into the SwiftArrayStudio Analyzer



Pour-and-go staining—no pipetting required



Designed with sustainability in mind—fewer tubes, less hands-on time, no external liquid handler necessary

Flexibility across genomics applications

Catalog and customized solutions for human and agrigenomic genotyping studies

The SwiftArrayStudio microarray analyzer offers a robust and efficient platform for genotyping applications, enabling researchers to detect and analyze genetic variants, single-nucleotide polymorphisms (SNPs), and other polymorphisms with high precision and throughput.



Human

Genome-wide analysis

Population genetics and biobanking studies

Pharmacogenomics

Blood typing research

Carrier screening research

Agrigenomics

Genomic selection

Genomic prediction

Genome-wide association studies

Marker-assisted breeding

Trait and disease mapping

Applied Biosystems™ Axiom™ PangenomePro™ Array

Designed for whole-genome coverage with high imputation coverage and accuracy

Applied Biosystems™ Axiom™ PharmacoPro™ Array

A targeted pharmacogenomics panel with the ability to detect critical pharmacogenomic and copy number variation, and human leukocyte antigens

Applied Biosystems™ Axiom™ agrigenomics arrays

Accelerate your marker-trait association and genomic selection efforts

Applied Biosystems™ Axiom™ myDesign™ arrays

Customized designs available to meet your exact needs

Streamlined software for easy-to-interpret results

The Applied Biosystems™ Axiom™ Analysis Suite offers:

- Copy number detection and visualization capabilities
- Genotypes and quality control metrics
- The capability to visualize heat maps, box and scatter plots, and individual SNP cluster plots
- The ability to go from instrument to genotypes with automated Axiom Analysis Suite
- Further analysis with companion tools such as Applied Biosystems™ Axiom™ HLA Analysis Software, star allele and metabolizer status, open-access imputation, and Polygenic Risk Score software

Exceptional service and support

From pre-installation through instrument lifetime, our dedicated service and support team will be by your side

- Engineered from the ground up for robust performance
- System design simplifies and speeds up preventive maintenance
- Remote access to instrument state and log files speeds up troubleshooting and problem resolution by service engineers
- Dedicated field service team to maximize your uptime



Instrument specifications

SwiftArrayStudio Analyzer	
Dimensions	W x H x D: 54.52 x 25.03 x 26.92 in. (138.48 x 68.58 x 68.39 cm) External waste bottle W x H x D: 6 x 10 x 8 in. (15.24 x 25.4 x 20.32 cm)
Weight	375 lb (170.1 kg)
Temperature range	15–30°C (59–85°F)
Humidity range	20–80% RH, noncondensing
Pollution degree	Grade II Install the instrument in an environment that has nonconductive pollutants such as dust particles or wood chips. Typical environments with a Pollution Degree II Grade rating are laboratories and sales and commercial areas.
Operating altitude	Located between sea level and 2,000 m (6,500 ft.) above sea level
Electrical supply	100–240 VAC
Current	2.6–6.2 A
Main supply voltage fluctuations	±10% VAC
Illumination	LED light source
Pixelation	4.1 megapixels
Scan time (96f array plate)	105 minutes
Scan time (384f array plate)	95 minutes

Ordering information

Description	Cat. No.
Instrumentation	
SwiftArrayStudio Analyzer	00-0471
SwiftArrayStudio Server	00-0472

Description	Assay and workflow	Kit configuration	Cat. No.
Axiom PangenomePro Array Kits			
PangenomePro Array Kit 1x	Axiom SwiftArray Assay, manual	1 kit for 96 samples	952643
PangenomePro Array Kit 2x	Axiom SwiftArray Assay, manual	1 kit for 2 x 96 samples	952645
Axiom PangenomePro Plus Array Kits			
PangenomePro Plus Array Kit 1x	Axiom SwiftArray Assay, manual	1 kit for 96 samples	952644
PangenomePro Plus Array Kit 2x	Axiom SwiftArray Assay, manual	1 kit for 2 x 96 samples	952530
PangenomePro Plus Array Training Kit 1x	Axiom SwiftArray Assay, manual	1 kit for 96 samples	952667
Axiom PharmacoPro Array Kits			
PharmacoPro Array Kit 1x	Axiom SwiftArray Assay, manual	1 kit for 96 samples	952647
PharmacoPro Array Kit 2x	Axiom SwiftArray Assay, manual	1 kit for 2 x 96 samples	952648
PharmacoPro Array Training Kit 1x	Axiom SwiftArray Assay, manual	1 kit for 96 samples	952668
Axiom SwiftArray Reagent Kit			
SwiftArray Reagent Kit 1x	Axiom SwiftArray Assay, manual	1 kit for 96 samples	952634
SwiftArray Reagent Kit 2x	Axiom SwiftArray Assay, manual	1 kit for 2 x 96 samples	952636
Axiom SwiftArray Reagent Kit with Wash Buffer			
SwiftArray Reagent Kit with Wash 1x	Axiom SwiftArray Assay, manual	1 kit for 96 samples	952639
SwiftArray Reagent Kit with Wash 2x	Axiom SwiftArray Assay, manual	1 kit for 2 x 96 samples	952641
Axiom SwiftArrayStudio Buffer Kit			
SwiftArrayStudio Buffer Kit	Axiom SwiftArray Assay, manual	1 kit for 2 x 96 samples	952638
Axiom SwiftArray Plus Reagent Kit 1x	Axiom SwiftArray Assay, manual	1 kit for 96 samples	952639
Axiom SwiftArray Plus Reagent Kit with Wash 1x	Axiom SwiftArray Assay, manual	1 kit for 96 samples	952640
Axiom SwiftArray Plus Reagent Kit 2x	Axiom SwiftArray Assay, manual	1 kit for 2 x 96 samples	952637
Axiom SwiftArray Plus Reagent Kit with Wash 2x	Axiom SwiftArray Assay, manual	1 kit for 2 x 96 samples	952642

Find out more at thermofisher.com/swiftarraystudio

applied biosystems