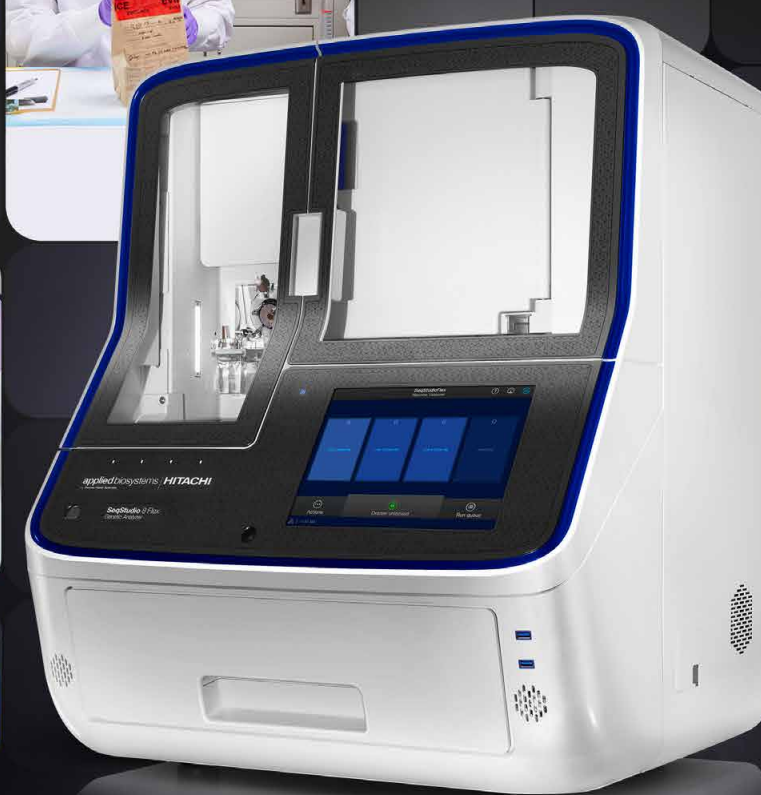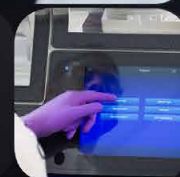# FLEX YOUR
POWER

SeqStudio Flex Genetic Analyzers are built to deliver quality data faster, easier, and more efficiently

applied biosystems

Flex your power

Designed using capillary electrophoresis (CE) technology trusted by human identification (HID) labs for over 25 years, Applied Biosystems™ SeqStudio™ Flex Genetic Analyzers deliver the flexibility and accuracy your work demands. Innovative capabilities including a continuously accessible four-plate deck can help you achieve reliable short tandem repeat (STR) results efficiently. Features such as lab-friendly connectivity and easy, on-instrument training videos can help get you started quickly and minimize downtime.

Features

- **Configuration**—8- and 24-capillary systems with a 4-plate deck as well as flexible loading options

- **Flexible scheduling**—continuous plate loading and sample reprioritization

- **Easy-to-use touchscreen computer**—with integrated data collection software and on-instrument training videos

- **Results you can trust**—optimized data collection software and validated performance with Applied Biosystems™ STR kits, compatible with other 5- and 6-dye kits

- **Reduced pull-up (false secondary peak)**—auto-spectral calibration that utilizes sample-specific spectral data to reduce pull-up editing

- **Seamless data interpretation**—with Applied Biosystems™ GeneMapper™ *ID-X* Software v1.7

- **Web-enabled services**—remote monitoring, run setup, and instrument control

- **Remote troubleshooting**—for faster issue resolution

- **Lab-friendly connectivity**—integrate your instrument into the lab with local area network (LAN), Wi-Fi, USB, and laboratory information management system (LIMS) compatibilities

- **Get up and running quickly**—every SeqStudio Flex system includes service installation and a one-day HID field application specialist (FAS) training to help you get started faster

- **Protection and traceability**—with an optional security, audit, and e-signature (SAE) software

NDIS
Approved

Thermo Fisher Scientific has validated both SeqStudio Flex Genetic Analyzers for Human Identification and GeneMapper *ID-X* Software v1.7 following the DNA Advisory Board (DAB) Quality Assurance Standards (July 2020) and guidelines from the Scientific Working Group on DNA Analysis Methods (SWGDAM, December 2016). GeneMapper *ID-X* Software v1.7 is also compliant with the Center for Internet Security™ CIS Benchmarks™.

Increased lab productivity

The SeqStudio Flex Genetic Analyzer, available in both 8- and 24-capillary configurations, is a genetic analyzer for fragment analysis and Sanger sequencing that delivers the high-quality data and reliable performance that forensic scientists expect. It comes with design enhancements for improved flexibility, usability, connectivity, and serviceability.
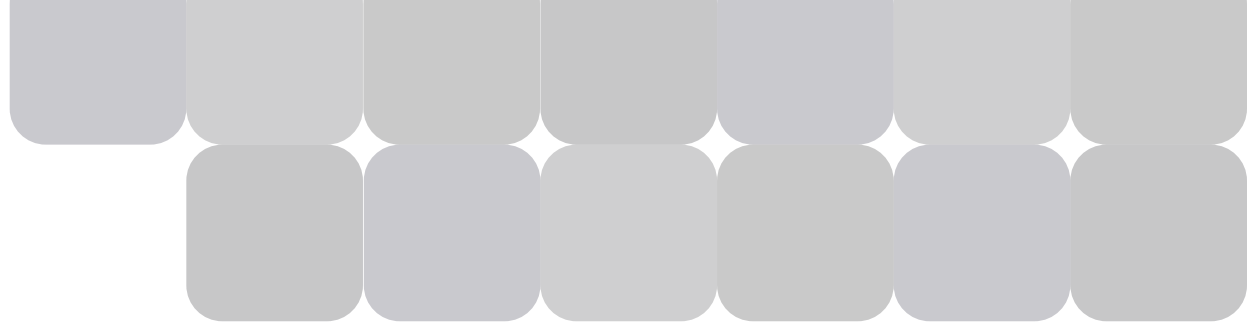
Flexibility

- **Accessibility**—continuously load plates and reprioritize urgent samples without having to terminate the current run

- **Increased walk-away capacity**—four plate positions accommodating 8-tube strips and 96-well plates for samples

- **Work when and where you want**—set up your plate and monitor run progress from anywhere using the Thermo Fisher™ Connect Platform

Usability

- **Designed for all levels of experience**—simple one-button startup, autocalibration, and on-screen step-by-step routine maintenance instructions as well as onboard self-help training videos

- **Simplified capillary array installation**—redesigned, more robust arrays with "click-and-slide" retractor tabs and enhanced detection cell housing, providing improved capillary protection, insertion, positioning, and ease of handling

- **Versatile**—compatible with Applied Biosystems™ 3500 Series Genetic Analyzer buffers and polymers

- **Easy inventory management**—with radio-frequency identification (RFID)-enabled tracking of consumable usage

- **No desktop computer required**—integrated touchscreen computer, intuitive software, walk-through wizards, and Applied Biosystems™ Plate Manager 2.1 Software for simplified plate setup and instrument operation

Connectivity

- Integrate the communication technologies and security options of today to propel laboratory efficiencies of tomorrow

- Connect your way—integrate your instrument with LAN, Wi-Fi, USB, and LIMS compatibilities

- **Confidently walk away**—monitor your run and data via the Connect Platform from your mobile phone, tablet, laptop, or remote desktop

- **Data integrity and compliance**—optional SAE software for an electronic chain of custody

Serviceability

Applied Biosystems™ instrument innovation continues through a digital service ecosystem for remote troubleshooting.*

- **Reduced service visits**—70% of issues are resolved remotely

- **Less instrument downtime**—remotely resolve issues in minutes, not days, using onboard Smart Help and Remote Support features

- **Real-time audio/video collaboration**—the Remote Support feature brings our technicians into your laboratory using cutting-edge, security-minded digital tools

- **Secure transfer of instrument performance data**—send log and run files directly from the instrument with the push of a button using Smart Help

* Network connectivity is required for Smart Help, Remote Support, and remote monitoring.

70% of issues resolved in minutes, not days, using our remote digital support tools

Thermo Fisher Scientific has implemented standards and policies to help protect data from unauthorized access in our Connect Platform. Scan the QR code to access our Security Operations Guide, which details the various standards, controls, data security approaches, business practices, and certifications used for the cloud-based storage that supports the Connect Platform.

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Validation, support, and service plans designed for forensic scientists

There's no time for downtime in your lab. With more than 25 years of expertise, no one knows CE better than we do—the company that designs, builds, and supports CE instrumentation. With more than 2,000 trained professionals ready to assist you, our superior support and service solutions for Applied Biosystems™ instruments and applications help get your lab up and running, and keep it running, so you can analyze your cases with complete confidence.

Need help bringing products online?

Integrate, validate, and implement

Look no further than our Human Identification Professional Services (HPS) team. Since 2007, our HPS team has been helping customers gain confidence in their workflow performance and increase efficiency in their forensic DNA processing. The HPS team has completed over 700 validation, integration, and implementation projects in more than 30 countries worldwide. With a dedicated team of validation specialists, each with forensic experience, we provide customers with unparalleled workflow support on our chemistries, instruments, and software.

You're covered

Every new instrument purchase comes with a standard 1-year factory warranty, 1-day HID FAS training orientation, and an advanced digital service ecosystem built right into the instrument. **Longer-term service plans are available that include guaranteed response times* and priority phone access to our certified technical support specialists.** The AB Assurance Plan helps take the guesswork out of instrument uptime, from issue prevention to resolution of performance-threatening issues twice as fast, so you can stay focused on the important work ahead of you. Find out more about the AB Assurance service plan at **thermofisher.com/abassurance**.
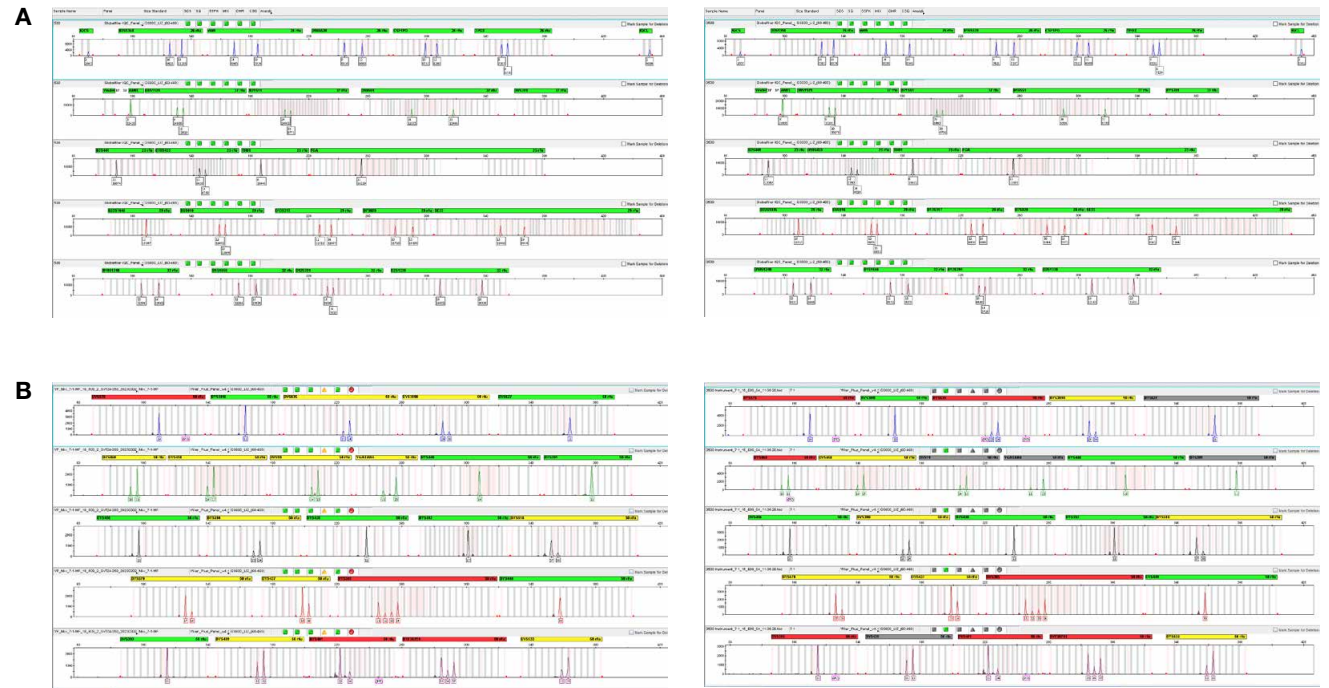
* Guaranteed response times vary by region.

On-demand support at your fingertips

Your new SeqStudio Flex Genetic Analyzer is equipped with a cutting-edge digital service ecosystem so you can access our network of trained professionals at the touch of a button. With Smart Help you can easily share log and run files to speed up service troubleshooting and, if needed, request a service visit. Remote Support features enable our technical team to see your instrument in real time and interact with you on the instrument screen to resolve issues virtually, freeing up time for you to focus on your next case. To find out how our digital support helps resolve up to 70% of cases in minutes, not days, go to **thermofisher.com/digitalserviceinnovations**.

Generate high-quality data with Applied Biosystems STR kits

The SeqStudio Flex Genetic Analyzers for HID are validated across a selection of Applied Biosystems™ PCR amplification kits. A complete validation report that includes genotyping concordance, resolution, minimum detection threshold, sizing precision and accuracy, sensitivity and dynamic range, signal variability, crosstalk, and carryover studies can be found in the [SeqStudio Flex Genetic Analyzer User Bulletin](#).

Data collection on the SeqStudio Flex Genetic Analyzer for HID is optimized for performance with Applied Biosystems STR kits to generate data comparable to those from the 3500 Series Genetic Analyzers (Figure 1). SeqStudio Flex Data Collection Software v1.1 also incorporates a pull-up reduction and off-scale recovery feature.

Figure 1. Similar performance of the SeqStudio Flex Genetic Analyzer (left) compared to the 3500 Series Genetic Analyzer (right). Panel A: 1 ng of DNA Control 007 was amplified using the Applied Biosystems™ GlobalFiler™ IQC PCR Amplification Kit. **Panel B**: 1 ng of a 7:1 mixture of DNA samples 007 and IB-0996 was amplified using the Applied Biosystems™ Yfiler™ Plus PCR Amplification Kit. Amplification and CE analysis protocols were performed according to manufacturer's user guides. Samples were analyzed with GeneMapper *ID-X* Software v1.7.

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Improved data interpretation

There are multiple types of pull-up (Figure 2) that can be observed on capillary electrophoresis systems as shown below. Like the 3500 system, the SeqStudio Flex systems incorporate both a pull-up reduction module to decrease your analysis time on casework samples and an off-scale recovery function to increase your first-pass success rate.

Spectral pull-up and off-scale pull-up

• Smaller peak centered under larger peak

• Raw data show similar parent and pull-up peak shape

• Caused by variability between pure dyes and amplified product

Instrument-specific pull-up

• Smaller peak off-center a bit from larger peak

• Raw data show sinusoidal curve
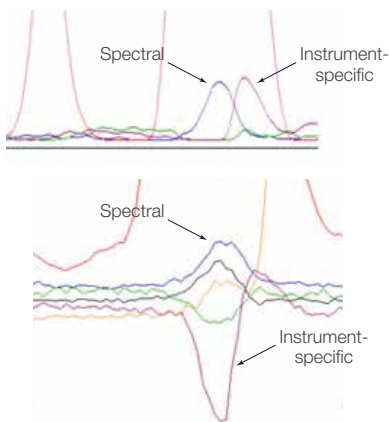
• Caused by migration of dyes

Figure 2. Illustrations of spectral and instrument-specific pull-up artifacts.

Data analysis with GeneMapper *ID-X* Software v1.7

GeneMapper *ID-X* Software v1.7 is required to analyze files from the SeqStudio Flex systems. This software can help decrease your data analysis time, allow for a more efficient processing workflow, and comply with ever-changing IT and security requirements. All of this is available without any changes to the analysis algorithm. These advanced capabilities include:

New database—utilizes a PostgreSQL™ database, which results in new abilities for backup and restore functions. Both Windows™ 10 and Windows™ 11 operating systems are supported.

Enhanced user interface—allows analysts to open multiple projects at once (Figure 3) and compare samples across all open projects using the Profile Comparison tool as well as compare annotation differences between multiple projects. Notes can be annotated directly on the electropherogram, and printing capabilities have been expanded.
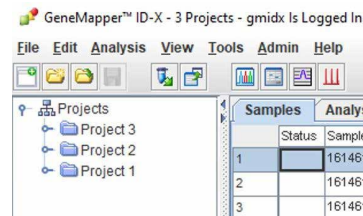

Figure 3. Multiple projects are open at the same time in the left-hand navigation panel.

Expanded user base—compatible with files from SeqStudio Flex Genetic Analyzers, 3500 Series Genetic Analyzers, and Applied Biosystems™ SeqStudio™ Genetic Analyzers, as well as files produced by Applied Biosystems™ ABI PRISM™ 3730, 3130, 3100, and 310 genetic analyzers. In the future, GeneMapper *ID-X* Software v1.7 will be able to analyze and view data files (.fsa/.ser) generated by the Applied Biosystems™ RapidHIT™ ID System.

Analysis parameters—optional allele-specific stutter, additive stutter, pull-up, and marker-specific filters can be applied based on your laboratory's needs.

Ordering information

Description	Cat. No.
SeqStudio 8 Flex Genetic Analyzer, GeneMapper *ID-X* Software v1.7 Full, HPS Standard CW Validation, AB Assurance plan with 1 included PM, and FAS Training	A58063
SeqStudio 8 Flex Genetic Analyzer, GeneMapper ID-X Software v1.7 Full, HPS Standard DB Validation, AB Assurance plan with 1 included PM, and FAS Training	A58064
SeqStudio 8 Flex Genetic Analyzer, GeneMapper ID-X Software v1.7 Full, AB Assurance plan with 1 included PM, and FAS Training	A58065
SeqStudio 8 Flex Genetic Analyzer for Human Identification	A56532
SeqStudio 24 Flex Genetic Analyzer, GeneMapper ID-X Software v1.7 Full, HPS Standard CW Validation, AB Assurance plan with 1 included PM, and FAS Training	A59250
SeqStudio 24 Flex Genetic Analyzer, GeneMapper ID-X Software v1.7 Full, HPS Standard DB Validation, AB Assurance plan with 1 included PM, and FAS Training	A59255
SeqStudio 24 Flex Genetic Analyzer, GeneMapper ID-X Software v1.7 Full, AB Assurance plan with 1 included PM, and FAS Training	A59260
SeqStudio 24 Flex Genetic Analyzer for Human Identification	A56534
SAE Administrator Console Software v2.1	A53717
GeneMapper ID-X Software v1.7, full installation	A71700
GeneMapper ID-X Software v1.7, client installation	A71701
GeneMapper *ID-X* Software v1.7, full upgrade	A01700
GeneMapper *ID-X* Software v1.7, client upgrade (1 license)	A01701
GeneMapper *ID-X* Software v1.7, client upgrade (5 licenses)	A01705
GeneMapper *ID-X* Software v1.7, client upgrade (10 licenses)	A01710
SeqStudio Flex Genetic Analyzer 24-Capillary Array (36 cm)	A49105
SeqStudio Flex Genetic Analyzer 8-Capillary Array (36 cm)	A49104
POP-4 Polymer (384 samples)	4393715
POP-4 Polymer (960 samples)	4393710
Anode Buffer Container (ABC) (4 packs)	4393927
Cathode Buffer Container (CBC) (4 packs)	4408256
Septa Cathode Buffer Container (10 packs)	4410715
Conditioning Reagent	4393718
Hi-Di Formamide (25 ml)	4311320
GeneScan 600 LIZ Size Standard v2.0 (800 rxns)	4408399

Partner with us to find the truth at **thermofisher.com/hid-seqstudioflex**

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