

SPECIFICATION SHEET

SeqStudio Genetic Analyzer



SeqStudio Genetic Analyzer

Key features

- Integrated cartridge for minimal hands-on time (polymer, array, pump, anode buffer—all in one unit); helps reduce human error
- Sanger sequencing and fragment analysis carried out on the same run
- Interactive touchscreen with easy-to-use interface
- Autocalibration
- Wi-Fi or local area network (LAN) connectivity
- Traceability and data security with an optional security, audit, and electronic signature (SAE) software module*
- Web-enabled remote monitoring and control capability**
- Tracking of consumables usage

Instrument specifications	
Number of capillaries	4
Number of dyes	6
Sample format	96-well standard plate and standard 8-tube strips
Applications	Sanger sequencing (next-generation sequencing (NGS) confirmation, indel analysis, heterozygote detection, minor variant detection, microbial identification, genome editing verification) Fragment analysis (microsatellite analysis, compatible with MLPA™ PCR, Applied Biosystems™ SNaPshot™ applications, cell line authentication)
Dimensions (W x D x H)	49.5 x 64.8 x 44.2 cm
Weight	53.6 kg
Power input	100–240 V
Internal hard drive storage	128 GB, approximately 3,500 injections or 14,000 reactions
On-instrument tracking	Radio-frequency identification (RFID)
Secondary analysis	<ul style="list-style-type: none"> • Applied Biosystems™ Sequence Analysis Software • Applied Biosystems™ SeqScape™ Software • Applied Biosystems™ Variant Reporter™ Software • Applied Biosystems™ GeneMapper™ Software • Applied Biosystems™ Minor Variant Finder Software • Applied Biosystems™ Analysis Modules (Quality Check, Variant Analysis, Peak Scanner, Microsatellite Analysis, and Next-Generation Confirmation) on Connect platform
Warranty	1 year included; extended warranties available
Training	SmartStart orientation (includes 1-day, on-site field application scientist training and setup with Connect platform and online Instrument Management)
Communication interface	Connect platform with cloud-enabled systems, Wi-Fi, and RJ-45 Ethernet ports
Configuration	Stand-alone; optional desktop or laptop computer

Run module specifications					
Run module	Bases (QV30 CRL†)	Samples‡	Approximate run time	Sizing precision:	
ShortSeq	350 bp	192	30 min	60–460 bp	461–600 bp, 600–800 bp
MediumSeq	500 bp	128	45 min	<0.50	NA
LongSeq	800 bp (QV20)	48	≤2 hr	<0.15	NA
ShortSeq BDX	350 bp	172	33 min	<0.15	<0.30, <0.45
MediumSeq BDX	500 bp	120	45 min		
LongSeq BDX	800 bp (QV20)	48	≤2 hr		
Run module	Size range	Samples‡	Approximate run time	Sizing precision: 60–460 bp	Sizing precision: 461–600 bp, 600–800 bp
SNaPshot	40–120 bp	230	25 min	<0.50	NA
FragAnalysis	60–460 bp	128	45 min	<0.15	NA
LongFragAnalysis	60–800 bp	48	≤2 hr	<0.15	<0.30, <0.45

* SAE enablement requires on-site field service engineer and PC (desktop or laptop) purchased from Thermo Fisher Scientific.

** Feature not available if optional SAE software module enabled.

† Contiguous read length (CRL) is defined as the longest uninterrupted segment of bases, calculated over a sliding window of 21 bp.

‡ Samples calculated over a 24 hr time period. Each run (injection) has 4 samples, and 1 sample equals 1 reaction.

Cartridge specifications	
Capillary array length	28 cm*
Maximum number of injections/reactions	Up to 125 injections/500 reactions or samples (Applied Biosystems™ SeqStudio™ Cartridge v1) Up to 250 injections/1,000 reactions or samples (SeqStudio Cartridge v2)
Polymer type	Applied Biosystems™ POP-1™ polymer (for performing sequencing and fragment analysis)
Shelf life	4 months (SeqStudio Cartridge v1) or 6 months (SeqStudio Cartridge v2) after opening
Storage	2–8°C
On-instrument tracking	RFID
Recycling	For more details, go to thermofisher.com/seqstudiorecycling

Optional desktop computer: minimum specifications	
Memory	16 GB (2 x 8 GB), 1,600 MHz DDR3,** non-ECC**
Processor	4th generation Intel Core™ i7-4770S processor (Quad Core HT, 3.10 GHz turbo, 8 MB, with HD graphics 4600)
Hard drive	2 x 500 GB SATA 3.0 GB/sec and 8 MB data burst cache
Operating system	Microsoft™ Windows™ 10 system

Optional laptop computer: minimum specifications	
Memory	16 GB (2 x 8 GB), 2,400 MHz DDR4†
Processor	6th generation Intel Core i5-6440HQ processor (Quad Core, 2.6 GHz; 6 MB cache)
Hard drive	M2.2 256 GB SATA Class 20 solid-state drive
Operating system	Microsoft Windows 10 system

* Works with POP-1 polymer to resolve short and long reads.

** DDR3 = double-data rate type 3, ECC = error-correcting code.

† DDR4 = double-data rate type 4.

Ordering information

Product	Cat. No.
SeqStudio Genetic Analyzer System with SmartStart Includes: SeqStudio Genetic Analyzer SeqStudio Genetic Analysis Software 1-day SmartStart orientation for SeqStudio Genetic Analyzer 1-year warranty	A35644
SeqStudio Genetic Analyzer System with SmartStart plus 1-year extended warranty Includes all items from A35644 plus additional 1-year warranty	A35645
SeqStudio Genetic Analyzer System with SmartStart plus 3-year extended warranty Includes all items from A35644 plus additional 3-year warranty	A35646
SeqStudio Starter Kit	A35000
SeqStudio Cartridge v1	A33671
SeqStudio Cartridge v2	A41331
Cathode Buffer Container (4 pk)	A33401
Cathode Buffer Container Reservoir Septa (20 pk)	A35640
96-Well Plate Septa (20 pk)	A35641
8-Strip Tube Septa (24 pk)	A35643
Integrated Capillary Protector	A31923
IQ/OQ/IPV for SeqStudio fragment analysis	A34549
IQ/OQ/IPV for SeqStudio sequencing analysis	A34551
IIQ/OQ/IPV for SeqStudio fragment and sequencing analysis	A34530
SAE Administrator Console Software v2.0 (optional)	A46170

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