

# 5500 SOLiD™ System

The next-generation sequencing system for every lab



## 5500 SOLiD™ System

Preliminary Information Sheet

### Key Benefits

- **Powerful platform**  
Robust benchtop system with industry-leading accuracy of up to 99.99% with Exact Call Chemistry (ECC) Module to deliver up to 15 Gb/day
- **Simplified sequencing**  
Streamlined workflows with embedded controls, reagent usage tracking, and intuitive software user interface
- **Rapid turnaround**  
4 Gb of quality data, or greater than 100 M quality reads/lane run, in less than 24 hours for quick answers
- **Cost-effective research**  
Lower costs per sample for single or multiplexed lane runs, with pay-per-use reagents
- **Flexible system**  
Versatility to run lanes independently to fit your application-specific projects

### Overview

Built on three decades of sequencing expertise and powered by the proven accuracy of ligation-based sequencing, the new 5500 SOLiD™ System provides a robust, affordable next-generation sequencing platform for every lab. Designed to give you the choice to optimize for turnaround time or throughput, the 5500 SOLiD™ System provides a highly accurate, cost-effective solution for analyzing one or many samples.

#### Explore the depths of translational research

The easy-to-use benchtop 5500 SOLiD™ System generates 10–15 Gb/day. With Exact Call Chemistry, the industry-leading accuracy of the SOLiD™ System gets you definitive answers about biological variation for applications like targeted resequencing, RNA-Seq, and ChIP-Seq.

#### Customize the system for your projects

The 5500 SOLiD™ System allows you to tailor your sequencing runs precisely for your research. The six independent FlowChip lanes as well as the pay-per-use reagents allows you to configure the instrument to different project scales and application types. Additionally, the system's intelligent barcode kits can accommodate from one to hundreds of samples in a single run.

#### Don't wait

With the 5500 SOLiD™ System, the unique capability to run each FlowChip lane independently allows you to turn around results in the shortest time possible. Now you can explore the genome, transcriptome, and epigenome with a hypothesis-neutral platform that combines powerful sequence data generation with premium quality in accuracy. Whether you need 96 small RNA samples run in 1 day, or 8–16 whole exome samples run in a week, the 5500 SOLiD™

System delivers high-quality results in a time-sensitive and cost-effective manner.

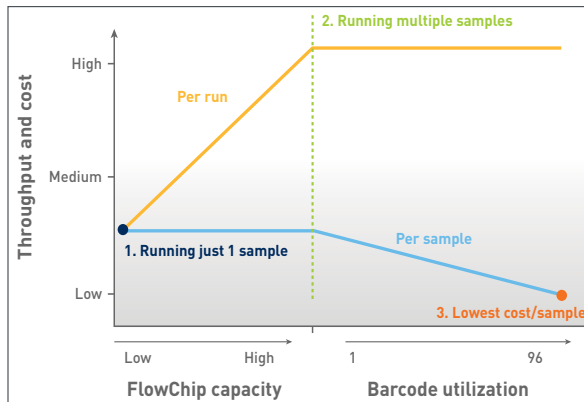
### Perform sequencing with ease

Designed in collaboration with core facilities and principal investigators, the integrated 5500 SOLiD™ System provides an intuitive and user-friendly workflow from sample preparation to data analysis. Benefits include:

- Embedded sequencing controls to enable real-time monitoring of data quality throughout the entire workflow
- System alerts to help maximize data quality and system performance, and to track reagent usage during the course of the sequencing run
- Easy-to-use software, 60% smaller data footprints, workstation computing, and standard base sequence file formats to facilitate setup, daily operations, and seamless integration with data analysis tools

### Join the era of genomic medicine

The throughput, broad range of applications, system flexibility, and intuitive design of the 5500 SOLiD™ System address the needs of core and services laboratories, and basic and clinical research labs, to take sequencing into every scientific and medical discipline.



**Figure 1. Flexibility of the 5500 SOLiD™ System.**

Adjust the configuration of the microfluidic FlowChip to select the balance between throughput and cost per run that suits your needs. Use up to 96 barcodes to multiplex samples and reduce the cost per sample. Three scenarios: 1) a single sample and fast results; 2) maximum throughput generating 10–15 Gb/day (at this scale, cost per run remains constant); 3) multiplexing samples with the use of barcodes, which reduces the cost per sample.

### 5500 SOLiD™ System Specifications\*

<b>System Components</b>	<ul style="list-style-type: none"> <li>• Benchtop instrument and control software with user-friendly design</li> <li>• 5500 SOLiD™ Sequencer (P/N 4452865)</li> <li>• 5500 SOLiD™ System (P/N 4460728)</li> </ul>
<b>Dimensions (W x D x H)</b>	1200 mm x 750 mm x 800 mm
<b>Configuration</b>	1 configurable microfluidic FlowChip with 6 independent run lanes
<b>System Accuracy</b>	Up to 99.99% <sup>†</sup>
<b>Throughput/Day</b>	Up to 10–15 Gb
<b>Throughput/Run</b>	Up to 90 Gb or greater than 1.4 B reads (paired-end or mate-paired runs)
<b>Samples/Run<sup>§</sup></b>	<ul style="list-style-type: none"> <li>• 1 genome</li> <li>• 12 exomes</li> <li>• 6 transcriptomes</li> </ul>
<b>Read Length</b>	<ul style="list-style-type: none"> <li>• 75 bp (fragment)</li> <li>• 75 bp x 35 bp (paired-end)</li> <li>• Up to 60 bp x 60 bp (mate-paired)</li> </ul>
<b>Run Time**</b>	<ul style="list-style-type: none"> <li>• 1 day for 35 bp, 1 lane</li> <li>• 7 days for 75 bp x 35 bp or 60 bp x 60 bp, 6 lanes</li> </ul>
<b>System Features</b>	<ul style="list-style-type: none"> <li>• Internal controls to enable pre- and real time-run checks to help maximize data quality and performance</li> <li>• Independent lane runs to enable quickest turnaround time</li> <li>• Flexible system configuration allows cost-effective consumable usage</li> </ul>
<b>Consumables</b>	Easy-to-use, application-specific kits
<b>Multiplexing</b>	96 barcodes for DNA and RNA applications

\* Specifications subject to change. <sup>†</sup>Requires use of ECC module. <sup>§</sup>30x coverage for human genome; ~100x–150x coverage for exome; whole transcriptome ≥100 M reads/sample. \*\*Longer run times may result with the use of the ECC module.

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