ILLUMINA SEQUENCING SYSTEMS

illumina®

For Research Use Only. Not for use in diagnostic procedures.

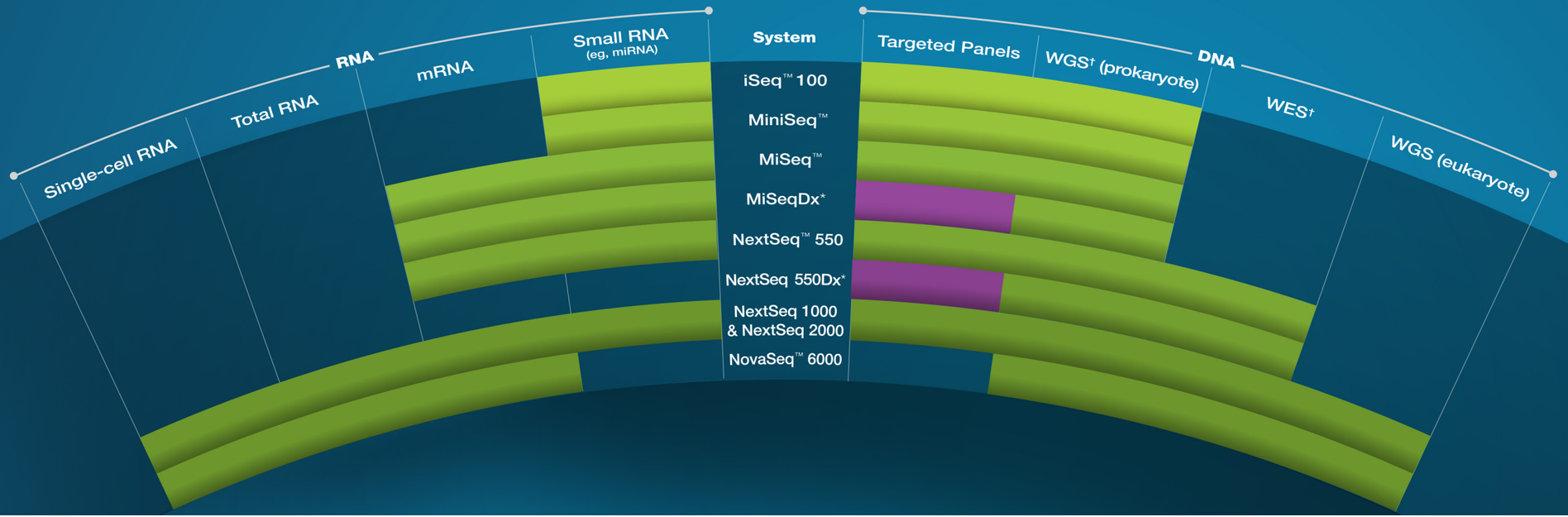
PROVEN QUALITY. TRUSTED SOLUTIONS.

Every day, researchers are using Illumina next-generation sequencing (NGS) systems to better understand human health and disease, as well as gain more insights into nonhuman organisms. We're enhancing research in emerging fields, from reproductive health to microbiology.

All Illumina sequencing systems utilize our proven technology. They perform fully automated and robust sequencing, enabling more accurate analysis. Our trusted solutions allow you to expand your research and achieve a high level of accuracy.

With a full range of solutions, we have the perfect system to meet your ever-evolving needs.

METHODS ACROSS THE GENOMIC SPECTRUM



We offer a wide range of options, from scalable systems to application-focused solutions.

DIAGNOSTIC

Built for clinical applications, the MiSeqDx* instrument and NextSeq 550Dx* instrument provide robust solutions able to offer deep insights into genetic testing.

RESEARCH

From the iSeq 100 System to the NextSeq 2000 System, our benchtop sequencing solutions leverage the power of Illumina NGS technology in an accessible and flexible format, making it easy for virtually any lab to accelerate their research.

With the NovaSeq 6000 System, we're revolutionizing genomics with unparalleled power. Now you can perform your high-throughput studies with production-scale sequencing for diverse applications.

***For *In Vitro* Diagnostic Use. †WGS, whole-genome sequencing; WES, whole-exome sequencing**

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ACCESSIBLE SOLUTIONS. TAILORED POWER.

iSeq 100

MiniSeq*

MiSeq*

NextSeq 550†

NextSeq 1000 & NextSeq 2000

NovaSeq 6000

Key methods	Targeted gene sequencing; direct amplicon sequencing; small-genome sequencing	Targeted gene sequencing; targeted gene expression profiling; small-genome sequencing		Targeted gene sequencing; metagenomic sequencing; small-genome sequencing				Gene expression profiling; RNA-Seq; exome; targeted gene sequencing; small-genome sequencing; Infinium™ microarray analysis		Single-cell sequencing; exome; RNA-Seq; small-genome sequencing; oncology panels; enrichment			Whole-transcriptome sequencing; exome; liquid biopsy development; methylation; medium/large-genome sequencing			
Flow cell	—	Mid-output	High-output	Nano	Micro	v2	v3	Mid-output	High-output	P1	P2	P3‡	SP	S1	S2	S4
Flow cells processed per run	1	1	1	1	1	1	1	1	1	1	1	1	1 or 2	1 or 2	1 or 2	1 or 2
Output range	1.2 Gb	2.1-2.4 Gb	1.9-7.5 Gb	300-500 Mb	600 Mb-1.2 Gb	750 Mb-8.5 Gb	3.8-15 Gb	16-39 Gb	25-120 Gb	30 Gb	40-120 Gb	60-360 Gb	80-800 Gb	167-1000 Gb	417-2500 Gb	2000-6000 Gb
Run time	8-19 h	4-17 h	4-24 h	17-28 h	10-19 h	5.5-39 h	21-56 h	15-26 h	11-29 h	~19 h	~13-29 h	~11-48 h	13-38 h	13-25 h	16-36 h	< 45 h
Clusters passing filter per flow cell	4M	8M	25M	1M	4M	15M	25M	130M	400M	100M	400M	1.2B	800M	1.6B	4.1B	10B
Maximum read length	2 × 150 bp	2 × 150 bp	2 × 150 bp	2 × 250 bp	2 × 150 bp	2 × 250 bp	2 × 300 bp	2 × 150 bp	2 × 150 bp	2 × 150 bp	2 × 150 bp	2 × 150 bp	2 × 250 bp	2 × 150 bp	2 × 150 bp	2 × 150 bp

* Additional kits available.
Visit illumina.com for details.

† The NextSeq 550 System has identical sequencing specifications to the NextSeq 500 System and includes array scanning functionality for cytogenomic and karyomapping applications.
‡ P3 Reagents are available for the NextSeq 2000 System only.

EXPANDED CLINICAL MENU

By expanding our IVD* menu, we are working to provide clinical solutions that support the diagnosis and management of disease.

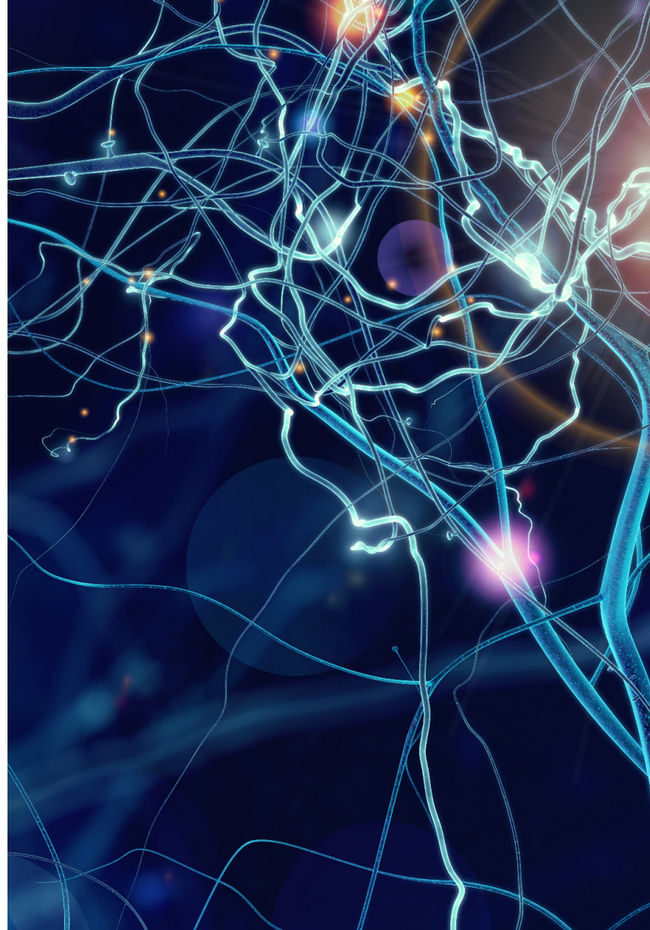
These regulated platforms are important milestones for the clinical community.

These solutions enable development of a large range of clinical applications, from targeted panels to whole genomes.

	MiSeqDx*	NextSeq 550Dx*†
Key methods	Targeted DNA sequencing (Dx mode) All associated MiSeq methods (Research mode)	Targeted DNA sequencing (Dx mode) All associated NextSeq methods (Research mode)
Flow cell	MiSeqDx v3 (Dx mode)	NextSeq 550Dx High Output (Dx mode)
Flow cells processed per run	1	1
Output range	> 5 Gb	> 90 Gb
Run time	< 28 h	< 35 h
Clusters passing filter per flow cell	15M	400M
Maximum read length	2 × 300 bp	2 × 150 bp

* For *In Vitro* Diagnostic Use. Not available in all regions and countries.

† The NextSeq 550Dx instrument has similar sequencing specifications to the NextSeq 550 System, depending on which sequencing reagent kit is used and includes array scanning functionality for cytogenomic and karyomapping applications in research mode only.



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FROM INSTRUMENT TO INSIGHT

Illumina offers bioinformatics and software to translate data generated using our sequencing instruments. Our cloud-based approach to software enables us to deliver high-quality solutions within a secure, scalable, and compliant environment.

Manage, analyze, interpret, and share data. Get up and running with genomics quickly with our simple informatics tools.

RUN MONITORING AND INSTRUMENT PERFORMANCE

Monitor runs on your instrument from anywhere. Maximize sequencer performance and identify potential issues when you send instrument operational data.

PUSH-BUTTON DATA ANALYSIS

Access a variety of NGS data analysis applications from Illumina and our growing ecosystem of providers.

DATA MANAGEMENT AND COLLABORATION

Store and manage data simply and economically with secure, HIPAA- and ISO-compliant* cloud-based solutions. Collaborate easily with data transfer and sharing tools.

COMPREHENSIVE INTERPRETATION AND REPORTING

Annotate and filter variants, review supporting evidence, and create reports from germline and somatic cancer data.

* HIPAA, Health Insurance Portability and Accountability Act; ISO, International Organization for Standardization

A CONTINUUM OF COMPREHENSIVE RESOURCES

From an initial evaluation to product support, Illumina offers streamlined NGS solutions to optimize your process. As the innovators of next-generation sequencing technology, we're here to deliver the experience and expertise to help accelerate your progress and propel your success.

EVALUATING YOUR NEEDS

We help you find the right solution for now and into the future. Discuss your needs with a sales representative and determine the tools that meet your requirements. Get training from our instructors to discover how to fully expand your research.

SETTING UP YOUR WORKFLOW

From library prep to informatics, our solutions help optimize your workflow so you know you're being the most efficient you can be.

MAINTAINING AND SUPPORTING YOUR SYSTEM

Our support doesn't end once you're set up. Whether you need bioinformatics training or sequencing consulting, we have the services you need to keep your lab running smoothly.

Our trusted solutions are considered the industry standard with over 17,000 active sequencing systems installed worldwide. Illumina sequencing by synthesis (SBS) chemistry delivers exceptional data quality and accuracy, with a reliably high yield of error-free reads.[1] The proven performance and scalable output of our sequencing systems support a full range of applications to propel your research forward.

From library prep and sequencing to informatics, Illumina genomic solutions empower researchers across the globe to find the answers they're looking for.

Learn more about the right solution for your lab
www.illumina.com/systems

1. Bentley DR, Balasubramanian S, Swerdlow HP, et al. *Nature*. 2008;456:53-59. doi:10.1038/nature07517

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