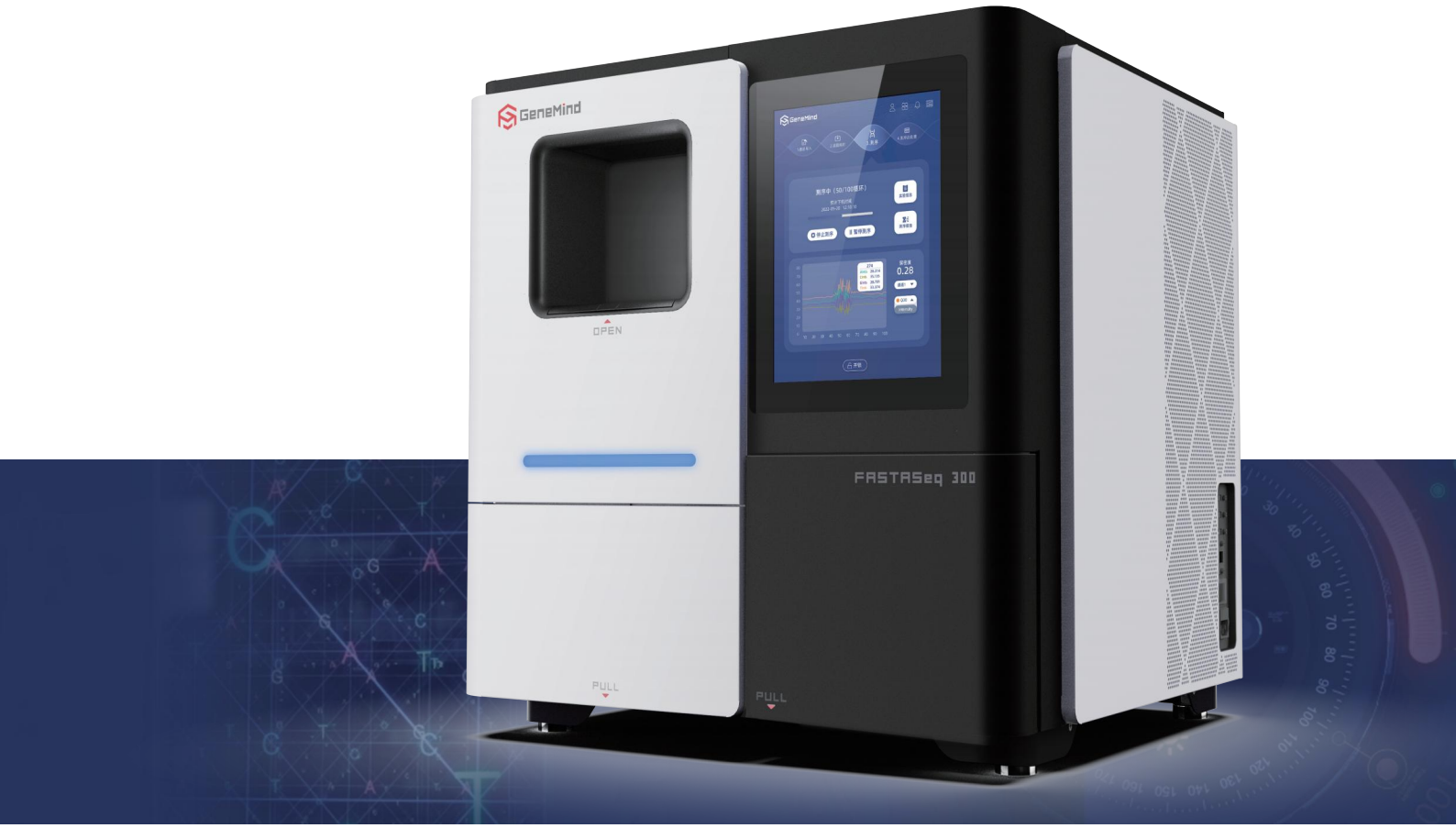
GeneMind

FASTASeq™ 300

High-throughput Sequencing Platform CE NMPA

Flexible · Rapid · Easy-to-use

- Maximum Throughput: 150 Gb
- Maximum Read Length: PE300/SE400
- Shortest Sequencing Time: SE75 4.5 hr



Product Parameter

Flowcell type	Lane	Throughput (Reads/FC)	Read Length	Data output (Gb)	Q30 [1]	TAT [2] (h)
FCL	2	50 M	SE100	5	⩾90%	5.5
FCM	4	125 M	SE75	9.4	⩾90%	4.5
			PE75	18.8	⩾90%	9.5
			PE150	37.5	⩾90%	13
FCH	4	280 M	SE75	21	⩾90%	5
			PE75	42	⩾90%	9.5
			PE150	84	⩾90%	16
FCP	4	500 M	SE75	37.5	⩾90%	7.5
			PE75	75	⩾90%	14
			PE150	150	⩾90%	24
FCX	2	100 M	SE400	40	⩾80%	31.5
			PE300	60	⩾85%	46.5

1. This parameter is obtained based on the average of multiple test results of GeneMind P3 standard library. The data output and the proportion of high quality data are affected by factors such as sample type, sample quality and effective flow cell utilization. The actual performance may vary.
2. The sequencing time to complete the sample read length plus the paired-end index (8+8), includes the time from sample loading to base calling, and generating basefile.

Main Features	
Lightning Chemistry 100% Faster Sequencing	Parallel biochemical and signal processing on a single flowcell delivers maximum speed and shortest turnaround time.
High-Density Flowcell 100% Higher Signal Density	A novel flowcell design and optimized base-calling ensure precise data from dense signals.
Bidirectional Flow System 50% Less Reagent Consumption	Advanced fluidics and reagent formulation slash reagent use per data unit.
Full Vertical Integration equipment-reagents-flowcell-software	100% domestically sourced core components ensure a secure, stable, and controllable supply chain.

Application

Application	Reads length	Data/sample	Number of Samples / FC [3]		
			FCM	FCH	FCP
			125 M	280 M	500 M
NIPT Plus	SE75	7 M unique Reads	12	24	48
TB-tNGS	PE100	2 M raw reads	36	96	192
Small Oncology Panel (Tissue)	PE150	1 Gb	20	48	96
Small Oncology Panel (Plasma)	PE150	7 Gb	4	8	16
tNGS (based on probe capture)	SE50	1 M reads	125	280	500
PGT-A	SE75	3.5 M Unique read	16	36	64
Carrier Screening	PE150	1.2 Gb raw data	25	56	100
WES	PE150	11 Gb	2	6	12

3 The above sample numbers for different applications are only for reference. Users need to adjust the sample numbers according to the actual experiment.

Total solution

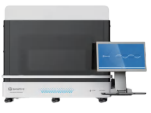
NIGM™ Non-invasive Prenatal Testing (NIPT) of GeneMind

Simple	Test from a tube of 10ml maternal blood sample as early as 9 gestational weeks
Accurate	Proven >99% sensitivity based on a test of more than 100, 000 pregnancies
Fast & Convenient	From sample to report: fast as 16.5 hours Simplified operation: Automated and localized data analysis and report
Flexibility	Compatible with low,medium and high throughput sequencing platforms Offering flexible options for both manual and automated workflows

NIPT Basic	NIPT Standard	NIPT Plus
▸ Trisomy 21，18，13	▸ Trisomy 21，18，13	▸ Trisomy 21，18，13
▸ Sex identification, fetal fraction estimation	▸ 6 Sex Chromosome Aneuploidies (SCAs) (XO/XXX/XXY/XYY/XO+XY/XXX+XY)	▸ 6 Sex Chromosome Aneuploidies (SCAs) (XO/XXX/XXY/XYY/XO+XY/XXX+XY)
	▸ Other 19 autosomal Aneuploidies	▸ Other 19 autosomal Aneuploidies
	▸ Sex identification, fetal fraction estimation	▸ 60 Microdeletion/duplications syndromes
		▸ Sex identification, fetal fraction estimation

For twin pregnancies, NIPT Basic is applicable, whereas the Standard and Plus versions are not recommended for use.

Parameter	NIPT Basic	NIPT Standard	NIPT Plus
Sample Volume	10 mL of a single tube of maternal blood		
Library preparation	PCR		
Method	Low-pass whole genome sequencing		
Number of samples per run (1 Positive Control +1 Negative Control included)	1 FCM: 24 1 FCH: 48 1 FCP: 96	1 FCM: 16 1 FCH: 32 1 FCP: 64	1 FCM: 12 1 FCH: 24 1 FCP: 48
Read length	SE 75		
Average Unique Reads / sample	⩾3.5 M	⩾5 M	⩾7 M
Report generation	Local analysis and report system		

	Sample Collection, Information Registration, and Isolation	DNA Extraction	Library Prepraration, QC, and Pooling	Loading	Sequencing	Analysis and Report
Automated workflow	G Tube	Genoscout EM	MrLH-96			AIRS
						
Total 16.5/17/19.5 hr	2 h	2 h	6 h	0.5 h	4.5/5/7.5 h	1.5 h

Ordering Information

PN	Sequencer
SQ00020	FASTASeq 300 Sequencing System Set
PN	**Reagents**
S000447	FASTASeq 300 Sequencing Kit V3.0 (FCM-D SE075-D)
S000448	FASTASeq 300 Sequencing Kit V3.0 (FCM 150cycles)
S000449	FASTASeq 300 Sequencing Kit V3.0 (FCM 300cycles)
S000450	FASTASeq 300 Sequencing Kit V3.0 (FCH-D SE075-D)
S000451	FASTASeq 300 Sequencing Kit V3.0 (FCH 150cycles)
S000452	FASTASeq 300 Sequencing Kit V3.0 (FCH 300cycles)
S000453	FASTASeq 300 Sequencing Kit V3.0 (FCP-D SE075-D)
S000454	FASTASeq 300 Sequencing Kit V3.0 (FCP 150cycles)
S000455	FASTASeq 300 Sequencing Kit V3.0 (FCP 300cycles)
S000290	FASTASeq 300 Sequencing Kit V2.0 (FCL-D SE100-D)
S000406	FASTASeq 300 Sequencing Kit V2.0 (FCX 400cycles)
S000277	FASTASeq 300 Sequencing Kit V2.0 (FCX 600cycles)

System Specification

Dimensions (W × D × H)	684 mm × 644 mm × 615 mm
Net Weight	about 145 kg
Power	2000 VA
Power Requirements	100-240 V~, 50/60 Hz
Operating Environment	Temperature: 19°C-25°C Realvtive humidity: 20%-80% (non-condensing) Altitude：below 3000 meter
Computer Configuration	CPU: Intel Xeon Silver 4216 Memory: 64 G Hard disk1：480 GB Hard disk2：3.84 TB Operating system：Microsoft Windows 10 ×64

Note: This document is based on company data of October, 2025, and is provided for reference only.
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