



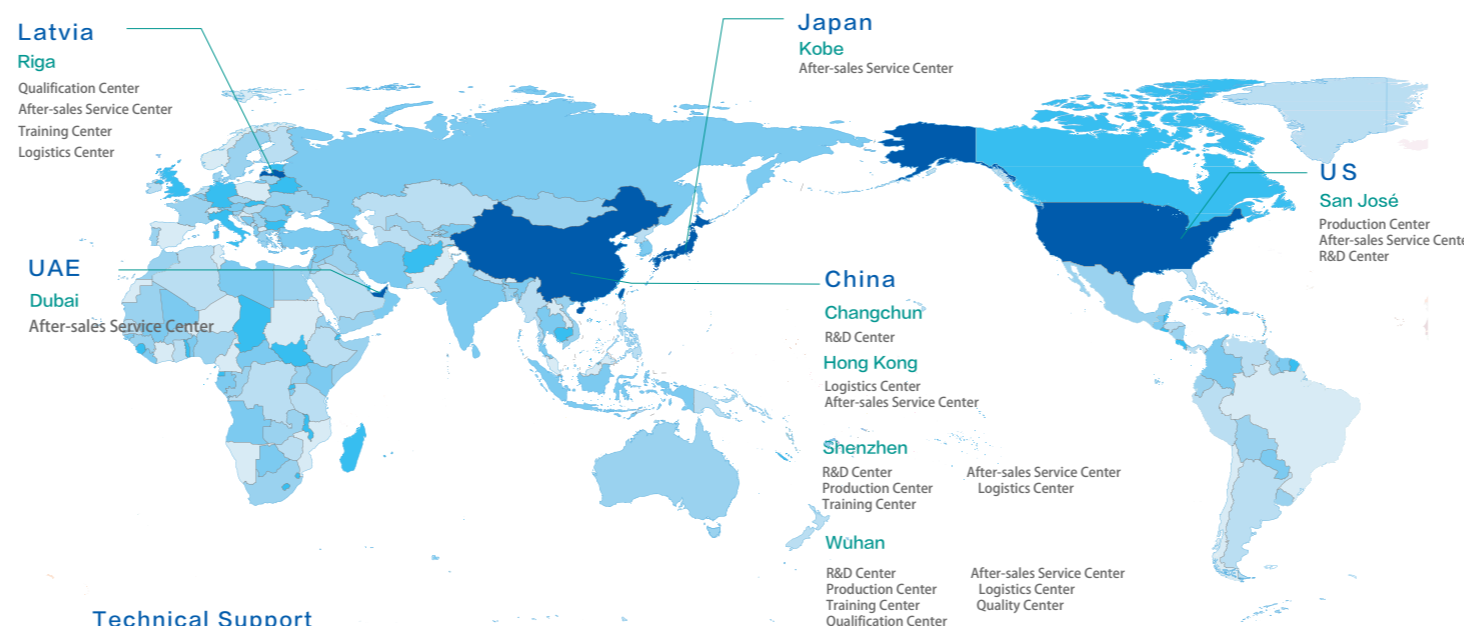
MGI focuses on providing laboratory solutions with innovative concepts, it brings users a more convenient and more efficient experience in research and clinic settings. The GPMCC Modular Laboratory is a new design concept to meet the increasingly diversified needs. With mix & match of standardized partitioning of multiple different functions, it integrates comprehensive and extensive experimental scenarios, adapted to a variety of operating environment. With this leading concept, multiple modular laboratory projects are launched, including mobile healthcare vehicles, container laboratories and offshore experimental vessels.

Hardware Parameters

Model*	Model	Intended Market
	DNBSEQ-G400	IVD
	DNBSEQ-G400RS	RUO
	DNBSEQ-G400RS FAST	RUO
Dimensions	Length: 1086 mm, Width: 756 mm, Height: 710 mm	
Net Weight	200 kg	
Power	Type	100~240V, 50/60Hz
	Rated Power	1200VA
Operating Environment Requirements**	Temperature	19 ~ 25°C
	Relative Humidity	20 %RH~80 %RH, non-condensing
	Atmospheric Pressure	70-106 kPa
	Waterproof Rating	IPX0
	CPU	Intel Xeon E5 10Core×2 2.2GHz
Control Computer Configurations***	Internal Storage	256GB RAM
	HDD	16TB
	SSD	480G
	Operating System	Windows 10 Enterprise

* Only for model classification
 ** For indoor use only ; The Flow Cells can be stored and transported at room temperature. No liquid medium is needed
 *** Supporting the computer's configurations and system updates

MGI Global Presence



Technical Support

The technical support team has a complete global coverage including technical services centers and multiple locations in major international regions to maximize customer satisfaction.

- Multiple international locations to provide timely and effective customer services , include training, after-sales service, and general enquiries;
- Spare part centers in Shenzhen, Wuhan, Qingdao, Tianjin, Hong Kong (China); Brisbane (Australia); and Riga (Latvia), to ensure sufficient supply of parts for machine maintenance;
- A fully-functional call centre is set up in the headquarters in Shenzhen, China. Free Hotline (+86) 4000-966-988(9AM-12PM,1PM-6PM , Beijing time , workdays)

After-Sales Services

Please be advised to communicate in advance for all international regional orders prior to the proposal commitment, which leaves time to set up service capability in Europe, Asia Pacific and North America.

- We offer free installation and installation validation services, including all the reagents required for delivering such services;
- Within 12 months upon installation or 15 months upon delivery (whichever comes first), all repair costs in relation to manufacturing flaws and malfunctions are covered by the warranty . Under warranty MGI is responsible for the related labor , parts and travel costs;
- The warranty includes one preventative maintenance;
- Outside the warranty, multiple extended warranty plans packages are also available. please reach your local MGI representative.

DNBSEQ-G50	DNBSEQ-G400RS FAST	DNBSEQ-G400	DNBSEQ-T7
DNBSEQ-G50 Integrated solution for small scale genome sequencing.	DNBSEQ-G400RS FAST Small and medium scale genome sequencing, simple operation and quick results.	DNBSEQ-G400 A core platform for large and medium scale genome sequencing, flexible and stable.	DNBSEQ-T7 A ultra-high throughput sequencer in the world, and the best choice for large scale genome sequencing.

MGI Tech Co., Ltd
 Address : Building11, Beishan Industrial Zone, Yantian District, Shenzhen, CHINA 518083
 Email: MGI-service@genomics.cn
 Website: en.mgitech.cn
 Tel: 4000-966-988
 Revision: 2019.9

Copyright Disclaimer: The copyright of this brochure is solely owned by MGI Tech Co. Ltd.. The information included in this brochure or part of, including but not limited to interior design, cover design and icons, is strictly forbidden to be reproduced or transmitted in any form, by any means (e.g. electronic, photocopying, recording, translating or otherwise) without the prior written permission by MGI Tech Co., Ltd.. All the trademarks or icons in the brochure are the intellectual property of MGI Tech Co., Ltd. and their respective producers.



Wechat

Genetic Sequencer
DNBSEQ-G400 Series
 Versatility to satisfy multiple needs

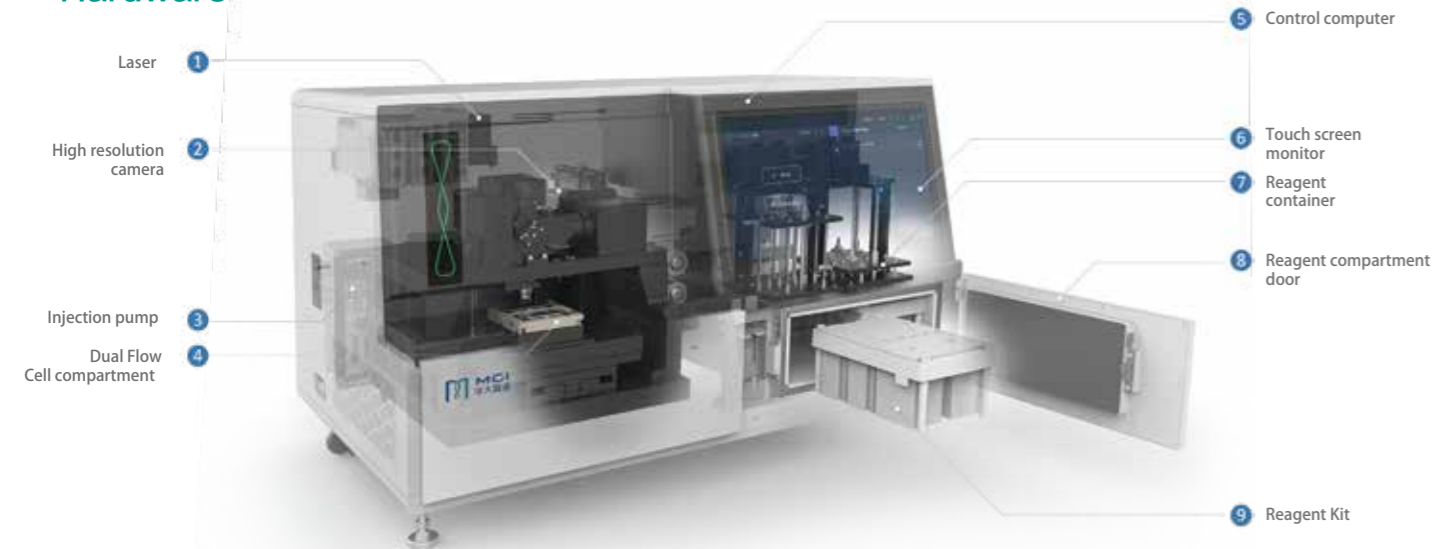


75~1440GB per run	PE150 sequencing at full capacity in only 38 hours
Supports sequencing and data analysis in a wide range of areas including basic research, clinical research, forensics and agriculture	Supports a range of read lengths, including SE50, SE100, SE400, PE100, PE150, PE200

Introduction

DNBSEQ-G400 series include DNBSEQ-G400 and DNBSEQ-G400RS FAST. This series utilizes an innovative Flow Cell system which can support various sequencing modes, and an optimized optical and biochemical system that enables the whole sequencing process to be completed within a short period of time, offering the user a simplified and streamlined sequencing experience.

Hardware



DNBSEQ-G400 Series Specifications		
Model	DNBSEQ-G400RS FAST	DNBSEQ-G400
No. of Flow Cell per run	2	2
Type of Flow Cell	FCS	FCS, FCL
No. of lanes/ Flow Cell	2	2, 4
Max reads/ Flow Cell *	550M	550M, 1500M-1800M
Read lengths	SE100, PE100, PE150	SE100, PE100, PE150, SE50, SE100, SE400, PE100, PE150, PE200

* The maximum number of effective reads are based on the sequencing of an internal standard library. Actual output may vary depending on sample type and library preparation method.

DNBSEQ-G400 Series Performance Parameters			
Read Lengths	Data Output	Data Quality Q30 *	Run Time **
SE50-FCL	75-90G	>85 %	~16h
SE100-FCL	150-180G	>85 %	~28h
SE400-FCL	600-720G	>70 %	~109h
PE100-FCL	300-360G	>85 %	~54h
PE150-FCL	450-540G	>75 %	~78h
PE200-FCL	600-720G	TBD	TBD
SE100-FCS	55G	>85 %	12-14h
PE100-FCS	110G	>85 %	~26h
PE150-FCS	165G	>75 %	~38h

* The percentage of base above Q30 is the average of an internal standard library over the entire run. The actual performance is affected by factors such as sample type, library quality, and insert fragment length.

** Run time was calculated based on Dual-Flow Cell mode, and includes sample loading, sequencing, base calling and data processing.

DNBSEQ-G400

FLEXIBLE
POWERFUL

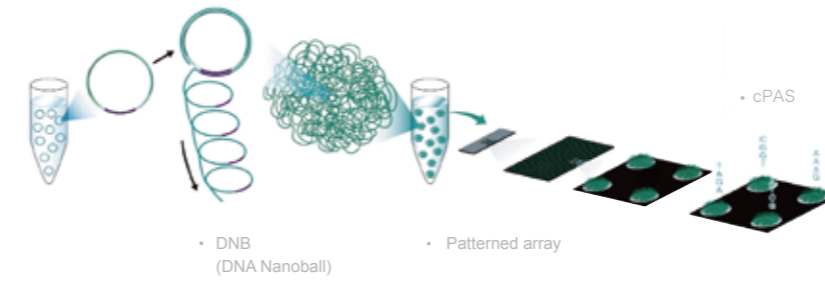


DNBSEQ-G400RS FAST

SWIFT
FOCUSED



MGI'S PROPRIETARY DNBSEQ™ TECHNOLOGY



INCREASED ACCURACY

No PCR amplification required. Our unique Rolling Circle Replication (RCR) technology employed in DNBSEQ™ library construction eliminates errors associated with PCR. Only the original template DNA is used to generate copies and therefore amplification errors do not accumulate, resulting in greater accuracy for detection of significant mutations such as Indels and SNPs.

DECREASED DUPLICATES

Optimized Patterned Array ensures that only one single DNB is attached at each spot, which results in greater saturation of DNB on the Flow Cell with unprecedented uniformity. This enables an industry-leading detection capability and an average WGS duplicate rate below 3%.

REDUCED INDEX HOPPING

MGI platform's unique library preparation and RCR amplification results much in lower index hopping rates compared with other platforms, at a rate of 0.0001%~0.0004%.

Whole Genome Sequencing (WGS)

- Sample: Human Cell Line NA12878
- Kit: MGIEasy Universal DNA Library Prep Set
- Sequencing: High-throughput Sequencing Set (PE150)
- Data Analysis: MegaBOLT+GATK

Sample	PE150-1	PE150-2
Mapping rate	99.54%	99.55%
Duplicate rate	2.19%	2.24%
Average sequencing depth	31.05	31.02
Coverage	98.99%	98.99%
Coverage at least 4X	98.44%	98.44%
Coverage at least 10X	97.45%	97.44%
Coverage at least 20X	92.69%	92.72%
SNP_Precision	99.50%	99.51%
SNP_Sensitivity	99.68%	99.67%
Indel_Precision	94.47%	94.22%
Indel_Sensitivity	96.09%	96.06%

Whole Exome Sequencing (WES)

- Sample: gDNA, FFPE, Frozen Tissue
- Kit: MGIEasy Exome Universal Library Prep Set Commercial Capture Probe
- Sequencing: High-throughput Sequencing Set (PE150)

Sample Type	gDNA	FFPE	Frozen
Q20_clean	96.56%	96.05%	96.56%
Q30_clean	88.71%	87.81%	88.79%
GC_clean	50.65%	53.85%	50.32%
Mapping_Rate	99.26%	98.88%	99.40%
Duplication_Rate	18.02%	20.36%	22.21%
Capture_Rate_on_Reads	72.98%	73.95%	74.12%
Average_depth(rmdup)	1100.61	1012.5	1100.78
Coverage(>=1X)	99.78%	99.99%	99.99%
Coverage(>=4X)	99.75%	99.96%	99.97%
Coverage(>=10X)	99.73%	99.86%	99.95%
Coverage(>=100X)	99.30%	89.90%	99.49%
Uniformity(>0.2)	98%	88.90%	98.14%

- Sample: Human Cell Line NA12878
- Kit: MGIEasy PCR-Free DNA Library Prep Set
- Sequencing: High-throughput Sequencing Set (PE150)
- Data Analysis: MegaBOLT+GATK

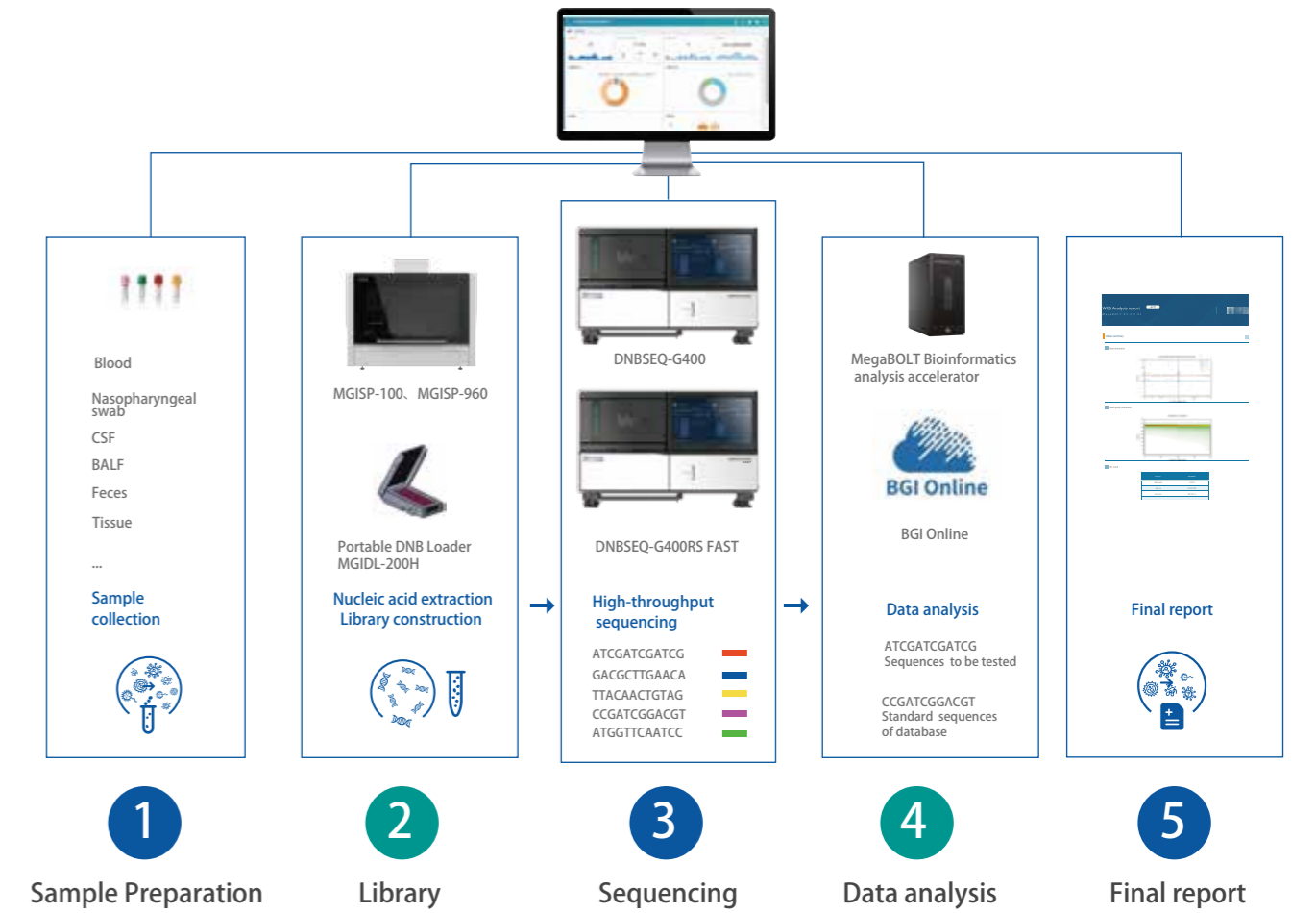
Sample	PE150-1	PE150-2
Mapping rate	99.15%	99.31%
Duplicate rate	0.97%	0.89%
Average sequencing depth	30.57	30.68
Coverage	99.18%	99.17%
Coverage at least 4X	99.02%	99%
Coverage at least 10X	98.7%	98.65%
Coverage at least 20X	94.17%	93.95%
SNP_Precision	99.95%	99.94%
SNP_Sensitivity	99.44%	99.45%
Indel_Precision	99.11%	99.1%
Indel_Sensitivity	98.26%	98.17%

Targeted Sequencing

- Sample: MGI Standard Sample, FFPE and cDNA
- Kit: Customer self-developed kit
- Sequencing: High-throughput Rapid Sequencing Set (PE150)

Category	MGI Standard Sample	Customer Sample
Cycle Number	310	310
Total Reads (M) / Lane	350.77	330.27
Q30 (%)	90.44	90.33
Split Rate (%)	98.58	98.93
ESR (%)	87.74	82.32

DNBSEQ-G400 Series Total Solution



Graphical User Guide, simple and easy to operate

