

ZTRON Pro Appliance

Partner of High-throughput Sequencers All-in-one Genetic Data Platform

CE ISO13485 ISO27001 GDPR



DNBSEQ Max-Capacity Sequencing



Million-scale Lab Management



PB-level High Performance Genetic Data Storage



ZMART Application Market



High Performance

High Security

High Intelligence

High Cost-effectiveness

High Availability

Product image for reference only, please prevail in kind.

● Product Description

The ZTRON Pro Appliance (ZTRON Pro) is a data platform which is designed by MGI for the high-throughput sequencers. It integrates laboratory information management system (LIMS), bioinformatics accelerator and high-performance genetic data storage. ZTRON Pro can be used directly in the laboratory or in the traditional data centers. It can be deployed independently and scaled out easily. Safe and reliable, it complies with GDPR regulations and reduces IT maintenance costs.

ZTRON Pro is built in with cost-effective bioinformatics analysis accelerators, equipped with industry-leading parallel file system, automated analysis and task scheduling platform, and laboratory information management system (LIMS) to satisfy the max-capacity sequencing for million samples.

As partner of the high-throughput sequencer, ZTRON Pro provides the following key functions:

■ DNBSEQ Max-Capacity Sequencing

Continuous ultra-high throughput sequencing powered by Dual ZBOLT high performance engines

- High performance computing cluster
- Embedded GPU+FPGA accelerators
- Automated analysis, multi-task scheduling
- CPU+GPU+FPGA heterogeneous algorithms

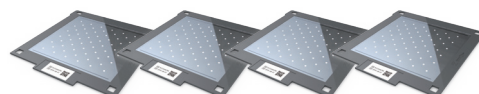
ZTRON Pro converts the CAL files generated by sequencers into FASTQ files (WFQ pipeline), or uses FASTQ files as input, after mapping and mutation detection, outputs BAM and VCF/gVCF files (WGS/WES pipeline).

ZTRON Pro integrates ZBOLT heterogeneous computing technology, which greatly improves the speed of WGS/WES secondary analysis.

WFQ speed for DNBSEQ-T7 PE150 (~2T data per flowcell)



~1 hour



~2 hours/RUN(4 flowcells)

WFQ speed for DNBSEQ-T10x4RS PE100 (~14T data per flowcell)



~6 hours



~24 hours/RUN(8 flowcells)

WGS analysis (~6 hours to process 12 samples)



Sequencing



Data processing

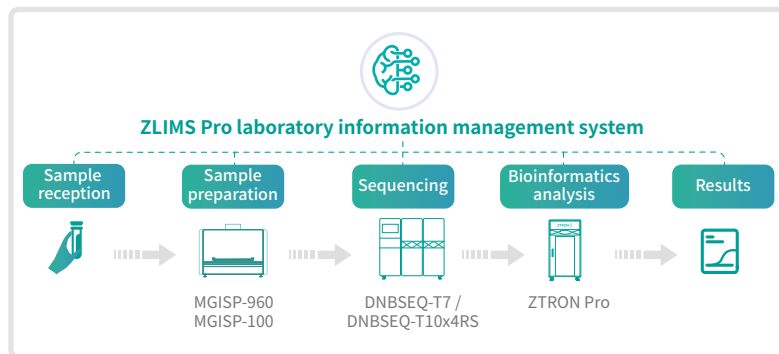


Results

■ Laboratory Information Management System

Supports millions of samples' sequencing
Automated sample lifecycle management

- Full life cycle traceability of samples
- Abundant work dashboard, intuitively grasp the production situation
- Remote monitoring and early warning of equipment status
- Data quality monitoring in sequencing process
- Compatible with multiple bioinformatics pipelines

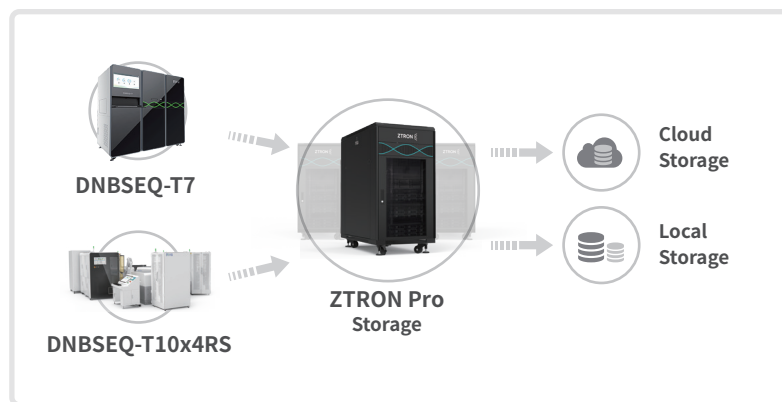


■ PB-level high performance genetic data storage

High-density, large-capacity, parallel file system

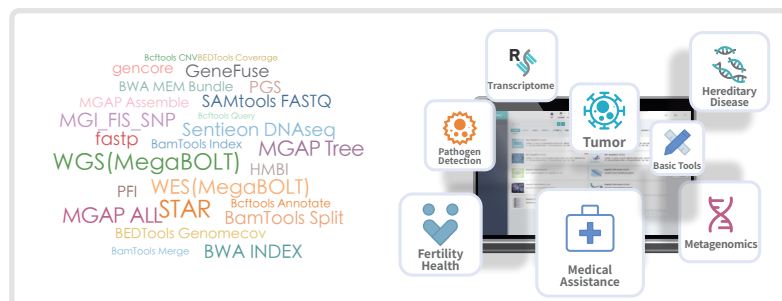
Full life cycle genetic data management

- 500TB or 1PB available space for each, scale out to 100PB
- Aggregated storage throughput is up to 7GB/s
- Automatic data management (local storage or cloud)
- No single point of failure, high available design
- Optimized storage for genetic data

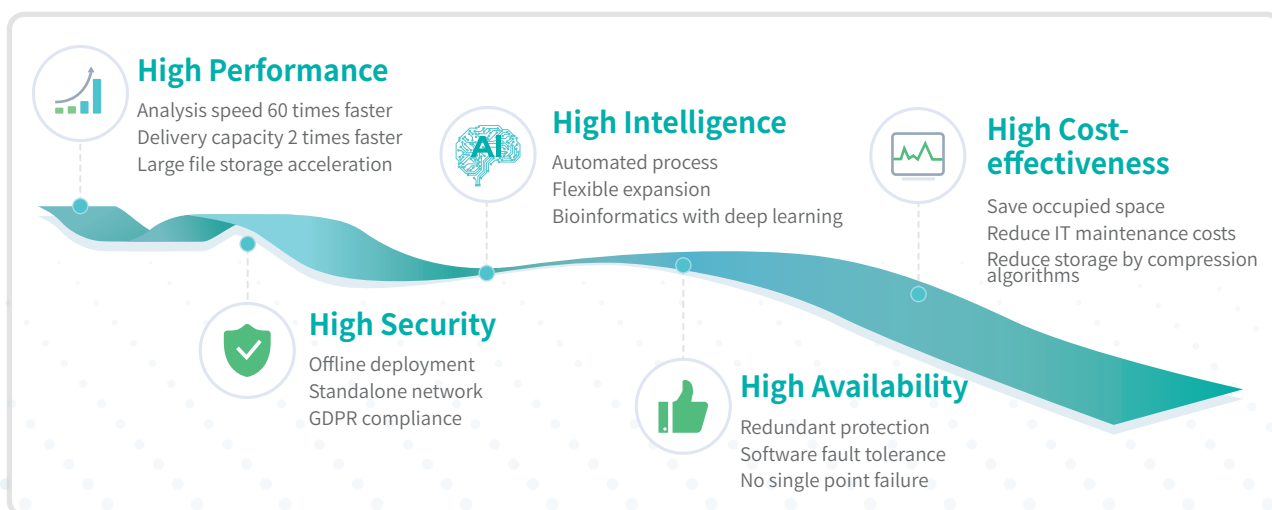


■ Application market

- **100+** tools and applications
- Open-source applications, MGI's self-developed algorithms and pipelines
- Customized pipelines, flexible configurations



● Product Highlights



● Technical Specifications

	MGI-ZTRON-PRO-T500	MGI-ZTRON-PRO-P1
Storage	<ul style="list-style-type: none"> • Single thread read speed \geq 1.5 GB/s • Aggerated bandwidth \geq 4GB/s • Available space \geq 500TB 	<ul style="list-style-type: none"> • Single thread read speed \geq 2 GB/s • Aggerated bandwidth \geq 7 GB/s • Available space \geq 1000TB
Computing	<p>Two ZBOLT servers are included and each configuration is as follows:</p> <ul style="list-style-type: none"> • CPU:64 core CPU or above x 2 • RAM:512GB or above • System Disk:480GB SSD or above x 2 • High-speed Cache:2TB NVMe SSD or above x 2 • GPU:Nvidia Tesla T4 or above • FPGA:Bioinformatics analysis accelerator 	
Network	<p>Two stacked switches are included and each configuration is as follows:</p> <ul style="list-style-type: none"> • 10/25G optical port x 18, 40/100GE optical port x 4 • 10/100/1000M RJ45 port • 10G SR Module x 5 • 1000BASE-T x 5 	
Software	<ul style="list-style-type: none"> • ZLIMS Pro system • 1Pbp WGS/WES basic analysis license (support 10,000 30x WGS human samples) • WFQ pipeline, WGS and WES pipeline 	
Other	<ul style="list-style-type: none"> • 22U cabinet x 1, 1200mm(length)* 600mm(width)* 1200mm(depth) • PDU x 2, use 32A industrial plug (32A 3P 230V) 	

● Purchasing Information

Part Number	Product Model	Spec
900-000444-00	MGI-ZTRON-PRO-T500	Set, RUO
900-000446-00	MGI-ZTRON-PRO-P1	Set, RUO

