

# Salus EVO Genetic Sequencer



## Salus EVO Platform

Salus Biomed is committed to providing a cutting-edge next-generation sequencing (NGS) platform that enhances research and clinical applications. The Salus EVO sequencer, engineered for data-intensive tasks, achieves an optimal balance of speed and throughput. Its advanced optics, rapid chemistry systems, high-density chip design, and streamlined workflow ensure exceptional throughput, data quality, user experience, and cost-efficiency to meet diverse needs.



CE-IVDR

## Key Features

A state-of-the-art sequencer featuring major upgrades in core technologies, specifically engineered for diverse data-intensive applications.

1500 M - 6000 M reads / run  
Throughput up to

**2000 Gb per run**

Run Time

**8 hr - 24 hr**

Read length

**SE 50 - PE 150**

High data quality

**Raw Q30 ≥ 85%**

## Specifications

Chip Type	Lanes	Read Length	1 x Data / Run	2 x Data / Run	Time	Q30
1500 M	4	SE 50	75 Gb	150 Gb	8 hr	≥ 90%
		PE 100	300 Gb	600 Gb	15 hr	≥ 85%
		PE 150	450 Gb	900 Gb	21 hr	≥ 85%
3000 M*	4	PE 100	600 Gb	1200 Gb	17 hr	≥ 85%
		PE 150	1000 Gb	2000 Gb	24 hr	≥ 85%

\*The sequencing time is for dual index (8+8);

\*The data output is from a single chip; Salus EVO can run two chips simultaneously;

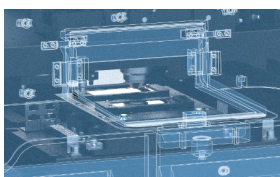
\*The sequencing time mentioned above is the theoretical sequencing time for a single chip;

\*The 3000 M Chips are expected to be shipped in the Q4 of 2024.

Application	1 x 1500 M (Samples / Run)	2 x 1500 M (Samples / Run)	1 x 3000 M (Samples / Run)	1500 M + 3000 M (Samples / Run)	2 x 3000 M (Samples / Run)
WES (15 Gb / Sample)	20 / 30	40 / 60	40 / 60	60 / 90	80 / 120
Large Panel (35 Gb / Sample)	8 / 12	16 / 24	16 / 24	24 / 36	32 / 48
WGS (100 Gb / Sample)	3 / 5	6 / 10	6 / 10	9 / 15	12 / 20
WGBS (100 Gb / Sample)	3 / 5	6 / 10	6 / 10	9 / 15	12 / 20
Single Cell (100 Gb / Sample)	3 / 5	6 / 10	6 / 10	9 / 15	12 / 20
Spatial Transcriptome (200 Gb / Sample)	1 / 2	2 / 4	2 / 4	3 / 6	4 / 8

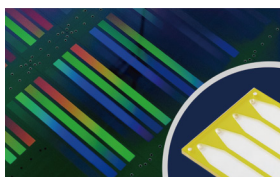
## Tech Innovations

### R&D capabilities



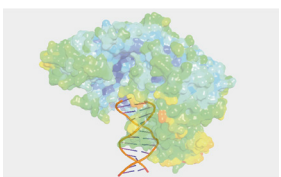
#### New Optical System

100% larger field of view and 50% less imaging time compared with commercial lenses



#### New Chips

Robustness and better reaction efficiency



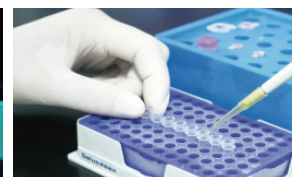
#### New Enzymes

Read length up to PE 300 with better quality



#### New Fluorescent Dye

Patented synthetic dyes to optimize imaging performance



#### New Chemistry

In fast mode, the SE 75 + 8 + 8 test for mNGS can be completed within 7 hours

# Data Demonstrations

## Whole Genome Sequencing WGS

Sample: NA12878 gDNA

Experiment: Salus EVO PE150, Whole Genome Sequencing (~30X) ;

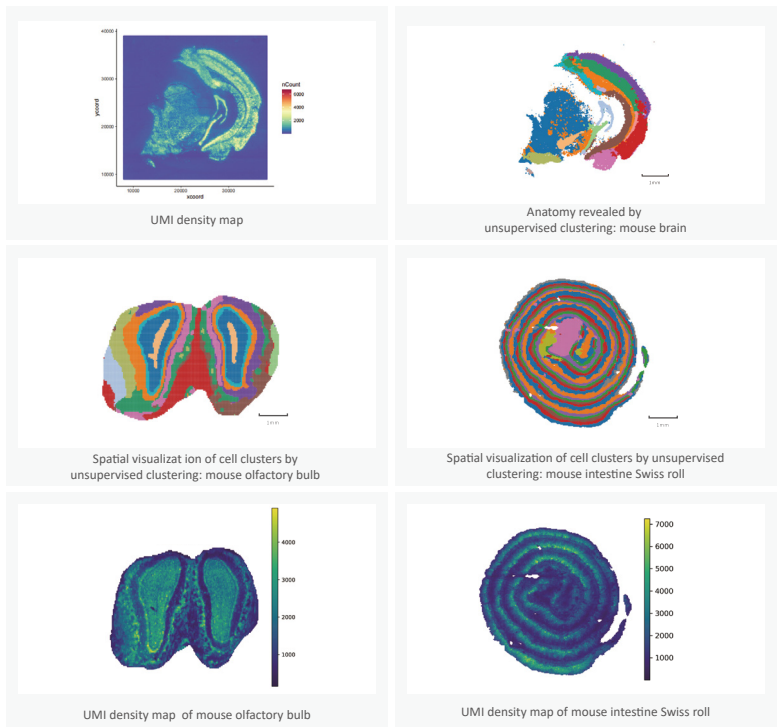
	Salus EVO_01 PE 100	Salus EVO_02 PE 150		Salus EVO_01 PE 100	Salus EVO_02 PE 150
Total_bases (G)	118.37	118.37	SNP_sensitivity (%)	99.52	99.54
Q30 (%)	95.26	96.03	SNP_precision (%)	99.57	99.5
GC (%)	39.63	40.00	SNP_F-Score (%)	99.55	99.52
Duplication_rate (%)	3.99	3.92	Indel_sensitivity (%)	93.33	93.39
Mapping_rate (%)	99.97	99.97	Indel_precision (%)	96.11	96.15
Mean_depth (X)	39.42	39.60	Indel_F-Score (%)	94.70	94.75
Coverage (%)	98.94	99.02			

## Spatial Transcriptomics

Sample: Mouse brain tissue sections

Experiment: Use the Salus STS reagent kit sets to collect cDNA for library preparation following tissue permeabilization (with ~1µm resolution), and perform PE150 sequencing with the Salus EVO

	Salus EVO
Total_reads (M)	253
Reads With Valid Barcodes (%)	74.77
Sequencing Saturation (%)	76.91
Q30 Bases in CB + UMI (%)	94.32
Q30 Bases in RNA Read (%)	88.74
Unique + Multiple Mapped to Genome (%)	92.75
Unique Mapped to Genome (%)	81.14
Unique + Multiple Mapped to Transcript (%)	59.10
Unique Mapped to Transcript (%)	59.10



## Massive Scale of Academic and Industrial Applications

Healthcare	Public Safety	Research	Breeding	Environment	Consumer
<ul style="list-style-type: none"> <li>• Early detection</li> <li>• Genetics</li> <li>• NIPT</li> <li>• PGT-A</li> </ul>	<ul style="list-style-type: none"> <li>• Disease control</li> <li>• Customs</li> <li>• FDA/NMPA/EMA</li> <li>• Forensics</li> </ul>	<ul style="list-style-type: none"> <li>• Animals</li> <li>• Plants</li> <li>• Biology</li> <li>• Medicine</li> </ul>	<ul style="list-style-type: none"> <li>• Agriculture</li> <li>• Livestocks</li> <li>• Aquaculture</li> </ul>	<ul style="list-style-type: none"> <li>• mNGS</li> <li>• eDNA</li> </ul>	<ul style="list-style-type: none"> <li>• Ancestry</li> <li>• Sports</li> <li>• Wellness</li> </ul>

# Salus EVO Instrument Specifications

Parameter	Specifications	
Dimensions	870 mm(W) × 995 mm(D) × 1616 mm(H)	
Weight	350 KG	
Power Requirements	Input voltage	200 V - 240 V~
	Frequency	50 / 60 Hz
	Power	1200 VA
	Fuse	T15AH250V
Instrument Configuration	Type	Capacitive
	Display	21.5 inch
	Resolution	1920 × 1080
Operating Environment	Temperature	19°C - 25°C
	Humidity	20% RH - 80% RH (No condensation)
	Altitude	≤ 2000m
Instrument Control Computer	CPU	2 x AMD7643 (Single 48 core / 96 - thread 2.3 - 3.6G / 225W )
	Storage	1 TB GB DDR4
	Memory	11 TB HDD * 3 ; 512 GB + 3.84 TB * 2 SSD
	OS	Windows 10 X64
Maximum Sound Pressure	75 dB(A)	

## After-sale service

Salus Biomed or its authorized partners offer comprehensive after-sales services, including installation, commissioning, repairs, maintenance, technical support, and any other necessary assistance.

Free installation, commissioning, reagents and consumables for performance validation are available. The company reserved all the rights for final explanation.

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## Sequencer Safety

The products comply with IEC6010-2010, IEC6010-2010 / AMD /:2016, IEC61010-2010: 2019, and IEC61010-2-081-2019.

Featuring a rounded shape design, Salus EVO is user-friendly for researchers and operators, significantly reducing the risk of scratching.

Crafted from flame-retardant and environmentally friendly materials, our instruments are designed for easy cleaning and sterilization with alcohol.

## Salus Biomed

### Empower and Cooperate

Salus Biomed was founded in Shenzhen, focusing on the development of high throughput genetic sequencing platform, and creating world's leading spatial omics research platform. The company is committed to the independent development of genomics and spatial genomics products, as well as translating research into clinical applications.



Sequencing Lab



Assembly Line



Enzyme Development



Office Area