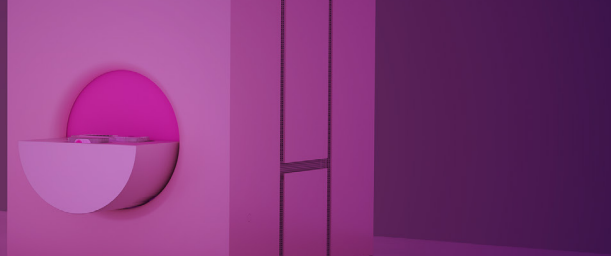
VEGA SYSTEM
SPECIFICATION SHEET



Push boundaries, not space

With the Vega™ system, the established power of HiFi sequencing—long reads, exceptional accuracy, and direct methylation detection—is now available for your lab. Adopting HiFi technology is made easy with streamlined end-to-end workflows from sample prep to analysis, plug-and-play system setup, and user-friendly interfaces like the web-based run manager SMRT® Link. Built on the same technologies that power the Revio® system, the Vega system gives you a more complete view of genomes, epigenomes, and transcriptomes from your benchtop.

System specifications

The Vega benchtop system delivers up to 60 Gb of HiFi data per run, methylation calling included, using a single SMRT® Cell. The onboard compute provides accurate base calling, HiFi read generation with DeepConsensus, methylation calling, barcode demultiplexing, and BAM file generation.

Library	Run time[1]	Q30+ bases	HiFi yield per Vega SMRT Cell[2]	Methylation detection
0.5–5 kb	12 hours	95%	6–8 million reads	5mC at CpG sites and 6mA for native DNA[3]
5–10 kb	24 hours	90%	25–50 Gb	
10–15 kb			50–60 Gb	
15–20 kb			50–60 Gb	

1. Run time refers to the data collection step.
2. HiFi yield is dependent on library quality and sequencing preparation procedures. Specified yield is based on high-quality samples prepared following best practices.
3. The 6mA caller is designed to detect methylation in the context of the Fiber-seq chromatin assay.

Key applications and sample throughput

HiFi reads turn questions into answers by offering accurate detection of variants with high precision and recall, full-length isoform discovery, and focused insights with targeted sequencing. Key applications include:

Library	Application	Expected coverage[4]	Samples per Vega SMRT Cell	Samples per year[5]
0.5–5 kb	Amplicon	50×	>1,000	200,000
5–10 kb	Microbial genome	30×	384	75,000
5–10 kb	PureTarget™ repeat expansion panel	200×	48	9,600
15–20 kb	Transcriptome with Kinnex™ full-length RNA kit	10 million reads	3	600
15–20 kb	Human genome	20×	1	200
15–20 kb	Human methylation profiling	5×	4	800

4. Expected coverages are estimates.
5. Annual throughput is estimated and based on 200 Vega SMRT Cells.

Get a more complete view of biology with HiFi reads

Comprehensive variant calling with phasing + 5mC

Access high accuracy for all variant types — SNVs, indels, structural variants, tandem repeat expansions, and methylation — including in challenging regions.

Full-length RNA sequencing

Characterize full-length isoforms, complex alternative splicing events, and fusion transcripts.

Targeted sequencing to study genes

Focus the power of HiFi variant calling by enriching for regions of interest using PureTarget™, hybrid capture or amplification.

Microbial genomics

Characterize microbiomes and metagenomes to gain a better understanding of microbial communities.

PacBio

Instrument specifications

Operating environment	
Temperature	19–25°C (66–77°F)
Humidity	20–80% relative humidity, non-condensing
Ventilation	4,250 BTU/hr (1,250 W)
Altitude	Below 2,250 m (7,380 ft)
Air quality	Pollution degree 2, indoor use only
Noise output	<70 dBA
Dimensions	
W × D × H	55.7 cm (21.9 in) × 69.5 cm (27.4 in) × 76.8 cm (30.2 in)
Weight	125 kg (276 lb)
Crated W × D × H	93.7 cm (36.9 in) × 79.7 cm (31.4 in) × 126.4 cm (49.8 in)
Crated weight	216 kg (476 lb)
Electrical power	
Power requirements	100–120 VAC at 50–60 Hz
Compute	
Network connection	1 GbE
Instrument operating system	Rocky Linux 9.4
Output file format	hifi_reads.bam; ~30 GB each, up to 6 TB per year

Ordering information

Part number	Product	List price (USD)
103-525-500	Vega system	$169,000
103-517-600	Vega polymerase kit (8 rxn)	$640
103-274-300	Vega sequencing plate	$200
103-406-700	Vega SMRT Cell tray	$820

Shrink your costs, grow your ambition

Whether you are purchasing your first PacBio sequencer or scaling up your fleet, contact a sales rep to see what Vega can bring to your lab. With a reagent commitment, Vega Access offers an especially affordable purchasing option.

	Vega price	Vega Access
Instrument price†	$169,000	$79,000
Reagent* price per run	$1,100	$2,125 for 96 runs $1,100 thereafter

† Vega system (103-525-500)
* Reagents include one reaction of Vega polymerase kit (103-517-600), Vega sequencing plate (103-274-300), and Vega SMRT Cell tray (103-406-700).

Learn about Vega: pacb.com/vega

Connect with us: pacb.com/contact-us

102-326-625 REV04 08AUG2025