SMRT Link
Explore and Analyze Your Data With Confidence

Unlock the power of PacBio® Single Molecule, Real-Time (SMRT®) Sequencing using our portfolio of software tools designed to set up and monitor sequencing runs, review performance metrics, analyze, visualize, and annotate your sequencing data.

SMRT® Link: A Web-based End-to-End Workflow Manager

- Supports all software needs within the Sequel® System portfolio of instruments, from sample setup to analysis results, using a single interface

- Provides fast, easy, and powerful analysis of SMRT Sequencing data across a wide range of applications

- Available on local compute and cloud environment

- Freely available for download at **pacb.com/software-downloads**

Scientist	Bioinformatician	Integration Developer
Intuitive, easy-to-use graphical interface enables streamlined analysis workflows	Command-line interface provides flexible analysis and optimization options for most efficient data processing	Comprehensive set of APIs facilitates easy integration with LIMS and other applications

SMRT Link Modules

SMRT Link includes five easy-to-use modules to guide you from setting up samples for sequencing through data analysis.

Sample Setup

- Generate sample preparation protocols using step-by-step guidelines
- Save and retrieve sample calculations

Run Design

- Design runs for multiple instruments across any of the Sequel System instruments
- Save favorite run parameters for fast and easy setup

Run QC

- Monitor run status in real time
- Obtain key run metrics, including read length and quality, throughput, and loading efficiency

Data Management

- Organize data into data sets and projects, and generate reports with key QC metrics
- Manage access permissions to projects for SMRT Link users
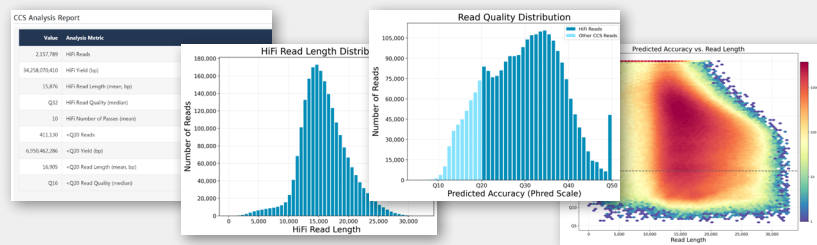
Data visualizations for rapid interpretation
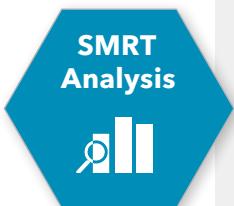
SMRT Analysis

- Analyze sequencing data generated by one or more sequencing runs
- Use the suite of analysis applications to obtain easy-to-interpret results
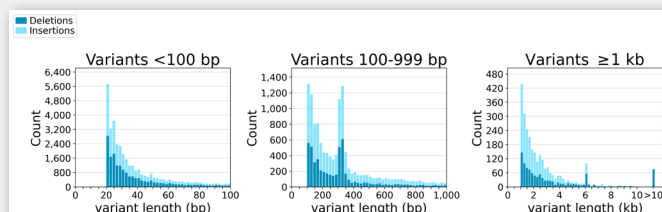
SMRT® Analysis interface showing results of a Structural Variant Calling analysis

SMRT Analysis Software

SMRT Analysis in SMRT Link includes a comprehensive set of applications for *de novo* assembly, variant identification, RNA analysis, and detection of epigenetic modifications.

Application	Analysis Applications	Features
WHOLE GENOME SEQUENCING	**Genome Assembly**	Generates high-quality *de novo* assemblies using HiFi reads
	Microbial Assembly	Generates *de novo* assemblies of small prokaryotic genomes 1.9 Mb – 10 Mb and companion plasmids 2 kb – 220 kb
	Mapping	Aligns sequencing reads to a user-provided reference sequence
VARIANT DETECTION	**Structural Variant Calling**	Identifies indels and structural variants (default: ≥20 bp) in a sample or set of samples relative to a reference
RNA SEQUENCING	**Iso-Seq® Analysis**	Characterizes transcripts and splice variants (*de novo* or reference-based)
COMPLEX POPULATIONS	**Minor Variant Analysis**	Detects, quantifies, and phases minor single nucleotide substitution variants in complex populations
TARGETED SEQUENCING	**Amplicon Analysis**	Identifies phased consensus sequences from a heterogeneous pool of amplicons
EPIGENETICS	**Base Modification Analysis**	Detects common bacterial epigenetic modifications (6mA, 4mC) and optionally analyzes the methyltransferase recognition motifs
Additional Tools	**Circular Consensus Sequencing**	Generates HiFi reads (>Q20) by identifying consensus sequences for single DNA molecules
	Trim gDNA Amplification Adapters and Mark PCR Duplicates	Trims PCR Adapters from a HiFi Reads data set created using an ultra-low DNA sequencing library and removes duplicate reads
	Various utility applications	Demultiplex barcodes, convert BAM to FASTX, export reads

The Complete PacBio Analytical Portfolio

In addition to SMRT Link software, the PacBio analytical portfolio includes the PacBio DevNet of community-developed analytical tools and SMRT compatible products with software solutions from trusted partners.
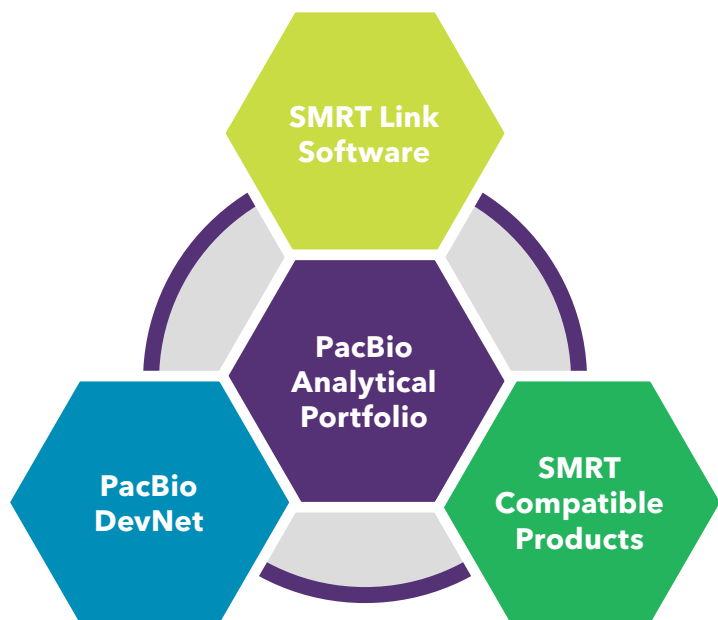
SMRT Link Software

Offers a complete suite of analysis applications to obtain easy-to-interpret results from SMRT Sequencing data.

PacBio DevNet

Provides scientists with easy access to open-source community-developed analysis tools for PacBio data, SMRT Sequencing datasets, and resources to help further your analysis and data interpretation.

SMRT Compatible Products

From compute infrastructure to tertiary analysis, these analytical partners offer a wide variety of solutions and services to complement our SMRT Analysis products.

"SMRT Link helped us set up a robust automated data analysis pipeline for clinical research, which is fully integrated in our bioinformatics infrastructure. The deep integration allows us to perform different kinds of analyses depending on the samples used and their expected outcomes. Use of the SMRT Link GUI allows for testing of settings before integration in the pipeline to ensure optimal performance."

— Kornelia Neveling, Ph.D., and Marcel Nelen, Ph.D., Human Genetics, Radboud University Medical Center

Join the SMRT Community

Access our software, suite of analysis tools, and support to get started on your path to discovery with SMRT Sequencing data.

Software	Analysis	Support
Download the latest version of SMRT Link	Learn more about analysis tools for SMRT Sequencing data	Get support from our world-class team
pacb.com/software-downloads	**pacb.com/analytical-software**	**pacb.com/support**