

# IrysSolve Compute™

## Standalone server for streamlined data analysis

Powered by Intel® Xeon Phi™

### Key Features

- Integrated Intel® Xeon Phi™ Architecture
- Optimized IrysSolve® Analysis Pipeline
- Intuitive Web-Based Interface
- Maximized Irys® System Throughput
- Affordable and Compact



### Overview

IrysSolve Compute™ solves the challenges associated with processing genomic data analysis by providing a cost effective, low maintenance, scalable compute solution on a stand-alone server. IrysSolve Compute™ is loaded with a specially optimized version of BioNano's *de novo* assembly and structural variation detection pipeline, IrysSolve®.

### Integrated Intel® Xeon Phi™ Architecture

IrysSolve Compute™ is a unified software and hardware ecosystem, powered by the Intel® Xeon Phi™ coprocessor and implemented on an open source Linux platform with up to 10 times the computational power of traditional CPU architectures.

### Optimized IrysSolve® Analysis Pipeline

IrysSolve®, a revolutionary analysis pipeline, is optimized on IrysSolve Compute™ to increase data processing capabilities providing access to a *de novo* assembly of a human dataset in under 24 hours.

### Intuitive Web-Based Interface

A simple web-based interface enables seamless integration into virtually any network setup.

### Maximized Irys® System Throughput

IrysSolve Compute™ provides the most efficient platform for keeping up with the vast amount of high-quality data generated by the Irys® System.

### Affordable and Compact

IrysSolve Compute™ provides cluster-like performance in an affordable, compact solution with the ability to reduce your hardware footprint and centralize genomic data analysis.

### Irys System



Irys Instrument



IrysView Software



IrysSolve  
Computational Solutions

### Learn More

For IrysSolve Compute™ ordering information, please contact [info@bionanogenomics.com](mailto:info@bionanogenomics.com) or visit [www.bionanogenomics.com](http://www.bionanogenomics.com).

# IrysSolve Compute™

Standalone server for streamlined data analysis

Powered by Intel® Xeon Phi™



## IrysSolve Compute™ Specifications

### Basic

2U Rackmount Form Factor

Intel® X540 Dual Port 10GBase-T

2000W Redundant Platinum High-efficiency Power Supply

Dimension (WxHxD): 17.2" (437 mm) x 3.5" (89 mm) x 31.0" (787 mm)

Gross Weight: 70 lbs (31.8 kg)

### Processor

2 x Intel® Xeon E5-2600 v3 2.50 GHz 12C / 24T

6 x Xeon Phi™ 3151P Co-Processors

### Memory

16 x 16 GB DDR4 2133 MHz 288-pin DIMM ECC

### Hard Drive

2 x 1.0TB SATA Seagate Constellation.2 Configured as RAID 1

### Ordering Information

Catalog Number:

IrysSolve Compute™  
(Xeon Phi™ 3151P)

NA: CR-001-01

EMEA: CR-001-02

APAC: CR-001-03

### Performance Comparison

	200x Arabidopsis	100x NA12878	(2) simultaneous 100x NA12878 assemblies
48 cores, 256 GB RAM	~24 hours	~7 days (162 hours)	~12.5 days (300 hours)
4 node cluster (32 cores, 256GB RAM)	~8 hours	~2.5 days (54 hours)	~4.5 days (108 hours)
IrysSolve Compute™	~3.5 hours	~24 hours	~48 hours

Intel, Xeon, and Intel Xeon Phi are trademarks of Intel Corporation in the U.S. and/or other countries.

### Learn More

For IrysSolve Compute™ ordering information, please contact [info@bionanogenomics.com](mailto:info@bionanogenomics.com) or visit [www.bionanogenomics.com](http://www.bionanogenomics.com).