



Stratys™ Specification Sheet

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CG-00079

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A

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Table of Contents

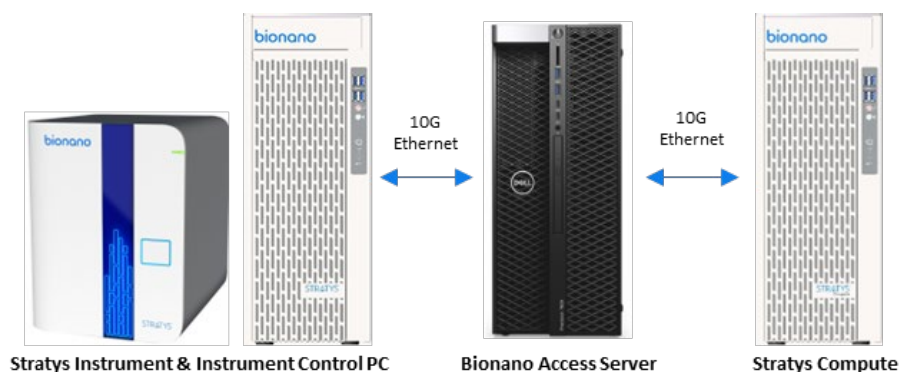
| | |
|--|-----------|
| Revision History | 3 |
| Introduction and Workflow | 4 |
| Features | 4 |
| Workflow | 4 |
| Instrument Labels with Definitions | 5 |
| Throughput Expectations | 6 |
| Technical Specifications | 7 |
| Stratys Instrument | 7 |
| Stratys Instrument Controller (included with instrument) | 7 |
| Bionano Access Server (included with instrument) | 7 |
| Stratys Compute (included with instrument bundle) | 8 |
| Safety | 8 |
| Regulatory | 9 |
| Technical Assistance | 11 |
| Legal Notice | 12 |
| Patents | 12 |
| Trademarks | 12 |

Revision History

| REVISION | NOTES |
|----------|-----------------|
| A | Initial release |

Introduction and Workflow

The Stratys™ System (Stratys™ Instrument with Instrument Controller, Bionano Access™ Server and Stratys™ Compute Server) provides rapid, high-throughput optical genome mapping for sensitive and accurate detection of genome-wide structural variation and an integrated software solution for the visualization, interpretation, and reporting of results with VIA™ software.

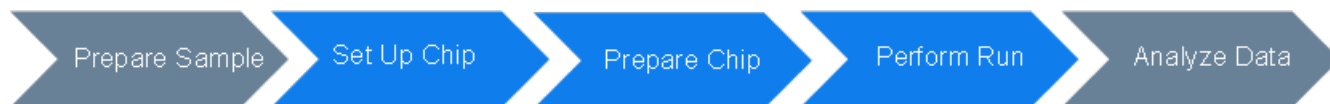


Features

- Intuitive loading workflow: The adaptive loading feature in the Instrument Control Software (ICS) ensures that the optimal conditions for DNA molecule loading are maintained throughout the scanning process. The initial hands-on-time is approximately five minutes per sample.
- Convenient and easy setup: Bionano Access allows users to set up chip runs, track and review run metrics, perform downstream analysis, and export and share data.
- Real-time quality control assessment: Bionano Access enables users to view real-time data and performance metrics from any internet browser with connection to the Access Server as the run progresses.
- Bionano Assure: Optional instrument health monitoring service that continuously inspects data quality and instrument performance. Additionally, this provides a streamlined diagnostic workflow for customers to interact with Bionano Support.

Workflow

To perform a run on the Stratys, use this workflow example as a guide:



Instrument Labels with Definitions

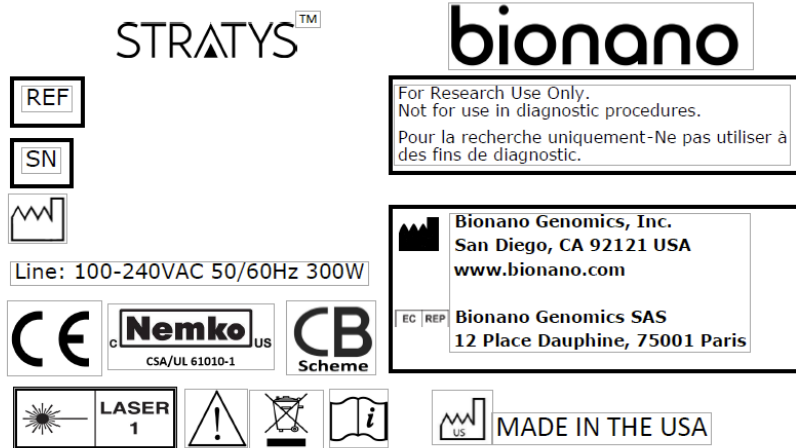

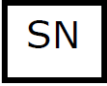


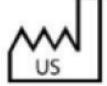


Figure 1. Labeling located on the back of the Stratys Instrument

Table 1. Definitions for the labeling located on the back of the Stratys Instrument

| | |
|---|------------------------|
|  | Catalogue number |
|  | Serial number |
|  | Date of manufacture |
|  | Manufacturer |
|  | Country of manufacture |

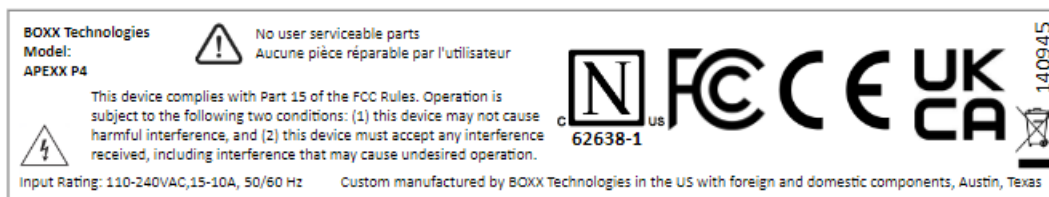


Figure 2. Labeling located on the back of the Stratys Instrument Control Software Computer

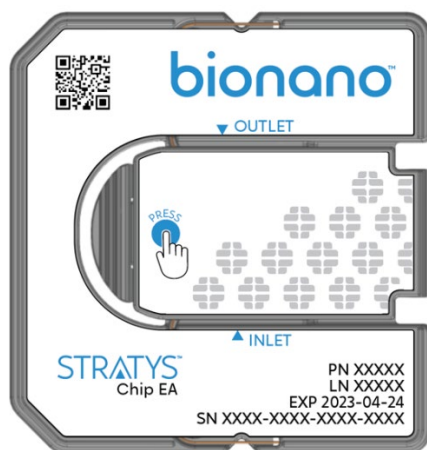


Figure 3. Labeling for the consumable chip

Throughput Expectations

| Stratys Performance | | | | |
|---|---|--|---|---|
| Target effective coverage ¹ | 100x | 200x | 400x | 1200x ² |
| Expected VAF for SV detection | ≥50% | ≥20 | ≥5 | Lower than 5% ⁴ |
| Stratys throughput per week ³ /samples | 24/7 operation: 260 40-hour operation: 120 | 24/7 operation: 168 40-hour operation: 60 | 24/7 operation: 96 40-hour operation: 60 | 24/7 operation: 30 40-hour operation: 24 |
| Imaging time (one batch of 12 chips) | 6-10 hrs. | 12-16 hrs. | 18-22 hrs. | 60-70 hrs. |

¹Target effective coverage based on 80% map rate.

²Requires Stratys™ Plus Chip, VAF: Variant Allele Fraction

³Maximum throughput on one Stratys system, assuming that enough samples are available to run at 100% capacity. Typical performance based on various human control samples run at Bionano.

⁴Refer to LIT-00017 Redefining Cell Characterization and QC for Genomic Integrity and Off-Target Monitoring and contact Bionano for more details.

Technical Specifications

Stratys Instrument

| Type | Requirements/Specifications |
|----------|---|
| Physical | <ul style="list-style-type: none"> • Height: 74 cm (29 in) • Width: 58 cm (23 in) • Depth: 74 cm (29 in) • Weight: 73kg (160lb) |
| Power | <ul style="list-style-type: none"> • 100-240 VAC at 50-60 Hertz • Power Consumption ≤ 300 Watts • 2m long, IEC 60320-C13 power cord |

Stratys Instrument Controller (included with instrument)

| Type | Requirements/Specifications |
|-------------|---|
| Accessories | <ul style="list-style-type: none"> • Monitor • Keyboard • Mouse |
| Space | <ul style="list-style-type: none"> • Height: 46 cm (18 in) • Width: 18 cm (7 in) • Depth: 56.4 cm (20.2 in) |
| Power | <ul style="list-style-type: none"> • 100-240 VAC at 50-60 Hertz • Power Consumption 1000 Watts • 2m long, IEC 60320-C19 power cord |
| Network | <ul style="list-style-type: none"> • 2 – 10 gigabit ethernet ports <p>Port 1 (required): connected to the Bionano Access Server</p> <p>Port 2 (recommended): connected to customer network to provide connectivity to the Saphyr Assure service via the internet</p> |

Bionano Access Server (included with instrument)

| Type | Requirements/Specifications |
|-------|--|
| Space | <ul style="list-style-type: none"> • Height: 46 cm (18 in) • Width: 18 cm (7 in) • Depth: 47 cm (18.5 in) |
| Power | <ul style="list-style-type: none"> • 100-240 VAC at 50-60 Hertz • Power Consumption ≤ 300 Watts |

- The server is shipped with a United States power cord. Users outside of the United States are required to supply a 2m long, country specific IEC 60320-C13 power cord (in some cases, the FSE may be able to provide the suitable power cord).

Network

- One port is connected to the Stratys Instrument controller at 10 GB
- LAN connection can be done at 1 GB

Stratys Compute (included with instrument bundle)

| Type | Requirements/Specifications |
|---------|---|
| Space | <ul style="list-style-type: none"> • Height: 46 cm (18 in) • Width: 18 cm (7 in) • Depth: 47 cm (18.5 in) |
| Power | <ul style="list-style-type: none"> • 100-240 VAC at 50-60hz • Power consumption 1200 watts • 2m long, IEC 60320-C19 power cord |
| Network | <ul style="list-style-type: none"> • Connected to the Bionano Access Server via 10 Gbps network port |

Safety



Class 1 laser device



Caution











Consult instructions for use



High voltage

Regulatory

| | |
|---|---|
|  | Special disposal required |
|  | CE mark |
|  | UKCA compliant |
|  | FCC compliant |
|  | Authorized representative in the European Community/ European Union |
|  | Conforms to UL STD 61010-1 for USA and Canada |
|  | Conforms to CB Scheme |
|  | Conforms to IEC 62638-1 for USA and Canada |

Environmental Considerations

| Element | Specification |
|-------------|--|
| Temperature | Maintain a lab temperature of 19°C (66°F) to 25°C (77°F). |
| Humidity | Maintain a noncondensing relative humidity between 20–80%. |
| Elevation | The instrument may only be operated at a location where the elevation is 2,000m (6,500 ft) or less above mean sea-level. |

| | |
|--------------------|--|
| Ventilation | Provide at least 5 cm (2 in) clearance behind the instrument to allow sufficient ventilation and access to instrument power connection. Overhead clearance required for installation and service is 93 cm (37 inch). |
| Air Quality | Operate the instrument in a Pollution Degree II environment or better. |

References

The following documentation is available for download from the [Bionano Support](#) page.

| Resource | Description |
|---|--|
| <i>Stratys System Safety Guide</i> (CG-00023) | Provides information about the instrument safety considerations. |
| <i>Stratys System User Guide</i> (CG-00041) | Provides an overview of instrument components and software, proper maintenance, and troubleshooting. |

Technical Assistance

For technical assistance, contact Bionano Technical Support.

You can retrieve documentation on Bionano products, SDS's, certificates of analysis, frequently asked questions, and other related documents from the Support website or by request through e-mail and telephone.

| TYPE | CONTACT |
|---------|---|
| Email | support@bionano.com |
| Phone | Hours of Operation: Monday through Friday, 9:00 a.m. to 5:00 p.m., PST US: +1 (858) 888-7663 Monday through Friday, 9:00 a.m. to 5:00 p.m., CET UK: +44 115 654 8660 France: +33 5 37 10 00 77 Belgium: +32 10 39 71 00 |
| Website | www.bionano.com/support |
| Address | Bionano, Inc. 9540 Towne Centre Drive, Suite 100 San Diego, CA 92121 |

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