

Ion GeneStudio S5 series

Speed and throughput flexibility across a broad range of NGS applications



| Chip type | Number of reads | Read length (output*) | Ion GeneStudio™ S5 System | Ion GeneStudio™ S5 Plus System | Ion GeneStudio™ S5 Prime System |
|---------------|-----------------|--------------------------------------|---|--------------------------------|---------------------------------|
| | | | Turnaround time (sequencing run** plus analysis time) | | |
| Ion 510™ Chip | 2–3 million | 200 bp (0.3–0.5 Gb) | 4.5 hr | 3 hr | 3 hr |
| | | 400 bp (0.6–1 Gb) | 10.5 hr | 5 hr | 5 hr |
| Ion 520™ Chip | 4–6 million | 200 bp (0.6–1 Gb) | 7.5 hr | 3.5 hr | 3 hr |
| | | 400 bp (1.2–2 Gb) | 12 hr | 5.5 hr | 5.5 hr |
| | 3–4 million | 600 bp (0.5–1.5 Gb) | 12 hr | 5.5 hr | 5.5 hr |
| Ion 530™ Chip | 15–20 million | 200 bp (3–4 Gb) | 10.5 hr | 5 hr | 4 hr |
| | | 400 bp (6–8 Gb) | 21.5 hr | 8 hr | 6.5 hr |
| | 9–12 million | 600 bp (1.5–4.5 Gb) | 21 hr | 8 hr | 7 hr |
| Ion 540™ Chip | 60–80 million | 200 bp (10–15 Gb) | 19 hr | 10 hr | 6.5 hr |
| | | 200 bp (20–30 Gb) 2 runs in 1 day | NA | 20 hr | 10 hr† |
| Ion 550™ Chip | 100–130 million | 200 bp (20–25 Gb) | NA | 11.5 hr | 8.5 hr |
| | | 200 bp (40–50 Gb) 2 runs in 1 day | NA | NA | 12 hr† |

* Expected output with >99% aligned or measured accuracy. Output dependent on read length and application.

** Sequencing run times are between 2.5 and 4 hr.

† Analysis of first run occurs concurrently with the second sequencing run.

| | Ion GeneStudio S5 System | Ion GeneStudio S5 Plus System | Ion GeneStudio S5 Prime System |
|--|--|--|--|
| Compatible chips | Ion 510, 520, 530, and 540 Chips | Ion 510, 520, 530, 540, and 550 Chips | |
| Dimensions (W x D x H) | 54.2 x 80.6 x 50.9 cm | | |
| Weight | 63.5 kg | | |
| Power | 100–240 VAC, 50/60 Hz, 6.5–14.5 A | 100–240 VAC, 50/60 Hz, 6.5–14.5 A | 100–240 VAC, 50/60 Hz, 6.5–14.5 A |
| Instrument clearance | Top = 30.5 cm (12.0 in.) Front = 30.5 cm (12.0 in.) Left = 10.0 cm (4.0 in.) Right = 30.5 cm (12.0 in.) Back = 30.5 cm (12.0 in.) | | |
| Working environment | <ul style="list-style-type: none"> Temperature: 20–30°C (68–86°F) Humidity: 40–60%, noncondensing Altitude: Up to 2,000 m (6,500 ft) above sea level Thermal output at typical power draw of 1,200 W: 4,094 BTU/hr | <ul style="list-style-type: none"> Temperature: 20–30°C (68–86°F) Humidity: 40–60%, noncondensing Altitude: Up to 2,000 m (6,500 ft) above sea level Thermal output at typical power draw of 1,200 W: 4,094 BTU/hr | <ul style="list-style-type: none"> Temperature: 20–30°C (68–86°F) Humidity: 40–80%, noncondensing Altitude: Up to 2,000 m (6,500 ft) above sea level Thermal output at typical power draw of 1,200 W: 4,094 BTU/hr (instrument) and 1100 W: 3,752 BTU/hr |
| Other connections | 1 GigE Ethernet; 2 x USB 2.0; RJ45-type connector | | |
| Server storage | ~12 TB | ~24 TB | ~25 TB |
| Server dimensions (W x D x H) and weight | NA | NA | 30.5 x 70.9 x 44.4 cm, 41.8 kg |
| Software | Alignment and variant calling with Torrent Suite Software; compatibility with laboratory information management systems as well as native integration with Ion Reporter™ Software (cloud and local server) | | |

Ordering information

| Product | Cat. No. |
|---|----------|
| Ion GeneStudio S5 series | |
| Ion GeneStudio S5 System | A38194 |
| Ion GeneStudio S5 Plus System | A38195 |
| Ion GeneStudio S5 Prime System | A38196 |
| Instruments for sample prep automation | |
| Ion Chef System | 4484177 |
| Ion OneTouch 2 System | 4474779 |

Find out more at thermofisher.com/genestudio