

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: 15–30°C (59–86°F) • Humidity: 10–80%, noncondensing • Altitude: Up to 2,500 m (8,200 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: 15–30°C (59–86°F) • Humidity: 10–80%, noncondensing • Altitude: Up to 2,500 m (8,200 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

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