

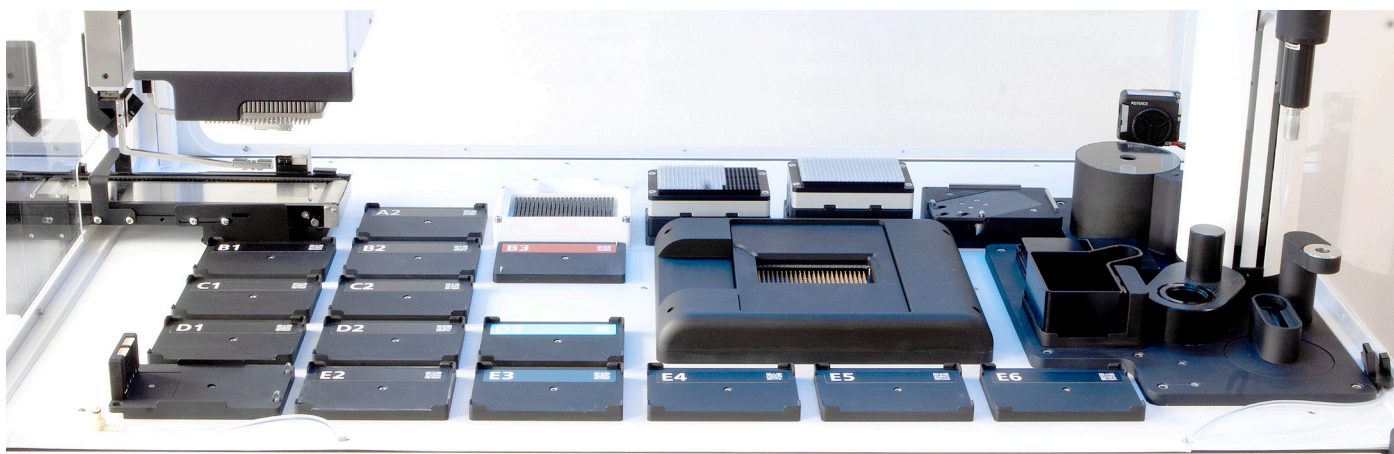
Technical Specifications:

Qube 384 - High Throughput Screen

Performance/features	Qube 384 Mk III		
Hardware modules	Automatic cell preparation, Onboard camera, Ionizer & barcode reader, Temperature control; heating/cooling at recording site		
Hardware modules (optional - can be retrofitted)	None	Automation package	Third-party integration
Unattended operation	Up to 4 hours	Up to 10 hours	∞
Target throughput per month	<100,000	<400,000	>400,000
Success rate (incl. pharmacology and quality filtering)	Up to 100%		
QChip and compound plate handling	Pre-loaded on Qube workplane	In the stacker with two towers	Third-party instrumentation
Just-in-time dilution of stock solution	√		
Resuspension of compound	√		
Compound plate preparation with liquid handler	√		
Barcode reader for full traceability of experiments	√		
Liquid handler tips	Disposable Washable onboard, water + optional solvent Automatic exchange at user-defined intervals		
Number of extracellular liquid additions	∞		
Liquid exchange rate	$\tau < 40$ ms		
Number of different intracellular solutions	24		
Automatic exchange of intracellular solution	√		
Stimulation mode	Voltage-gated, Ligand-gated, Current clamp, Mechanical, Light-stimulated (optional)		
Unlimited combination of stimulation modes in the same sweep	√		
Adaptive protocols - 384 individual protocols	V_{xx} , I_{adapt} , I_{rheo}		
Differentiated protocols	Any multiple of two columns; whole-cell, voltage and current clamp		
Shortest/longest voltage-segment	0.1 ms / 2h 47m		
Liquid exposure time in ligand-gated experiments	0.8 - 10.0 s (user configurable)		
Resolution of current injection	0.6 pA		
Recording configuration	Whole-cell / perforated patch		
Cell types applicable	Cell-lines, Stem cells, Primary cells, iPSC		
QChip compatibility	Single-hole, Multi-hole, Variable hole number, Variable hole size		
QChip fractional use	Any multiple of two columns		
Maintenance of electrodes	None		
Electrode stability	Electrode drift < 0.01 mV/min		
User maintenance of instrument	None		
Giga Ohm seals	√		
R_{series} compensation	√ (up to 100%)		
C_{cell} , C_{slow} and leak compensation	√		
Data security, traceability and storage options	2 x 12 TB harddrives, data reduction, data migration, automatic backup, full log of activity, user-hierarchy, Cloud storage		
Sophion Analyzer Software	√ (unlimited licenses)		



Dimensions & Requirements	Qube 384 Mk III Basic	Qube 384 Mk III with automation	Qube 384 Mk III integrated
Width	129 cm main body + 32.5 cm shelf for circulator	178 cm	129 cm + external
Depth	85-146 cm (open)	85-146 cm (open)	85 cm + external
Height	186 - 203 cm (open)	186 - 203 cm (open)	186 - 203 cm (open)
Weight	600 kg	630 kg	600 kg + external
Point pressure	3.4 kg/cm ²	3.6 kg/cm ²	3.4 kg/cm ² (Qube)
Foot print	0.86 m ²	0.86 m ²	0.86 m ² (Qube)
Power supply	100-240 V 50-60 Hz Max. 8A	100-240 V 50-60 Hz Max. 8A	100-240 V 50-60 Hz Max. 8A
Pressure	6 - 8 Bar	6 - 8 Bar	6 - 8 Bar
Vacuum	900 - 620 mBar	900 - 620 mBar	900 - 620 mBar
Network	1 Gb/s Ethernet	1 Gb/s Ethernet	1 Gb/s Ethernet



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