



Azure Cielo™ Real-Time PCR Systems

Product Specifications

The Azure Cielo Real-Time PCR system brings you the accuracy and sensitivity you need for your research, with intuitive touch screen software. Designed to fit the needs of your lab, the Cielo 3 and the Cielo 6 allow you the flexibility to select a system that fits both your applications and your budget.

Specifications	Azure Cielo 3 51AIQ030	Azure Cielo 6 51AIQ060
Performance specifications		
Dye compatibility	SYBR Green, EvaGreen, FAM, VIC, JOE, HEX, CAL Fluor 540, CAL Fluor Orange 560, Quasar 670, Cy5, LIZ, Mustang Purple	SYBR Green, EvaGreen, FAM, VIC, JOE, HEX, CAL Fluor 540, CAL Fluor Orange 560, ROX, TAMRA, TEX615, Quasar 670, CAL Fluor Red 610, Cy5, LIZ, Mustang Purple, Cy5.5, Quasar 705
Custom dye/chemistry	Yes	
Chemistry capability	Fast/Standard	
Multiplexing	Up to 3 targets	Up to 6 targets
Dynamic range	10 logs	
Detection sensitivity	1 copy of amplified DNA	
Sensitivity (resolution)	Detect differences as small as 1.3 fold in target quantities in singleplex reactions	
Durability	Stress tested to 1000+ repeated experiments	
Research applications	Quantitative and qualitative gene expression analysis, miRNA analysis, NGS library quantification, 3 or 6 channel multiplex ability, pathogen quantification and SNP genotyping.	

Specifications		Azure Cielo 3 51AIQ030	Azure Cielo 6 51AIQ060
System specifications			
Size (W x H x D)	12" x 17" x 20" (30.5 x 43.2 x 50.8 cm)		
Weight	50 lbs (22.7 kg)		
Sample capacity (wells)	96		
Reaction volume	1–50 µL (10 to 50 µL recommended)		
Run time	Less than 30 minutes, depending on programmed protocol		
Calibration	Factory calibrated for common qPCR chemistries		
Installation	Product Specialist set up and training post-purchase		
Max. block ramp rate	6°C/sec		
Avg. sample ramp rate	4°C/sec		
Plate compatibility	Low-profile, semi-skirted or non-skirted 96-well plates with optical sealing film (any brand)		
Color compatibility	Frosted, transparent or white plastic		
Tube compatibility	Low-profile single or strip tubes with optical caps		
Working environment	Ambient temperature 0–30°C and humidity up to 85%		
Electrical specifications	Electric power: 100–240 VAC, 8A; Consumption: 0.8kW (800 Watts)		
Manufacturing location	Made in California, USA		
Thermal performance			
Temperature uniformity	±0.2°C		
Temperature accuracy	±0.1°C		
Temperature range	4.0–99.9°C		
Temperature gradient	Max span: 40°C in 30.0–99.9°C temperature range		
Cooling rate	2°C/sec		
Lid temperature range	Heats up to 112°C		
Thermal element	6 Marlow Peltiers		
Block set up	Up to 12 thermal gradient temperature zones		
Optical modules			
Detection channels	3	6	
Standard channels	Channel 1 Excitation 475 ± 14 nm and Emission 524 ± 12 nm Channel 2 Excitation 527 ± 10 nm and Emission 565 ± 12 nm Channel 3 Excitation 623 ± 12 nm and Emission 676 ± 18.5 nm	Channel 1 Excitation 475 ± 14 nm and Emission 524 ± 12 nm Channel 2 Excitation 527 ± 10 nm and Emission 565 ± 12 nm Channel 3 Excitation 537 ± 13 nm and Emission 583 ± 11 nm Channel 4 Excitation 572 ± 7.5 nm and Emission 623 ± 12 nm Channel 5 Excitation 623 ± 12 nm and Emission 676 ± 18.5 nm Channel 6 Excitation 655 ± 7.5 nm and Emission 711 ± 12.5 nm	
Excitation (light source)	LED		
Detection method	Fiber optic system + CMOS		
Acquisition speed	16 well simultaneous scan		

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Onboard computer and software			
Touchscreen	10.3" built in computer		
Operating system	Linux		
Software	Preloaded Azure Cielo Device		
Calibration	Onboard analytics and sensors confirm operation of mechanical, thermal and optical components prior to running		
Device management	Device name, date & time, serial number and software version		
Output file type	.AZE		
Onboard memory	32GB equivalent to 20,000 experiments		
Live readout	Real-time raw data amplification curves for every fluorescence channel to monitor the qPCR reactions. Real-time temperature progression graph for both the lid and sample allowing user to monitor for any abnormalities.		
Protocol setup	Setup a new protocol from a pre-defined qPCR template, including the thermal profile, lid temperature, reaction volume and choose which fluorescence channels to scan. Ability to edit presaved protocols.		
Reaction progress	Monitor qPCR with count down of each step and time remaining. View Real-Time qPCR graphs during an active experiment for purpose of monitoring Real-Time reactions.		
Connectivity			
Connection types	USB, Ethernet, Wi-Fi, external PC		
Remote access	Monitor and run protocols remotely, access files from personal PC		
Azure Cielo Manager Analysis Software AIQ100			
Analysis modes	qPCR with dye/SYBR, qPCR with probe		
Analysis types	Standard curve, absolute and relative gene expression, SNP genotyping, melt curve		
Post-run summary	View Statistical data in the form of charts, curves and graphs. Easily export a complete and easily customizable report of the qPCR experiment.		
Plate mapping	Intuitive plate map design that allows users to assigns well ID as Standards, Unknowns, Calibrators, Negative Control, NTC etc.		
Number of installations	Unlimited		
Operating system compatibility	Windows		
Compatibility	Easily Copy/Paste data or graphs onto Paint, Microsoft Office or other supported applications as needed. Export data in MS-office, PDF or in MIQE preferred RDML (1.0, 1.1, 1.2) format		
Ordering information			
Azure Cielo	51AIQ030	51AIQ060	
Azure Cielo Manager	51AIQ100		

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