



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 AIQ030	Azure Cielo 6 AIQ060
Performance specifications		
Dye compatibility	SYBR Green, EvaGreen, FAM, VIC, JOE, HEX, CAL Fluor 540, CAL Fluor Orange 560, 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 2-fold in target quantities in singleplex reactions	
Durability	Stress tested to 1,000+ repeated experiments	
Research applications	Quantitative and qualitative gene expression analysis, miRNA analysis, genetic mapping, genetic fingerprinting, NGS library quantification, 3 or 6 channel multiplex ability, pathogen quantification	

Specifications	Azure Cielo 3 AIQ030	Azure Cielo 6 AIQ060
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	10–150µL (recommended), 1µL minimum	
Run time	Less than 30 minutes	
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	Semi-skirted or un-skirted with optical seal film (any brand)	
Color compatibility	Frosted, transparent or white plastic	
Tube compatibility	Low-profile tubes with Optical Strip Caps and 8 or 12-well stripped and single tubes	
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 105°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 Control and Azure Cielo Manager analysis software	
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	.AZD	
Onboard memory	32GB equivalent to 20,000 experiments	
Live readout	Real-time 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 PCR 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, Allele Discrimination with probe and Comparative Quantitation	
Analysis types	Standard curve, absolute and relative gene expression, SNP genotyping, presence/absence, HRM	
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 assign 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	AIQ030	AIQ060
Azure Cielo Manager	AIQ100	



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