



eQ162C / 2CP / 4CP

Real-time PCR System

The system is suitable for PCR reaction and quantitative detection in immunology, human genome engineering, forensic science, oncology, tissue and group biology, paleontology, zoology, botany and other fields.

The system is optimized for configuration, especially for small sample size, rapid on-site inspection and quarantine, disease prevention and control (such as African swine fever, bird flu, etc.), food safety, agriculture, forestry and biochemistry.

Quality Comes From Technology



CE



Application Field

Disease prevention and control, inspection and quarantine,
agriculture and forestry, food safety testing,
African swine fever (ASF)



Clinical diagnosis, community medical
POCT on-site inspection

Molecular biology teaching and research



Battlefield, criminal investigation and
emergency detection

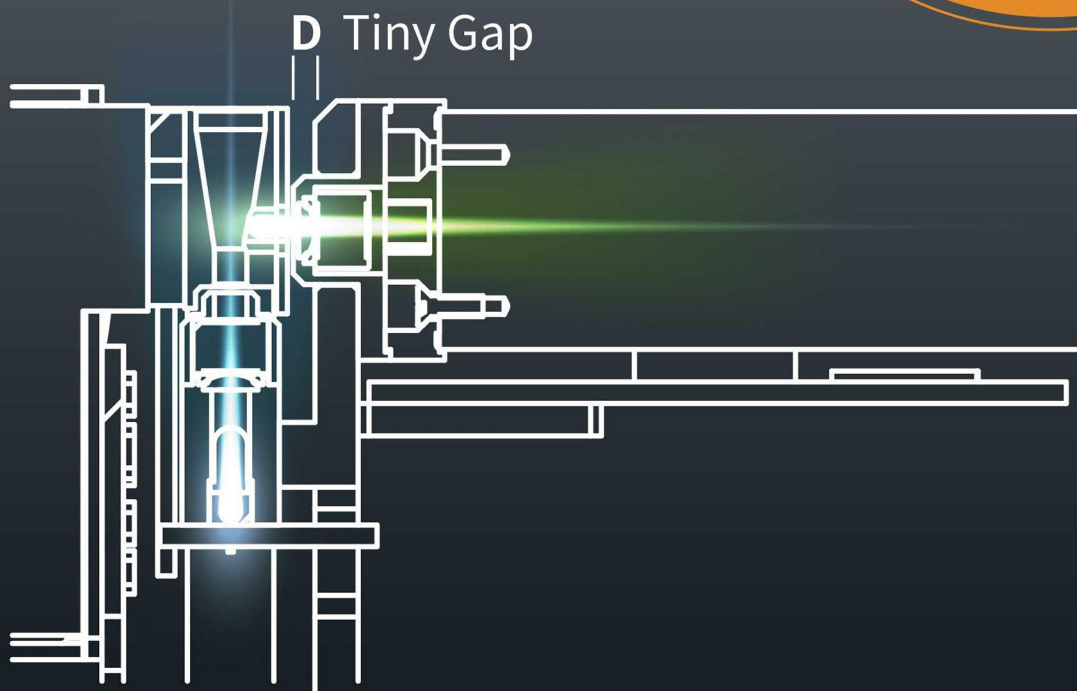
Strong! In All Aspects

Strong Fluorescence Signal Low Background Noise Good Consistency

With our proprietary DFD two dimensional optoelectronic module, highly sensitive PMT directly detects samples at micro-distance. Carefully adjusted Dual Independent Fluorescence channels make the signal very strong and extremely lower the background noise. It is especially suitable for real-time PCR experiments of low-concentration DNA reagents such as direct amplification reagents, extraction-free reagents, and quick- extraction reagents.

The carefully optimized excitation light bandwidth greatly reduces the crosstalk between the channels and avoids misjudgment of the amplification results.

Scanning detection with the same optoelectronic module eliminates the need for signal strength calibration correction between optical paths.



Ingenious Block Design

Light Block Fast Ramp Rate Good Uniformity

Technical
Characteristics

02

Our proprietary module edge temperature self-compensation (ETSC) design, reduces weight and gets excellent temperature uniformity of the block. It effectively shortens the PCR experiment time.

Long life Peltiers are used.



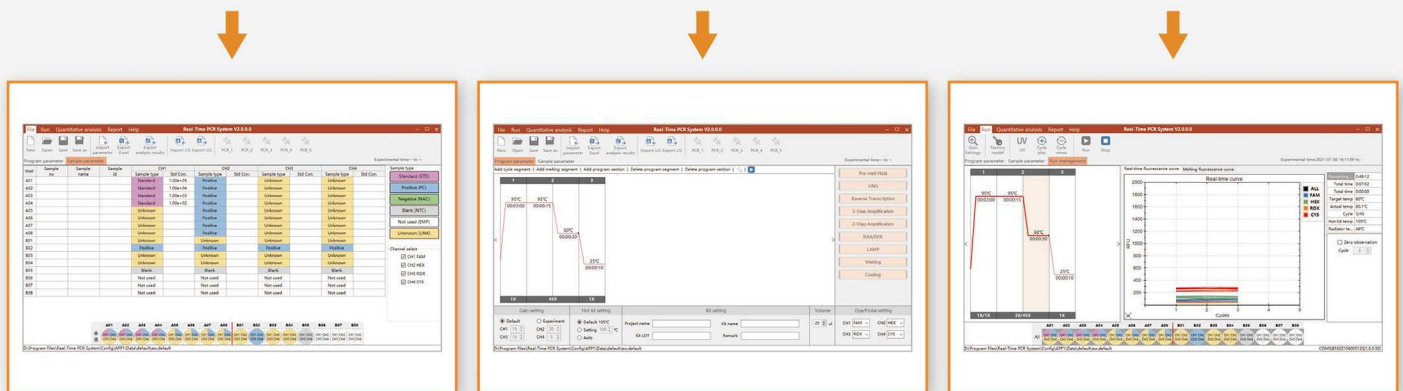
Intimate Design

Software Friendly, Clear Concise and Easy-to-use Software

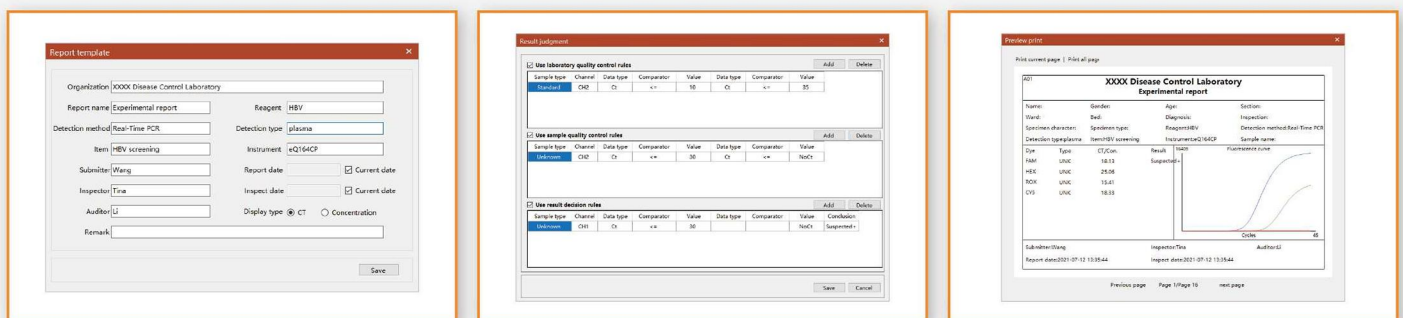
Operating software adopts Windows 10 interface style and easy to use.

Built in two-steps, three-steps, LAMP, RPA methods' PCR program templates, direct expansion reagent PCR program template and other common ones. Users only need to select the template, modify the parameters, and then complete the PCR program setting, which is fast and convenient.

The system has the functions of system parameter setting (password permission), experiment parameter setting, sample information input, operation management, data export EXCEL, overview of PCR program, real-time amplification curve display, channel crosstalk correction, criterion setting, automatic report, curve capture and so on.

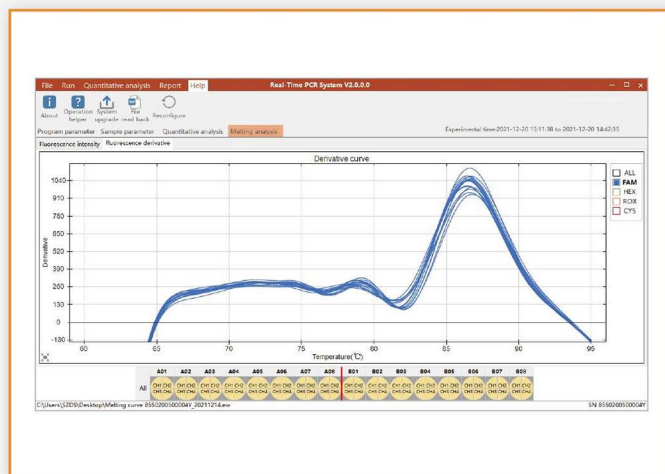
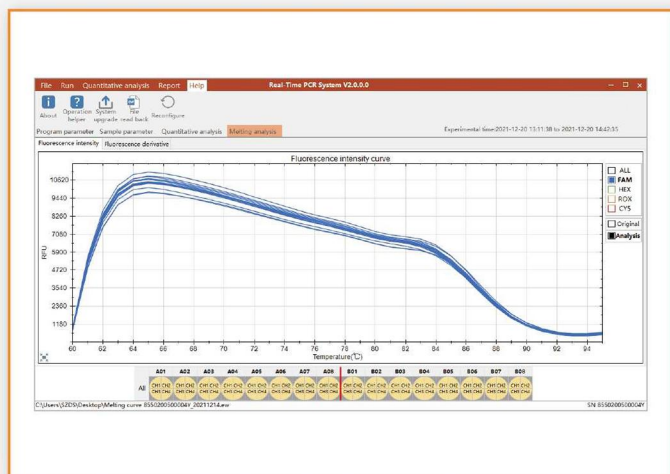


The system preset human / animal experiment report template. Users can also customize report template, result judgment, fluorescence analysis curve and report printing type.



Note: Those above pictures are taken from model eQ164CP.

It can be used for high resolution melting curve (HRM), SNP analysis, mutation scanning, methylation research, genotyping and other purposes.



Note: Those above pictures are taken from model eQ164CP.

Simple But Beautiful

Appearance
Simple, Light Weighted
and Portable

Technical
Characteristics

04

A4 paper size, compact, ease to move.

Built-in power supply keeps your desktop clean.



Care for Details

Respect Operator's Habits and Reduce Instrument Pollution

Technical Characteristics

05

The instrument has built-in ultraviolet lamp (UV), and the irradiation intensity is up to $70 \mu\text{W}/\text{cm}^2$. After the experiment, just click the [UV] button to effectively degrade the aerosol pollution on the module and the heat cover.

This machine adopts standard 0.2ml single tube or 8-strip transparent tube. There is no special requirement for test tubes. High tube, short tube, flat top tube, dome tube, transparent cap, etc. are all applicable. Operators can mark the tube with marks. It is convenient and practical.



In UV scan
(hot lid should be closed in actual work)



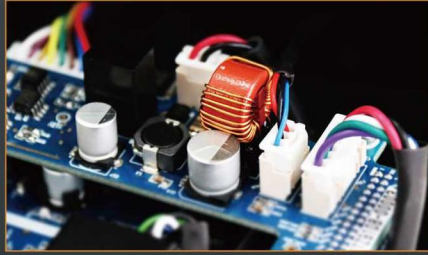
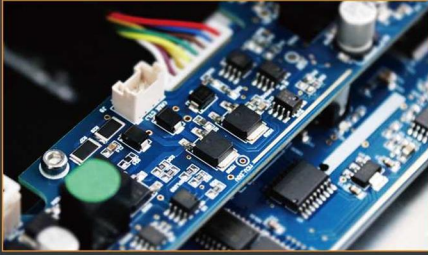
In fluorescence scan
(hot lid should be closed in actual work)

Strict Process Gives High Quality

Quality Comes From Professional Manufacturing

Technical Characteristics

06



Selected Electronic Components

Meticulous Manufacturing Process



Rigorous Experimental Verification.

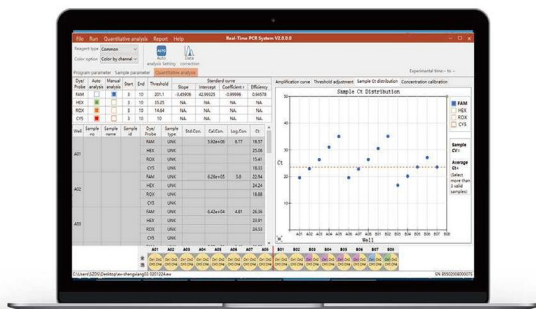
Actual verification by multiple brand reagents.



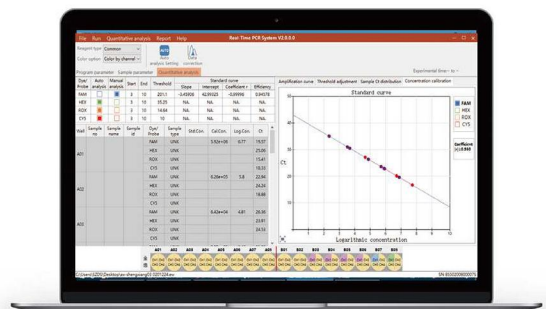
Fluorescence intensity Curve



Logarithmic Fluorescence Curve



Sample Ct Distribution



Standard Curve

Note: Those above pictures are taken from model eQ162C.

Model	eQ162C	eQ162CP	eQ164CP
Sample volume	16*0.2 ml single tube or 8-strip transparent tube (except for white opaque tube), you can mark the tube with markers on the cover of the tube.		
Applicable reagents	The system is an open platform, suitable for various real-time PCR reagents, including fast extraction reagents, non-extraction reagents or direct amplification reagents and other low-concentration PCR reagents.		
Reaction volume	5-100ul		
Dynamic range	1-10 ¹⁰ Copies		
Color wavelength	400~700nm		
Optical sensor	PMT	PD	PD
Dyes and probes	CH1: FAM、SYBR Green I ; CH2: HEX、JOE、VIC、ROX .		CH1: FAM、SYBR Green I ; CH2: HEX、JOE、VIC、TAMRA ; CH3: ROX、CALRED ; CH4: CY5、QUASAR
Detection technology	Scientific grade, suitable for micro-reaction system.	Double PD detection, practical grade, suitable for conventional reaction system.	Four PD detection, independent excitation fluorescence detection, suitable for multiple PCR.
Channel number	2-fluorescent channel		4-fluorescent channel
★ Unique design of DFD photoelectric module	DFD two-dimensional precision photoelectric module, independent 4-color channel, micro-gap direct photometry, high signal-to-noise ratio. Strong ability to resist environmental light interference. The crosstalk between fluorescent channels is very low to avoid misjudgment of amplification results.		
Sensitivity	1 Copy		
Rn	≥0.998		
CV	≤0.6%		
Block setting range	10-99.9°C		
Temperature control mode	Tube mode. Real temperature of simulated reagent.		
Refrigeration technology	Peltier		
★ ETSC block temperature equalization technology	The know-how of block edge temperature self-compensation design (ETSC) not only reduces the weight of the block, but also achieves excellent temperature uniformity, which effectively shortens the time of PCR experiment.		
Precision of temperature control	≤0.1°C		
Display resolution	0.1°C		
Temperature accuracy	≤0.2°C		
Temperature uniformity	≤±0.2°C		
Max. ramping rate	≥4°C/s		
Avg. ramping rate	≥2.5°C/s (50~90°C)		
Hot lid	30-105°C, Default 105°C.		
Operating mode	Operate through PC (provided by customer). one PC can be used to control multiple PCR machines to form N * 16 PCR array to run N PCR experiments simultaneously, which is flexible and changeable.		
PC operating system	Windows7/10		
Com. interface	RS232./USB		
Software functions	Built in two-steps, three-steps, LAMP, RPA methods' PCR program templates, free extraction reagent PCR program template and other common ones. It has functions of system settings (password permission), experimental parameter settings, sample information input, operation management, data export EXCEL, general view of PCR program, real-time amplification curve display, channel crosstalk correction, criterion setting, automatic report, curve capture, etc.		
★ Analytical functions	Standard Curve, Relative Quantitative Curve and Melting Curve (HRM)		
Reports	The human/animal experiment report templates are preset in the system, and the report template is also customized. Results Judgment, fluorescence analysis curve, report printing and other functions.		
★ Specialized biodegradation function	The built-in ultraviolet lamp (UV) can effectively degrade the aerosol contamination on the block and thermal hot lid, and the irradiation intensity is as high as 70uW/cm ² .		
Operating indicator	Power on, in operation, successful communication, ultraviolet degradation (UV), fault alarm, hot lid open alarm.		
operating ambient	Ambient temperature:10-30 °C, relative humidity: 20-85% RH, elevation not higher than 2000 m, storage temperature: - 20-60°C.		
Input power	100-240V~300VA		
Dimensions (L×W×H)	324×212×122mm(A4 paper size)		
Net weight	5.8kg		

★: Refers to the unique technology