



FMR-5S

Smart Quant System

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For Science For Health

Introduction

The FMR-5S Real-Time PCR System combines a large touchscreen (Screen), smart gradient optimization (Smart), ultra-fast detection (Speed), high sensitivity (Sensitivity), and long-term stability (Stability) to deliver a faster, smarter, and more reliable qPCR experience. With 5-second full-plate detection, a 12.1" HD display, and automation-ready features, FMR-5S is built to accelerate your research with confidence.

It supports a wide range of analysis modes, including absolute and relative quantification, genotyping, positive/negative calls, melt curve analysis, protein thermal shift assays, HRM (high-resolution melting), and MMCA (Multicolor melting curve analysis), making it a versatile tool for diverse research applications.

Features

Smart

Equipped with smart analysis software, Up to 100 projects can be preset.
Can set 12 columns of gradient temperature at once.

Screen

12.1-inch retractable color touch screen, with adjustable screen angle, no need to connect to a computer for operation.

Speed

The maximum temperature ramp rate can reach 8°C/second, and all 96 wells of all fluorescence channels can be detected within 5 seconds.

Stability

LED-based optics, no maintenance, long lifespan. With auto-tray and multi-instrument control, it fits right into automated workflows.

Sensitivity

Strong fluorescent signal, low background noise, and high sensitivity.



Product Parameters

Detection Module	
Detection Format	0.2 mL 96-well non-skirted/semi-skirted plate, 0.2 mL 8-tube strip tubes, 0.2 mL single tubes (transparent thin-wall)
Fluorescence Channels & Dyes	F1: FAM / SYBR Green / EVA-Green; F2: HEX / VIC / JOE / TET / YELLOW; F3: ROX / Texas Red; F4: Cy5; F5: Cy5.5; F6: CY3 (optional)
Reaction Volume	10–100 μ l
Sample Reproducibility	CV < 1%
Linear Range	1–10 ¹⁰ copies
Optics & Detection	High-brightness LED with long lifespan; high-sensitivity photodiode; lateral excitation and scanning; simultaneous multi-channel detection within 5 seconds
Excitation / Emission Wavelength	400–810 nm / 500–810 nm
Fluorescence Linearity	R $\geq$ 0.990
Thermal Module	
Block Material	Aluminum
Heated Lid Temperature	30–115 °C (adjustable, default 105 °C)
Temperature Control	Block & tube temperature control
Max Heating/Cooling Rate	8 °C/S
Temperature Uniformity	$\pm$ 0.2 °C
Temperature Accuracy	$\pm$ 0.1 °C
Temperature Resolution	$\pm$ 0.1 °C
Gradient Accuracy	0.1–42 °C
Number of Gradient Rows	12
Control & Software	
Display & Control	Interactive Display: 12.1" touch screen with real-time run status visualization Flexible Operation: Supports standalone use or connection to a PC
Power-off Recovery	Supported
Analysis Capabilities	Absolute / Relative quantification, Genotyping, Positive/Negative calls, Melt curve analysis, Protein thermal shift assays, HRM, and MMCA
Custom Reporting	Supports xls, csv, txt, pdf, jpg, LIS; customizable report formats
Program Management	Standard & expert modes; multi-level account management; run history export; intelligent fault diagnosis
Hardware & Environment	
Module Material	Peltier module
Operating System	Windows 7 / 10 / 11
Interface Types	USB 2.0, RS232
Dimensions (L×W×H)	520 × 350 × 330 mm
Weight	32 kg
Power Supply	100–240 V AC, 50/60 Hz, 1500 W
Working Environment	10–35 °C, 20–80% humidity (non-condensing), altitude <2000 m



About Us

For Science For Health

Customers remain our foremost priority. By setting up local customer support teams in major global markets, we are able to directly engage and connect with our users.

We have served customers in over 60 countries and regions, including scientists, researchers and engineers devoted to human health. Our products have obtained 200+ market access. To better cater to our global clientele, we have established wholly-owned branches offices in the U.S., Canada, the U.K., Germany, Indonesia, Australia, Singapore and Hong Kong SAR, creating localized customer service and technical support teams that promptly address customer needs and offer one-stop services. Furthermore, we have set up warehouses in multiple regions worldwide and ensured high quality delivery of products through cold chain transportation.

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