

# QuantStudio 5 Real-Time PCR System

Take charge of how you create and manage your real-time PCR data with Applied Biosystems™ QuantStudio™ 5 Real-Time PCR System. Available with either a 96- or 384-well thermal block, the high performance instrument offers more control to customize your reactions and still maximize bench space with a small footprint. Additional filter channels and six temperature block zones\* allow ultimate control over cycling conditions. Desktop software with security, auditing, and e-signature features assists with 21 CFR part 11 compliance and increased security to help ensure your run and your data are protected. With web browser-based or desktop analysis options, the QuantStudio 5 Real-Time PCR System offers superior performance and quality. Leverage the power of Thermo Fisher Cloud to stay connected to your data anywhere, anytime when you are online.



\*Available on 96-well format only.

## QuantStudio 5 Real-Time PCR System performance specifications

Dye compatibility	FAM™/SYBR™ Green, VIC™/JOE™/HEX™/TET™, ABY™/NED™/TAMRA™/Cy™3, JUN™, ROX™/Texas Red™, Mustang Purple™, Cy5™/LIZ™, CY™5.5 dye		
Multiplexing	<b>96-well:</b> up to 6 targets with 21 filter combinations; <b>384-well:</b> up to 5 targets		
Dynamic range	10 logs		
Sensitivity (resolution)	Detect changes as little as 1.5-fold in target quantities in singleplex reaction		
Sensitivity (No. of copies)	1 copy		
Research areas	Infectious diseases Pathogen detection Translocation analysis Viral load analysis	Drug metabolism Plant sciences Agricultural biotechnology Oncology	Inherited diseases Epigenetics Synthetic biology Stem cells
Key applications	Gene expression Copy number variation High resolution melt	SNP genotyping Mutation scanning Mutation detection	Protein thermal shift MicroRNA profiling Methylation analysis

## QuantStudio 5 Real-Time PCR System specifications

Dimensions and weight	27 x 50 x 40 cm (W x D x H), <26 kg
Sample capacity (wells)	96 (0.1 mL and 0.2 mL blocks available) or 384
Reaction volume	<b>96-well:</b> 10–30 µL for 0.1 mL block; 10–100 µL for 0.2 mL block; <b>384-well:</b> 5–20 µL
Maximum ramp rate	6.5°C/sec
Average sample ramp rate	3.66°C/sec
Temperature uniformity	0.4°C
VeriFlex™ Blocks	<b>96-well:</b> 6 independent temperature zones; <b>384-well:</b> NA

**QuantStudio 5 Real-Time PCR System specifications, *continued***

Heating/cooling method	Peltier
Run time	Less than 30 min
Calibration	Factory calibrated
Onboard memory	10 GB, which translates to approximately 2,000–5,000 run files
Electrical approvals	IEC, CE
Excitation (light source)	Bright white LED
Filters/colors	<b>96-well:</b> 6 decoupled filters, up to 21 combinations; <b>384-well:</b> 5 coupled filters
Excitation/detection range	<b>96-well:</b> 450–680 nm/500–730 nm; <b>384-well:</b> 450–650 nm/500–700 nm
Data acquisition	Whole-plate imaging
Touch screen	Interactive touch screen with real-time application viewing
Online ecosystem	Thermo Fisher Cloud
Communication interface	Thermo Fisher Cloud, USB, or Wi-Fi
External devices	2D barcode reader via USB connection
System configuration	Stand-alone, PC connected, or direct connection to Thermo Fisher Cloud via LAN or Wi-Fi
International standards	ISO 13485

**QuantStudio™ 5 Real-Time PCR Software specifications**

Cloud design and analysis software	<ul style="list-style-type: none"> <li>• Desktop option using Microsoft™ Windows™ 7 operating system</li> <li>• Web browser–based software option; run on PC or Mac™ computer</li> </ul>
Run programming options	<ul style="list-style-type: none"> <li>• Preoptimized protocol templates or ability to customize</li> <li>• Programmable and manual pause</li> <li>• Locked workflows</li> </ul>
Chinese language software	Available
MIQE compliance	Real-time PCR data markup language (RDML) export format
Features to assist with 21 CFR part 11 compliance	Security, auditing and e-signature; no additional fees or licenses required
Single-plate analysis	Absolute and relative gene expression, SNP genotyping, presence/absence, high resolution melt
Multiplate analysis	Gene expression studies, SNP genotyping studies

**Ordering Information**

Product	Cat. No.
QuantStudio 5 Real-Time PCR System,* 96-well, 0.1 mL block	A28138
QuantStudio 5 Real-Time PCR System,* 96-well, 0.2 mL block	A28139
QuantStudio 3 Real-Time PCR System,* 384-well	A28140

\*Does not include computer. Additional Cat. Nos. are available that include laptop or desktop computer.

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