QuantStudio 6 and 7 Pro Real-Time PCR Systems

Applied Biosystems™ QuantStudio™ 6 and 7 Pro Real-Time PCR Systems are designed to offer high quality, excellent reliability, and a smart workflow experience. These systems feature an interactive touchscreen interface, intuitive software, preoptimized protocol templates, and access to your data anytime, anywhere with our cloud-based Thermo Fisher™ Connect Platform. Additional smart features are included to enable a personalized experience, improve efficiency, and help streamline your workflow.

Smart features

Facial authentication	Hands-free login and access to your personal profile
Hands-free operation	Perform basic operations using voice commands
Radio-frequency identification (RFID) smart plate workflow	2 embedded RFID readers to detect and decode Applied Biosystems™ TaqMan® Smart Plates
Smart Help	For faster, more efficient, and more effective resolution of instrument and application issues
Smart Remote Support	A real-time audio/video collaboration tool and an advanced remote desktop support tool that reduces instrument downtime from days to minutes

Performance specifications

Dye compatibility	FAM™, SYBR™ Green I, VIC™, JOE™, HEX™, TET™, ABY™, NED™, TAMRA™, Cy®3, JUN™, ROX™, Texas Red™, Mustang Purple™, Cy®5, LIZ™, Cy®5.5
Multiplexing	5 or 6 targets
Dynamic range	10 orders of magnitude
Sensitivity (resolution)	1.5-fold resolution; detect down to 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 (CNV), high resolution melting (HRM), single-nucleotide polymorphism (SNP) genotyping, mutation scanning, mutation detection, Applied Biosystems™ Protein Thermal Shift™ analysis, microRNA profiling, methylation analysis

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System specifications

Dimensions (D x W x H) and weight	52.5 x 33.8 x 54.7 cm; 38 kg
Sample capacity (block format)*	96-well 0.2 mL block, 96-well 0.1 mL block (Fast), 384-well block, Applied Biosystems™ TaqMan® Array Cards
Reaction volume*	10–30 µL for 96-well 0.1 mL block; 10–100 µL for 96-well 0.2 mL block; 5–20 µL for 384-well block; ~1.5 µL for TaqMan Array Cards
Maximum ramp rate	96-well (0.2 mL): 6.5°C/sec; 96-well (0.1 mL): 9.0°C/sec; 384-well: 6.0°C/sec; TaqMan Array Cards: 5.0°C/sec
Average sample ramp rate	96-well (0.2 mL): 3.66°C/sec; 96-well (0.1 mL): 4.81°C/sec; 384-well: 2.92°C/sec; TaqMan Array Cards: 3.00°C/sec
Temperature uniformity	0.4°C
Temperature range	4–99.9°C
VeriFlex™ Blocks	3 or 6 independent temperature zones (96-well blocks)
Block size	22.5 x 22.5 x 7 cm
Heating and cooling method	Peltier
Run time	Less than 30 min
Calibration	Engineer calibrated during installation
Onboard memory	10 GB, which translates to approximately 450 run files
Electrical approvals	IEC, CE
Excitation (light source)	Bright white LED
Filter or color combina0tions	5 for QuantStudio 6 Pro system, 21 for QuantStudio 7 Pro system
Excitation/emission range	450–600 nm/500–640 nm
Detection method	CMOS technology
Data acquisition	Whole-plate imaging
Touchscreen	12 inch capacitive touchscreen with real-time application viewing
Online ecosystem	Our free, cloud-based Connect Platform with cloud-enabled systems
Communication interface	Connect Platform with cloud-enabled systems, USB, LAN, or Wi-Fi
External devices	2D barcode reader via USB connection
System configuration	Stand-alone, PC connected, or direct connection via LAN or Wi-Fi to the Connect Platform

* Blocks are being released at intervals, so some may not be currently available.

Software specifications

Cloud design and analysis software	• Desktop option using Microsoft™ Windows™ 10 or Mac™ operating system • Web browser–based software option; run on PC or Mac computer
Run programming options	• Preoptimized protocol templates or ability to customize – Programmable and manual pause • Preprogrammed protocol decoded by RFID reader
MIQE compliance	Real-time PCR data markup language (RDML) export format
Data analysis	Standard curve, absolute and relative gene expression, SNP genotyping, presence/absence, HRM

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Ordering information

Product	Cat. No.
QuantStudio 6 Pro Real-Time PCR System, 96-well, 0.2 mL block	A43159
QuantStudio 6 Pro Real-Time PCR System, 96-well, 0.2 mL block, laptop	A43166
QuantStudio 6 Pro Real-Time PCR System, 96-well, 0.2 mL block, desktop	A43180
QuantStudio 7 Pro Real-Time PCR System, 96-well, 0.2 mL block	A43162
QuantStudio 7 Pro Real-Time PCR System, 96-well, 0.2 mL block, laptop	A43169
QuantStudio 7 Pro Real-Time PCR System, 96-well, 0.2 mL block, desktop	A43183
QuantStudio 6 Pro Real-Time PCR System, 384-well block	A43161
QuantStudio 6 Pro Real-Time PCR System, 384-well block, laptop	A43168
QuantStudio 6 Pro Real-Time PCR System, 384-well block, desktop	A43182
QuantStudio 7 Pro Real-Time PCR System, 384-well block	A43164
QuantStudio 7 Pro Real-Time PCR System, 384-well block, laptop	A43171
QuantStudio 7 Pro Real-Time PCR System, 384-well block, desktop	A43185
QuantStudio 6 Pro Real-Time PCR System, 96-well, 0.1mL block	A43160
QuantStudio 6 Pro Real-Time PCR System, 96-well, 0.1mL block, laptop	A43167
QuantStudio 6 Pro Real-Time PCR System, 96-well, 0.1mL block, desktop	A43181
QuantStudio 7 Pro Real-Time PCR System, 96-well, 0.1mL block	A43163
QuantStudio 7 Pro Real-Time PCR System, 96-well, 0.1mL block, laptop	A43170
QuantStudio 7 Pro Real-Time PCR System, 96-well, 0.1mL block, desktop	A43184
QuantStudio 7 Pro Real-Time PCR System, TAC block	A43165
QuantStudio 7 Pro Real-Time PCR System, TAC block, laptop	A43172
QuantStudio 7 Pro Real-Time PCR System, TAC block, desktop	A43186

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