

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

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| 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

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| 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 |

System specifications

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| 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 combinations | 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

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| Cloud design and analysis software | <ul style="list-style-type: none"> • Desktop option using Microsoft™ Windows™ 10 or Mac™ operating system • Web browser-based software option; run on PC or Mac computer |
| Run programming options | <ul style="list-style-type: none"> • Preoptimized protocol templates or ability to customize <ul style="list-style-type: none"> – 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 |

Ordering information

| Product | Cat. No. |
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| 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 |

See the future of qPCR at
thermofisher.com/quantstudiopro

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