

QuantStudio 5 Real-Time PCR System

Take charge of how you create and manage your real-time PCR data with the Applied Biosystems™ QuantStudio™ 5 Real-Time PCR System. Available with either a 96- or 384-well thermal block, this 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, helping to ensure your run and your data are protected. With Web browser-based and desktop analysis options, the QuantStudio 5 Real-Time PCR System offers superior performance and quality. Plus, you can leverage the power of Thermo Fisher Connect to stay connected to your data anywhere, anytime when you are online.



QuantStudio 5 Real-Time PCR System performance specifications

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|------------------------------------|---|---|---|
| Dye compatibility | FAM™, SYBR™ Green, VIC™, JOE™, HEX™, TET™, ABY™, NED™, TAMRA™, Cy®3, JUN™, ROX™, Texas Red™, Mustang Purple™, Cy®5, LIZ™, and Cy®5.5 dyes | | |
| Multiplexing | 96-well: up to 6 targets with 21 filter combinations; 384-well: up to 5 targets | | |
| Dynamic range | 10 logarithmic units | | |
| Sensitivity (resolution) | Detect changes as little as 1.5-fold in target quantities in a 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 (HRM) analysis | Single-nucleotide polymorphism (SNP) genotyping Mutation scanning | Mutation detection Protein thermal shift MicroRNA profiling Methylation analysis |

QuantStudio 5 Real-Time PCR System specifications

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|---------------------------------|--|
| 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), 384 |
| Reaction volume | 96-well 0.1 mL block: 10–30 µL; 96-well 0.2 mL block: 10–100 µL; 384-well block: 5–20 µL |
| Maximum ramp rate | 96-well 0.1 mL block: 9.0°C/sec; 96-well 0.2 mL block: 6.5°C/sec; 384-well block: 6.0°C/sec |
| Average sample ramp rate | 3.66°C/sec |
| Temperature uniformity | 0.4°C |
| VeriFlex™ Blocks | 6 independent temperature zones (96-well blocks only) |

* Available on 96-well format only.

QuantStudio 5 Real-Time PCR System specifications (continued)

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|-------------------------------------|--|
| Temperature range | 4–99.9°C |
| Heating/cooling method | Peltier system |
| Run time | 96-well: <30 min; 384-well: <35 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 | 96-well: 6 decoupled filters, up to 21 combinations; 384-well: 5 coupled filters |
| Excitation/emission detection range | 96-well: 450–680/500–730 nm; 384-well: 450–650/500–700 nm |
| Data acquisition | Whole-plate imaging |
| Touch screen | Interactive touch screen with real-time application viewing |
| Online ecosystem | Thermo Fisher Connect |
| Communication interface | Thermo Fisher Connect, USB, or Wi-Fi |
| External devices | 2D barcode reader via USB connection |
| System configuration | Stand-alone, PC connected, or direct connection to Thermo Fisher Connect via LAN or Wi-Fi |
| International standards | ISO 13485 |
| Run monitoring | Real-time run monitoring app on Apple™ or Android™ mobile devices* |

QuantStudio 5 Real-Time PCR Software specifications

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|---|---|
| Design and analysis software | <ul style="list-style-type: none">• Desktop option using Microsoft™ Windows™ 7 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• Programmable and manual pause• Locked workflows• Run recovery feature for power interruptions |
| 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 and/or absence, HRM, protein thermal shift |
| Multiplate analysis | Absolute and relative gene expression studies, SNP genotyping studies |

MIQE = Minimum information for publication of quantitative real-time PCR experiments

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 5 Real-Time PCR System,** 384-well | A28140 |

Stay connected at thermofisher.com/quantstudio5

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* With Internet connection and Thermo Fisher Connect account.

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

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