

# QuantStudio 5 Dx Real-Time PCR System

Designed to simplify workflows and minimize training needs, the Applied Biosystems™ QuantStudio™ 5 Dx Real-Time PCR System can help you get to your clinical answers quickly by fitting seamlessly into your established workflow. This compact, flexible system offers confidence in performance and supports both development\* and IVD modes.



## Premium performance at an affordable price

- **Results you can trust**—detect differences in target quantity as small as 1.5-fold in singleplex reactions, and obtain 10 logarithmic units of linear dynamic range
- **Simple, powerful software**—allows users to set up a run, lay out assays, control the instrument, and conduct plate analysis within a single, easy-to-use software interface
- **Proven performance**—over 10 years of clinical real-time PCR instrument manufacturing
- **Efficient**—interactive diagnostic instrument with short run times, minimal maintenance, and use of existing plastic consumables
- **Enhanced security**—security, auditing, and e-signature (SAE) functionalities that assist with compliance plus the ability to support multiple clients; maintain centralized SAE settings that can be applied to multiple instruments on the same network, allowing better control for your IT department
- **Peace of mind**—IVD test menu allows only authorized IVD tests to be run through IVD mode, helping to reduce the risk of unauthorized use and accidental or intentional misuse
- **Flexibility you need**—diagnose or develop, the choice is yours with software options that guide you through every step of test development\* and *in vitro* diagnostic (IVD) modes
- **Maximize benchtop space**—compact instrument
- **Superior support**—support available globally from highly skilled, customer-focused staff
- **QuantStudio system qPCR performance**—the reliability, sensitivity, and accuracy you expect, coupled with an intuitive and simple-to-use interface that allows users of any experience level to operate the system with ease

\* Test development mode is for Research Use Only.

## Features that help you comply with requirements of accrediting bodies

Maintenance and calibration reports	Records are updated automatically with maintenance and calibration events and can be printed on demand, documenting that the system has been maintained and calibrated to vendor specifications.
Reagent tracking	Stores and archives information about reagents used with each test, including lot number and expiration date, with each run. Archived files can be retrieved when required to track samples that were tested with a given set of reagents.
Sample tracking	Tracks sample name and type. Captures critical sample data, which are customizable by assay. Enables laboratories to more easily track samples associated with a particular plate, set of reagents, run date and time, and data files.
E-signature history	Security, auditing, and e-signature software records test events, actions taken, dates, user names, user roles, and activity performed, for documentation and archiving purposes.
Experimental results	Report output records details for documentation, archiving, and review-at-a-glance needs, including experiment name, barcode, file name, time stamps (creation, run start, run finish, duration, and modifications), instrument name, serial number, experiment type, results summary, plate layout image, standard curves, results table, and QC summary.

## Technical specifications

Reaction volume	96-well, 0.2 mL block: 10–100 $\mu$ L
Excitation source	Bright-white LED
Optical detection	6 decoupled filters, CMOS camera
Excitation/detection range	450–680 nm/500–730 nm
Temperature range	4–99.9°C
Maximum block ramp rate	6.5°C/sec
Average sample ramp rate	3.66°C/sec
Temperature uniformity	0.5°C
Temperature accuracy	0.25°C
Heating and cooling method	Peltier
Independent temperature zones	6 VeriFlex™ zones (5°C zone to zone)
Chemistries	Both fast and standard
Run times	<30 min (fast mode)
Validated reaction volumes	10–100 $\mu$ L
Factory-calibrated dyes	FAM™, SYBR™, VIC™, ABY™, NED™, TAMRA™, JUN™, ROX™, Mustang Purple™, and Cy®5 dyes
Multiplex	5-plex with 1 passive reference; 6-plex with no passive reference
Sensitivity	1 copy; detect differences as small as 1.5-fold in target quantities in singleplex
Dynamic range	10 logarithmic units of linear dynamic range
Security and auditing features	<ul style="list-style-type: none"> <li>Integrated tools to assist with compliance</li> <li>The audit function is always enforced in IVD mode, but optional for the test development mode to tailor for different traceability needs</li> </ul>
Automation compatible	No
Footprint (H x W x D)	40 x 27 x 50 cm
Weight	27 kg

Find out more at [thermofisher.com/quantstudio5dx](https://thermofisher.com/quantstudio5dx)