

Real-time PCR

QuantStudio 7 Pro Dx Real-Time PCR System (CE-IVD, IVDR)

Designed to meet the *in vitro* diagnostic regulation (IVDR) requirements for higher quality and safety for medical devices, the Applied Biosystems™ QuantStudio™ 7 Pro Dx Real-Time PCR System is a qPCR platform for the future. The system combines modern hardware and software in a compact footprint that enables customers in molecular diagnostics to achieve maximum efficiency, smarter productivity, and higher accuracy from their workflow.

Smart instrument, smart features, and smart productivity enabled by connectivity

- **Future-ready**—IVDR compliant
- **Results you can trust**—detect differences in target quantity as small as 1.5-fold in singleplex reactions; 10 orders of magnitude of linear dynamic range
- **Simple, powerful software**—users can set up a run, lay out assays, control the instrument, and analyze plates within a single, easy-to-use touchscreen interface; no computer is needed
- **Proven performance**—over 10 years of experience in clinical real-time PCR instrument manufacturing
- **Efficient**—interactive diagnostic instrument with shorter run times, minimal maintenance, and compatibility with 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
- **Instrument monitoring**—use a mobile app to check instrument availability and monitor run progress
- **Voice command**—enables selected hands-free operation by voice control (Alexa™ services)
- **Smart support**—Smart Help to report issues or request instrument services to reduce downtime; remote access to device for troubleshooting



The QuantStudio 7 Pro Dx instrument is a stand-alone system

The graphical user interface (GUI) enables an end-to-end *in vitro* diagnostic (IVD) workflow:

- Run setup for predefined assays
- Instrument controls
- Run monitoring
- Post-run data analysis, exporting, and reporting
- Maintenance and support
- SAE features to assist compliance with regulations

Instrument is Internet of Things (IoT)—enabled (Thermo Fisher™ Connect Platform)

- Voice-activated controls
- Smart support
- Remote run monitoring

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 that are customizable by assay. Enables laboratories to efficiently track samples associated with a particular plate, set of reagents, run date and time, and data files.
E-signature history	SAE software records test events, actions taken, dates, user names, user roles, and activity performed, for documentation and archiving purposes.
Experimental results	Report 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.

Features that help you increase your productivity

Stand-alone configuration	End-to-end workflow on the device enables users to review results and report directly on the touchscreen
Assay-driven workflow	Reduce manual entries and associated errors using embedded setup and analysis in an assay definition file
Remote monitoring	Monitor run and instrument status using the Instrument Connect mobile app or the Connect Platform
Hands-free operation	Perform basic operations using voice commands
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 reduce instrument downtime from days to minutes

Technical specifications	
Reaction volume	96-well, 0.2 mL block: 10–100 μ L; 384-well block, 5–20 μ L
Excitation source	Bright-white LED
Optical detection	6 decoupled filters, complementary metal oxide semiconductor (CMOS)
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 time	<30 min (fast mode)

Technical specifications (continued)	
System dyes	Applied Biosystems™ 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 reaction
Dynamic range	10 orders of magnitude of linear dynamic range
Touchscreen	12 inch capacitive touchscreen with real-time application viewing
Online ecosystem	Free, cloud-based Connect Platform with cloud-enabled systems
Security and auditing features	<ul style="list-style-type: none"> Integrated tools to assist with compliance The audit function is always enforced
Footprint (H x W x D)	54.7 x 33.8 x 52.5 cm
Weight	38 kg



QR code for “Features and benefits” video

 Learn more at thermofisher.com/quantstudio7prodx
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