

A qPCR System for the Future of Molecular Diagnostics: QuantStudio™ 7 Pro Dx Real-Time PCR System



Real-time PCR (qPCR) assays are now largely inseparable from clinical diagnostic labs. Use of molecular-based assays will continue to grow in number and importance for infectious disease, oncology, and other vitally important diagnostic applications. For diagnostic assay developers and clinical testing labs, this means that to stay ahead, it's no longer enough to simply have a qPCR system.

To truly drive innovation forward, you must select a qPCR system that serves the lab's present and future throughput needs, integrates seamlessly into the wider operational environment, and features the latest advancements with respect to data integrity, cyber security, user-friendliness, and beyond. Whether your lab focuses on assay development or performs clinical molecular diagnostic testing, the new capabilities of the Applied Biosystems™ [QuantStudio™ 7 Pro Dx Real-Time PCR System*](#) and Diomni™ software can maximize assay efficiency and offer your lab profound returns. Below, read how the latest features of the QuantStudio™ 7 Pro Dx Real-Time PCR System set it apart from other qPCR options.

Maximizing Efficiency and Flexibility for Assay Developers

For labs in the diagnostic development stage, having a qPCR system that can minimize an assay's time to market is crucial. The QuantStudio™ 7 Pro Dx Real-Time PCR System offers flexibility and scalability at every step to make progress as efficient as possible and let users take control of qPCR assay development. The instrument's clear touchscreen enables point-of-operation controls for assay layout and data analysis without a separate computer. Remote run monitoring and voice-activated commands also reduce hands-on time at the instrument, letting lab personnel start a run without even taking off their gloves. [Interchangeable 96-well and 384-well blocks](#) allow users to tailor each run to their specific needs, and both the 96- and 384-well blocks can be integrated with any level of automation, including liquid handling for continuous plate loading and API interfaces.

The QuantStudio™ 7 Pro Dx Real-Time PCR System is also tailored to the detailed quality assessment needs of developers. During qPCR assay development, it can also be challenging for a lab team to keep precise records of the detailed results, reagents used, and samples tested in a specific run, but accurate records are essential in verifying quality and reproducibility. The QuantStudio™ 7 Pro Dx Real-Time PCR System allows users to access archived information such as lot number and expiration date of reagents used in each run, detailed reports of experimental results, and critical sample data.

The Applied Biosystems Diomni software is a web application for [creating and managing assay definition files](#) (.ADF) On the instrument's clear touch screen, the software allows users to easily set up a run, configure assay parameters, and analyze plates in an intuitive interface, so users can quickly learn to operate the instrument all while reducing errors. The Diomni software also allows users to easily configure data visualization as desired, keeping analysis simple even in the dynamic environment of assay development. From the flexible, intuitive features of the instrument to the clear and navigable integrated software, the entire QuantStudio™ 7 Pro Dx Real-Time PCR System is perfectly tailored to support collaboration and accelerate the pace of your lab.

Supporting High Throughput and Quality Results for Clinical Labs

As qPCR continues to grow as a core component of clinical diagnostic testing, labs need advanced instrumentation and optimized workflows to stay competitive and add value to their health system. Innovative features of the QuantStudio™ 7 Pro Dx Real-Time PCR System makes it possible to lower turnaround times while delivering reliable, high-quality results. The interchangeable blocks and fast mode option of the QuantStudio™ 7 Pro Dx Real-Time PCR System lets personnel run a customized number of samples in as few as 30 minutes. Additionally, the smart, standalone system supports end-to-end IVD and LDT workflows without an accompanying computer, making every run as simple and seamless as possible. The Diomni software can be configured to accommodate different IVD and LDT assays as the lab's needs change.

Manual processes lower lab efficiency and introduce human error associated risk, which is especially problematic in a clinical setting. To reduce these risks, the QuantStudio™ 7 Pro Dx Real-Time PCR System offers a variety of ease-of-use features that make configuration straightforward for any user and reduce the need for manual setup. Through Diomni, assay definition files can be accessed to set up every run, streamlining testing operations. Furthermore, all clinical lab teams occasionally need to troubleshoot instrument issues, but a setting where time-to-result is crucial to high quality patient care, instrument downtime is an unacceptable and costly outcome for most labs. QuantStudio™ 7 Pro Dx Real-Time PCR System instruments include Thermo Fisher Scientific's integrated [Smart Help and Remote Support technology](#). This important feature lets personnel easily report issues, request maintenance, and receive remote troubleshooting assistance to minimize downtime and quickly get test schedules back online without overburdening personnel.

Security and auditing traceability are also critical priorities in a clinical setting. Building a foundation of data integrity and security from the start in qPCR operations will set your lab up for success and avoid regulatory challenges. [SAE functionality](#) in the QuantStudio™ 7 Pro Dx Real-Time PCR System complies with 21 CFR Part 11, ISO 15189, and ISO 13485. As an added benefit, centralized SAE settings can be applied to multiple instruments on the same network to simplify control of your lab's IT demands. The SAE software also provides full auditing traceability, recording, documenting, and archiving e-signatures on every test event and action taken. With QuantStudio™ 7 Pro Dx Real-Time PCR System, next-generation compliance features are built-in, giving your lab peace of mind even as operations grow.

Invest in a qPCR Platform That Delivers at Every Phase

The use of qPCR in molecular diagnostics continues to grow, and labs need a flexible, scalable, and advanced qPCR system to stay ahead of the curve. No matter how the challenges of molecular diagnostics evolve, innovative features of the QuantStudio™ 7 Pro Dx Real-Time PCR System and built-in Diomni software can support the unique needs of assay developers and clinical labs alike.

To learn more about how the QuantStudio™ 7 Pro Dx Real-Time PCR System can help your lab take control of molecular diagnostic development and testing, visit thermofisher.com/quantstudio7prodx or download our on-demand workshop to explore the [features of the Diomni software](#).

**Note: The QuantStudio™ 7 Pro Dx Real-Time PCR System is not available in all countries.*