AB applied biosystems™
by *life* technologies™

a new era in
high-productivity qPCR

Applied Biosystems® ViiA™ 7 Real-Time
PCR System

life technologies™

a new era in high-productivity qPCR

The ViiA™ 7 Real-Time PCR System delivers the proven reliability, sensitivity, and accuracy you expect from Applied Biosystems, with new features designed for high-productivity qPCR. Building on the gold-standard design elements of six generations of real-time PCR systems, the ViiA™ 7 Real-Time PCR System makes it easier to get the high-quality results you need.

- **Accomplish more, faster.** Run hundreds of qPCR reactions simultaneously on the ViiA™ 7 System with TaqMan® Array Micro Fluidic Cards. The fully integrated workflow speeds your time-to-results.

- **Skip the learning curve.** The ViiA™ 7 System's intuitive software, easy touch screen setup, automation integration, and effortless block exchange are designed to let you get started right away.

- **Get results you can trust: well to well, run to run, and instrument to instrument.** Enhanced fluorescence detection with the OptiFlex™ System offers six excitation and six emission filters for more multiplexing flexibility, and higher resolution for more accurate data.

- **Get the flexibility you need.** Easily interchangeable thermal cycling block formats let you select the format that's right for your project. You can choose from standard or Fast 96- and 384-well formats, as well as a novel 384-well TaqMan® Array block.

ViiA™ 7 [vee-uh sev-uhn]
## — high-productivity qPCR instrument

1. A new, 7th-generation real-time PCR system that paves the way for high-productivity qPCR through flexibility, performance, integrated TaqMan® Assay content, and the most advanced set of features available.

productivity. integration. performance.

The ViiA™ 7 Real-Time PCR System combines all of the qPCR features you want in a single high-performance instrument, so that you can optimize your research productivity. With a simplified workflow, intuitive software, touch screen interface, and one-button protocols for error minimization, the ViiA™ 7 System offers exceptional reproducibility with minimal well-to-well and instrument-to-instrument variation. Full compatibility with any standard or fast-cycling 384- or 96-well plates and TaqMan® Array Micro Fluidic Cards and Reagents makes high-productivity real-time PCR accessible to labs of any size.

Front access allows easy block change.

TaqMan® Array Micro Fluidic Card. Streamlines reaction setup, does not require liquid-handling robotics, and provides standardization when screening selected panels of genes.

Productivity...

High-performance features for maximum productivity

Ideal for performing medium- to high-throughput real-time PCR, the ViiA™ 7 System enhances your lab's productivity.

- **Quick block changes:** Front access makes it easy to change thermal cycling block formats without having to move attached peripherals such as robots or computers.

- **Easy touch screen interface:** Instrument touch screen provides one-touch protocols for fast and easy assay setup for a broad range of applications.

- **Automation compatibility:** Integrated with the Applied Biosystems® Twister® II Robot, the ViiA™ 7 System will allow you to maximize productivity for automated environments.

- **Peace of mind:** Data recovery capability for 100+ runs.

Integration...

Fully compatible with TaqMan® Array Micro Fluidic Cards

Applied Biosystems® TaqMan® Assays are the gold standard in qPCR analysis, providing high sensitivity, high specificity, and a broad dynamic range.

- **TaqMan® Array–ready:** Hundreds of customizable and predefined TaqMan® Array Micro Fluidic Cards are available, containing preloaded TaqMan® Gene Expression or MicroRNA Assays in an easy-to-use format. You can analyze 1–8 samples in parallel using your choice of 12–384 TaqMan® Assays.

- **384-well throughput without robotics:** With TaqMan® Array Micro Fluidic Cards, there's no need for liquid-handling robotics or complex pipetting to load; simply add your sample and master mix and run on the ViiA™ 7 System.

- **Compatible with the full range of TaqMan® Assays:** The ViiA™ 7 System is optimized to enable clear, clean data for all TaqMan® Assays, including MicroRNA Assays, Protein Assays, Long Non-coding RNA Assays, and Pri-miRNA Assays.

Performance...

New OptiFlex™ System for unsurpassed accuracy

The ViiA™ 7 System features the new OptiFlex™ System, which provides enhanced fluorescence detection enabling accurate and sensitive data analysis.

- **Better accuracy:** High-resolution detection system for more accurate reads with TaqMan® Array Micro Fluidic Cards, 384-well plates, and 96-well plates.

- **Maximum multiplexing:** Six decoupled excitation and emission filter channels for the greatest number of dye combinations and maximum multiplexing capabilities.

- **Flexible data collection:** Multiple ramp method detection formats provide more flexibility for collecting data during a ramp stage.

- **Precise quantification:** Detect changes as small as 1.5-fold in target quantities in singleplex reactions.
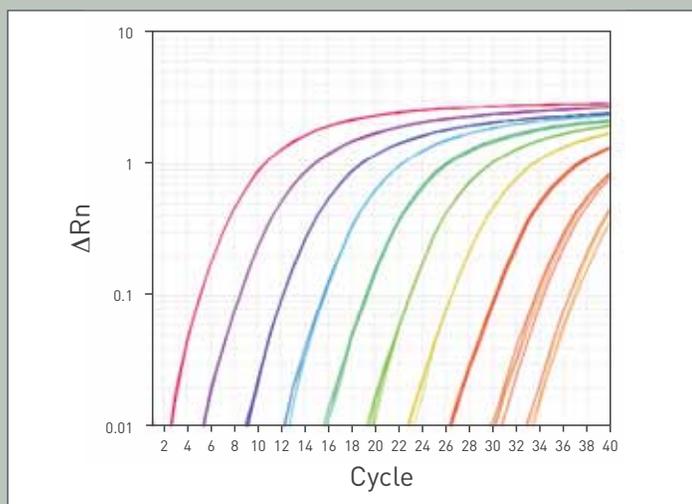
Real-time reproducibility. This plot shows results from amplification of 18S target DNA in 10-fold dilutions starting at 25,000 copies, using the 384-well block. The data show highly reproducible results over 9 logs of input template amount, illustrating the broad linear dynamic range of the system.

The ViiA™ 7 System is fully integrated with the Applied Biosystems® Twister® II Robot to enable high-productivity qPCR in automated environments.

ViiA™ 7 Software

Intuitive, easy-to-use software for maximum productivity

Intuitive interface and innovative design

- **User-friendly:** Easily identifiable icons guide you through the workflow seamlessly to set up runs and analyze experiments. The graphical interface makes it easy to edit the PCR thermal cycling conditions.

- **The ViiA™ 7 remembers your favorites:** With the new ReadiApp™ feature, you can quickly select default protocols for standard applications.

Convenient walk-away operation

Enjoy the freedom of operating the ViiA™ 7 System from any networked computer.

- **Full remote control of up to four instruments:** With the ViiA™ 7 Software Instrument Console, you can review run statistics and remotely control up to four instruments or experiments in real time from your desktop computer. You can also receive email notifications to keep you informed of run and instrument status when you are not in the lab.

- **Status monitoring of up to 15 instruments:** Up to 15 instruments can be networked for monitoring basic instrument status, so that you always know which instruments are in use and which are available for the next experiment.

Expandable software architecture

Optional add-ons are available to upgrade features to existing software.

- **21 CFR Part 11 compliance:** The optional SAE module assists with Security, Auditing, and Electronic signature of records for full data traceability.

- **Enhanced high-resolution melt (HRM):** Using the built-in MeltDoctor™ protocols and calibrations, you can spend less time optimizing the run and more time customizing your results. Define the number of variants you want to see by quickly changing analysis settings.

Improved data analysis

The ViiA™ 7 Software offers innovative approaches to analyze your data.

- **Easy management of large data sets:** The embedded gene expression (RQ) study application is designed to analyze 100+ runs, while heat maps and scatter plots provide quick checks on data quality.

- **Real-time control for genotyping cluster analysis:** In genotyping experiments, you can optimize your genotyping run times using a real-time PCR progress monitor to determine the ideal cycle for cluster analysis.

Fully compatible with high-throughput environments

- **High-throughput experiment setup:** Create multiple experiment files simultaneously with the push of a single button. You can import your plate setup files from other Applied Biosystems® real-time systems to facilitate easy experiment setup.

- **Easy, automated data export:** Set up experiment templates with predefined export preferences and have the ViiA™ 7 Software auto-export to your desired file directory.

- **Open API:** Open application program interfaces (API) allow integration with third-party systems such as LIMS (laboratory integration management systems) or custom automated platforms.
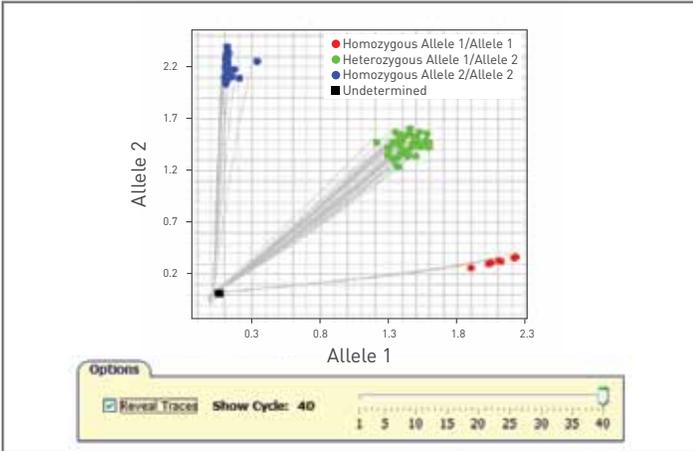
Allelic discrimination plot with traces using real-time PCR data. Cluster plot of 94 gDNA samples and 2 no-template controls (NTCs) genotyped using TaqMan® SNP Genotyping Assay C_245448_10 with both PCR and allelic discrimination performed on the Applied Biosystems® ViiA™ 7 Real-Time PCR System. The novel use of real-time PCR data to plot SNP cluster progress aids in calling ambiguous samples and reducing run times by displaying the optimal number of cycles necessary for maximum cluster separation.

Additional analysis plots are available for quality control. For example, heat maps are available to assess the correlation between samples in gene expression experiments.

With the ViiA™ 7 System, up to four instruments can be remotely controlled and precisely monitored in real time. You can even review detailed run statistics and other vital information remotely and receive status notifications by email. Up to 15 instruments can be networked to provide basic instrument status information from any networked computer.

Intuitive interface and innovative design. Thanks to an intuitive interface and innovative design, with ViiA™ 7 Software you can start a run in less than five clicks with the QuickStart feature, access optimized application protocols using the ReadiApp™ feature, and create studies directly from the software home screen.

the complete qPCR solution to advance your research

Our mission is to continually support your path to discovery. The ViiA™ 7 Real-Time PCR System embodies our commitment to providing everything you need for easier, more productive qPCR experiments as part of a complete solution from sample to results. With full integration, everything works together—instruments, software, chemistries, and ready-to-use assays—to enable the consistent, reliable results you need to advance your research.

In addition to instrumentation, software, and consumables, the ViiA™ 7 System includes:

- Professional installation
- Worldwide application and technical support

For more information about the ViiA™ 7 Real-Time PCR System or any of our qPCR products, contact your Applied Biosystems representative or visit **www.appliedbiosystems.com/viia7**

Specifications	
Block change design	Block change from front of instrument in less than 1 min; no secondary tools required
Temperature uniformity	±0.5°C, within 30 sec of reaching temperature set point
Run time	~35 min for 384-well, ~30 min for 0.2 mL 96-well and 0.1 mL Fast 96-well (using Applied Biosystems® Fast Master Mix)
Demonstrated sensitivity	Down to 1 copy
Dynamic range	Up to 9 logs of linear dynamic range
Supported applications	Standard curve, Comparative C_t, Genotyping, Presence/Absence, HRM, Melt curve
Resolution	Detect changes as little as 1.5-fold in target quantities in singleplex reaction
Supported blocks and volume	96-well standard (10–100 µL reactions) 96-well Fast (10–30 µL reactions) 384-well (5–20 µL reactions) TaqMan® Array Micro Fluidic Cards (~1 µL reactions)
Excitation/detection wavelengths	6 excitation (450–670 nm) 6 emission (500–720 nm)
21 CFR p11 enablement	Security and auditing features for instrument data
Power	100–240 V, ~50/60 Hz
Automation	Includes plate-loading arm w/ barcode (sales, service, and support provided by Life Technologies)
Remote monitoring	Ability to monitor 15 instruments at a time; optional Smart Monitoring Service for remote instrument diagnostic monitoring by Life Technologies
Remote notification	Emails user when run is started, stopped, or aborted
Data export format	Fully configurable by user
Dimension (W x D x H)	53.3 cm (21 in) x 63.5 cm (25 in) x 64.5 cm (25.4 in)
Weight	66.9 kg (148 lb)

Ordering information

Instrument systems	P/N
Applied Biosystems® ViiA™ 7 Real-Time PCR System with 384-Well Block	4453536
Applied Biosystems® ViiA™ 7 Real-Time PCR System with TaqMan® Array Block	4453537
Applied Biosystems® ViiA™ 7 Real-Time PCR System with 96-Well Fast Block	4453535
Applied Biosystems® ViiA™ 7 Real-Time PCR System with 96-Well Block	4453534

Accessories	
ViiA™ 7 System Automation Accessory Robot (100–240 V)	4453551
384-Well Block Upgrade Kit	4453545
TaqMan® Array Upgrade Kit	4453546
96-Well Fast Block Upgrade Kit	4453544
96-Well Block Upgrade Kit	4453543

Services	
1-Year Extended Warranty, ViiA™ 7 System	ZG61SCVIIA7

Software add-ons	
ViiA™ 7 Software HRM Module	4453724
ViiA™ 7 Software 21 CFR Part 11 Module	4453723

Life Technologies offers a breadth of products   DNA | RNA | PROTEIN | CELL CULTURE | INSTRUMENTS

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