

AriaDx Real-Time PCR System



Total Confidence in qPCR

The Agilent AriaDx Real-Time PCR System evolves with your clinical needs, providing you with modular and precise real-time PCR results. The AriaDx qPCR System offers configurable optical modules, intuitive software, and simple-to-use interface, empowering you with fast, reproducible, and accurate results. The state-of-the-art thermal cycler, LED optical modules, and on-board instrument self-diagnostic tests keep lifetime and maintenance costs to a minimum and ensure you are getting the most out of your samples





Confidence in Quick and Accurate Results

The AriaDx system's next-generation optics design, precision thermal block, and easy user interface enable quick turnaround times from assay set up to results—meaning quicker time to results.

- Blazing fast scan times: up to three seconds for all six channels
- Ready to go: factory calibrated
- Fast assay set up: intuitive touch screen interface



Confidence in a System that Meets Your Needs—Today and Tomorrow

The agile design of the AriaDx Real-Time PCR system offers the industry's first configurable and customer-changeable optics. Now you can mix and match optics to suit your needs today, and easily change them to suit your needs for tomorrow.

- Up to six optical module types/filters to choose from
- Low maintenance and lower life time costs
- On-board self-diagnostics to optimize instrument performance



Confidence in Easy-to-Use, Precise Software

The AriaDx software combines robust data analysis algorithms and intuitive organization for precision and ultimate ease-of-use.

- Aria Analytical software available for free
- Electronic tracking software upgrade available
- Tight and accurate thermal control

AriaDx

Better systems. Brilliant results.



Confidence in a system that meets your needs today and tomorrow

The AriaDx Real-Time PCR system is a fully integrated qPCR amplification, detection, and data analysis platform. The system's modular design combines a state-of-the-art thermal cycler, an advanced optical system with spectra-optimized LED modules, comprehensive data analysis software.

The instrument leverages a software suite of on-board diagnostics, giving you confidence that fail points are identified prior to running your assay. Experience total confidence with AriaDx's blend of speed, agility, and precision.

Speed

Ready, go!

Factory calibrated

The Agilent AriaDx Real-Time PCR system is ready to go out of the box – no calibration required!

Ultrafast chemistry

The AriaDx is optimized for our Brilliant III reagents and can run all fast chemistries.

Blazing scan times

Scan all channels in less than three seconds – the fastest in the industry.

Agility

Today and tomorrow

Modular design

Optical modules allow in-lab upgrades with the click of a button.

Intuitive interface

The touch screen makes system integration easy for all users.

Broad applications

The AriaDx supports multiple assays, chemistries, and applications, including: gene expression, comparative quantitative PCR, genotyping, allele discrimination, NGS library quantification, and more.

Precision

Superior data

Thermal control

Easily maintain $\pm 0.2^{\circ}\text{C}$ of your target temperature.

Impressive sensitivity

Two-fold discrimination in one cycle with 95% confidence over a wide dynamic range.

Easy reporting

Quickly export raw data in multiple formats and customize data reports.

Speed

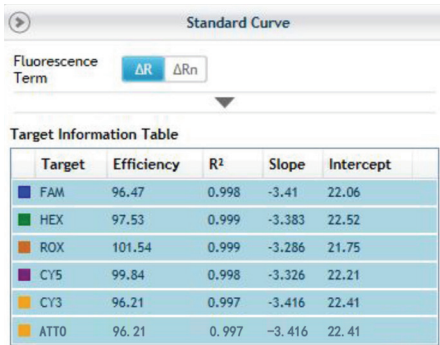


Figure 1. Six color standard curve data by fluor.

Ready go! Agilent Technologies provides a total solution approach to real-time quantitative PCR.

The AriaDx system makes routine and complicated applications simpler and faster without sacrificing data integrity.

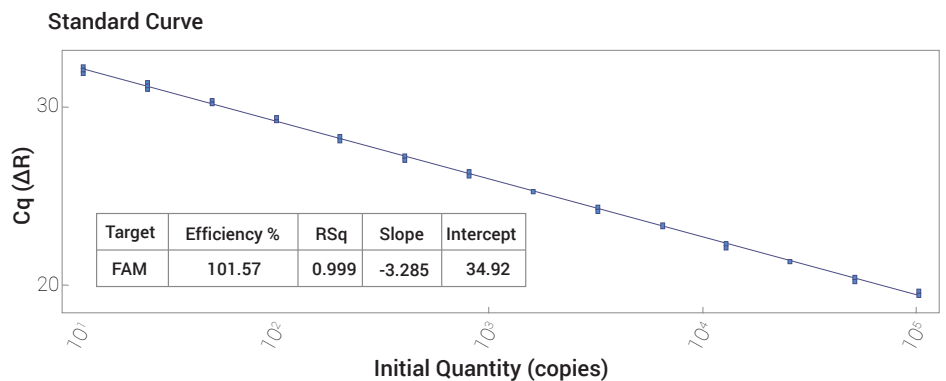
- **Multiplex**

More agility and speed in your assays with reagents optimized for your reactions.

- **Open platform**

Compatible with multiple reagent chemistries.

- *Tight manufacturing quality controls.*
- *Open reagent platform: use your assays and reagents.*



The AriaDx is sensitive enough to detect 2 copies to 1x10⁹ copies.

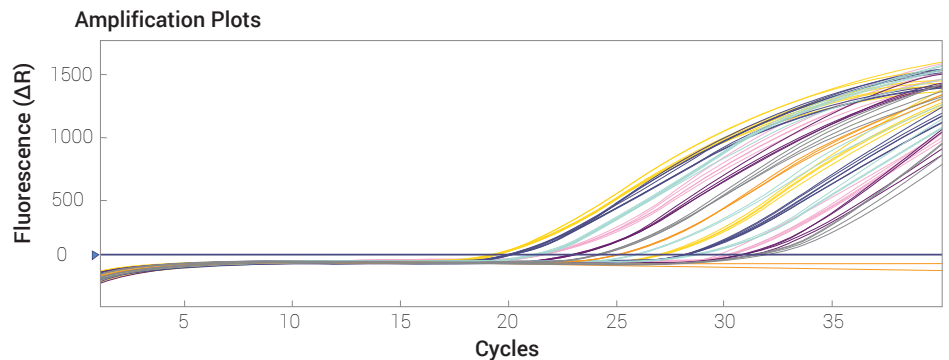


Figure 2. Amplification and standard curve plots showing sensitivity measuring a two-fold change.



Optical modules. The first real-time PCR system with optics contained in optical modules, the AriaDx system allows for less cross talk between channels—resulting in improved data resolution.

The AriaDx system comes calibrated directly from the factory. Now you can be confident you are measuring biological variation over the instrument's life.

- LIMS connectivity
- Expandable and upgradeable in the lab
- No reference channel needed
- "Set it and forget it" calibration
- Accommodate as many or as few optical channels as you require

With optical modules that have no need for a reference channel, you get tight calibration and steady emission wavelengths for consistent data with every run.



Software with LIMS connectivity. To effectively and effortlessly manage import and export of experimental data.

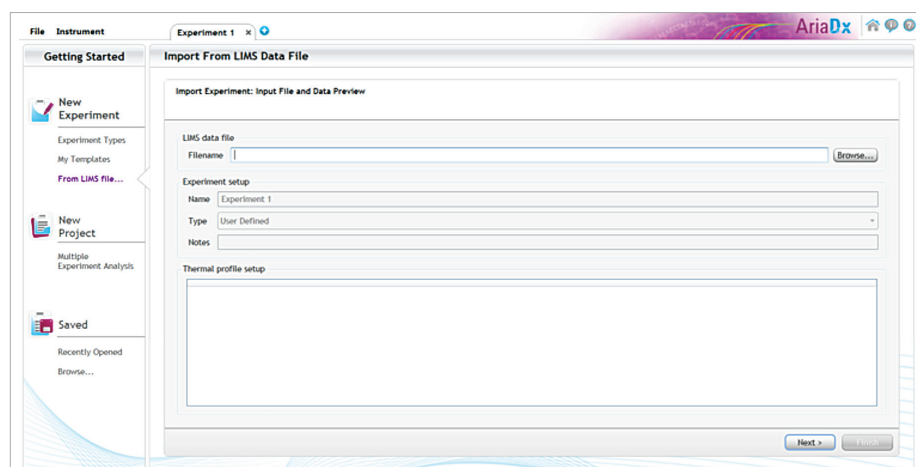


Figure 3. Set up experiments quickly and efficiently using LIMS import feature.

Advanced, easy-to-use software with proprietary algorithms accompany AriaDx's precision chemistry and thermocycling capability.

Easy touch screen set-up

Simple-to-use, feature-rich touchscreen allows you to set up runs with the touch of a finger. Secure data management and audit trailing features are available by licensing electronic tracking software upgrade.

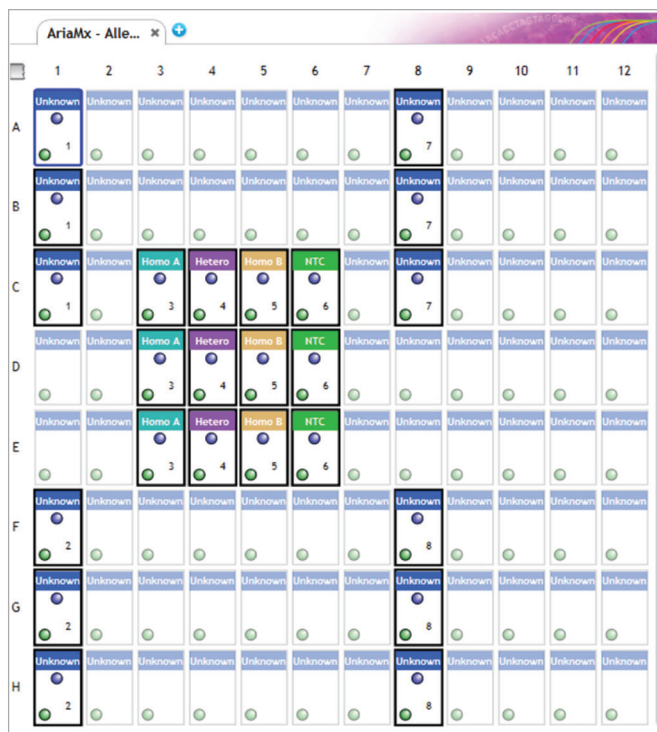
Software features

- Touchscreen set-up
- Onboard diagnostics
- Remote monitoring
- Base software included with instrument purchase



Plate maps at your fingertips

Program at the plate and well level. Simply hover over a well, and its details will open in a new window.



	1	2	3	4	5	6	7	8	9	10	11	12
A	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
B	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
C	Unknown	Unknown	Homo A	Hetero	Homo B	NTC	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
D	Unknown	Unknown	Homo A	Hetero	Homo B	NTC	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
E	Unknown	Unknown	Homo A	Hetero	Homo B	NTC	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
F	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
G	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
H	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown

- LIMS connectivity at no additional charge.
- Secure data management and audit trail provided by electronic tracking software upgrade.

Figure 4. Easy-to-access plate and well maps.

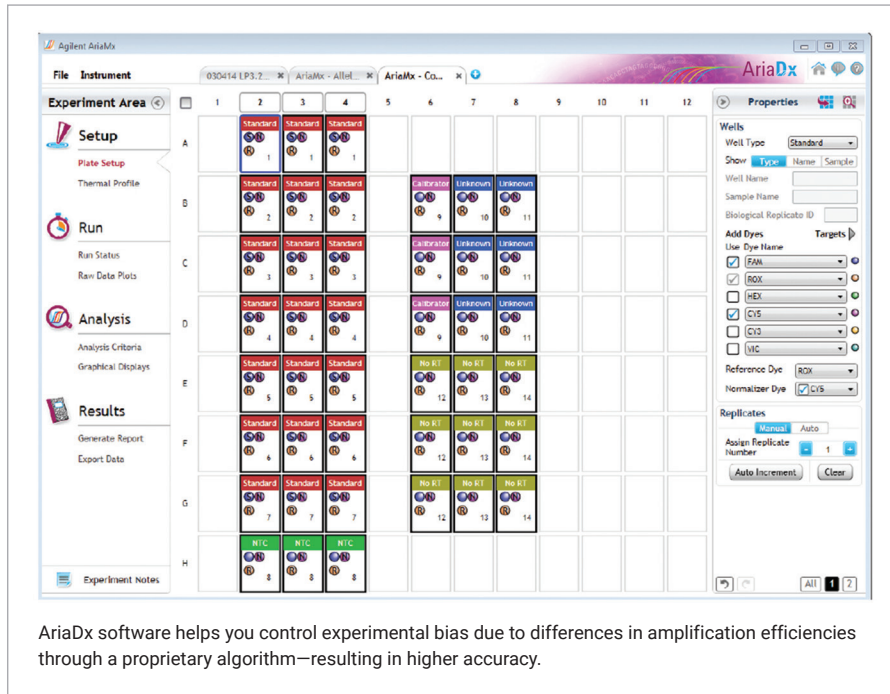
Pre-programmed assays

Pre-programmed assays allow for easy selection of calibrators, normalizers and sample associations.

- Quantitative PCR
- Allele discrimination
- Comparative quantification

In high throughput gene expression studies, standard curves are not used. Relative quantity calculation is automated using the comparative quantitation module in the AriaDx software.

See Figure 5 for details.



AriaDx software helps you control experimental bias due to differences in amplification efficiencies through a proprietary algorithm—resulting in higher accuracy.

Figure 5. Set-up screen for comparative quantitation.

Easy reporting

Easily export raw data in multiple formats with the touch of a finger. Select only those datasets you want displayed using custom data reports:

- Plate set-up
- Experimental thermal profile
- Raw data plots
- Analysis criteria
- Amplification plots
- Allele determination
- Graphical displays
- Tabular results
- Experimental notes

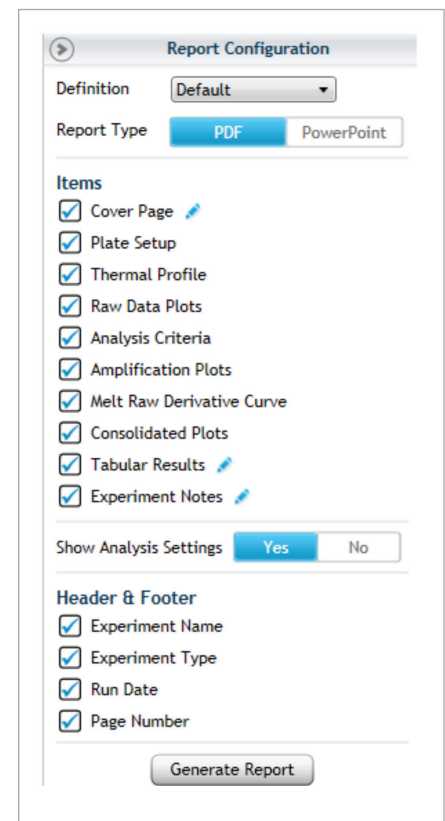


Figure 6. Report configuration.

Note: Electronic Tracking software is available at an additional cost. HRM analysis feature is not available for the AriaDx.

Services

Give your research the attention it deserves. Regain time lost on peripheral tasks and focus on the critical processes that keep your lab competitive and successful.

Maximize Uptime, and Get More Reliable Results

Agilent CrossLab service plans, preventive maintenance, and compliance services are available to you at the system level, assuring all modules of your system are covered.

Confidence, Not Compromise

Agilent stands behind every instrument, giving you confidence in equipment functionality and data. Agilent has one global focal point: providing our customers with the best service available worldwide.

- *96%+ of parts immediately available when needed.*
- *Speedy delivery for critical parts.*
- *Dedicated instrument support for fast issue resolution.*

Up to 90% of Agilent-certified service professionals hold advanced degrees and our service professionals average over 7.5 years of instrument repair experience. Equipped with calibrated and traceable tools, our service technicians verify your equipment is running at maximum performance. Agilent hardware and software qualification protocols guarantee rapid issue resolution.

The Agilent Service Guarantee if we cannot fix an instrument covered by an Agilent CrossLab service plan, regardless of manufacturer, our escalation process will resolve the issue up to and including replacing your instrument for free.*

Breadth of Services

Agilent-certified service professionals have been called upon to support customers with customized training, systems and enterprise integration, workflow design, special engineering projects, protocol development, and project management. We have conducted over 100,000 successful system qualifications worldwide, and our genomics professionals operate in 65 countries.

Immediate Assistance

Whatever the challenge, our broad resources address your needs. Expect reduced repair time with:

- **Virtual technical support:** Rapid assistance with instrumentation, reagents, applications, and protocols requires a vast knowledge of a variety of chemistries. That's why our advanced Application Scientists are typically PhD scientists with genomics experience – just like you. If you still need a service visit, your Agilent-certified service professional will have a previewed diagnosis and will arrive quickly with the required parts and supplies.
- **Detailed asset information:** Our tracking system provides critical information on instrument usage, resulting in quicker solutions.

Warranty and Multi-Year Upfront Coverage

Each AriaDx has a global warranty, including the standard warranty for the country of purchase. If moved to another country, the destination country's standard warranty will apply to the instrument.¹

Agilent CrossLab Service plans available for purchase with AriaDx include:

- **Enhanced Extended Warranty:** lengthens your instrument's standard warranty coverage, including an enhanced second year of warranty-level repair using genuine Agilent parts with an annual preventive maintenance service.²
- **Return to Agilent (RTA):** This may be accompanied with a loaner instrument, exchanging out your instrument, or direct return of your instrument to Agilent.
- **Installation and Introduction (I&I):** An Agilent-certified service professional will install and introduce you to the AriaDx system.
- **Standard preventive maintenance (PM):** Agilent is available to run routine maintenance check-ups on your instrument annually to ensure peak performance for the upcoming year.³
- **CrossLab Silver:** A bundled service plan including annual standard preventive maintenance service and the return to Agilent RTA program, if necessary.
- **Multiyear service plans:** Protect against price increases and lock-in your price for the plan's duration. Cut down on administrative tasks, save time, and focus on strategic initiatives knowing that you have continued service coverage.



¹ Except for on-site warranty where Agilent does not have an applicable product-specific support presence or authorized representative in that country.

² Only available for new instrument purchases.

Specifications

Feature	Description
Excitation Source	8 dye specific LEDs per optical module
Detection Sources	8 photodiodes
Optical Modules	SYBR/FAM HEX ROX CY3 CY5 ATTO425 6 slots, swappable optical modules
Dye Selection	Excitation and Emission
Reaction Volume	10 µL to 30 µL
Chemistries Supported	SYBR, HRM
Thermal System	Six Peltiers made from two ceramic plates with semi-conductor elements, 96-well
Thermal System Temperature Range	25.0 – 99.9°C Heating: 6.0°C/sec Cooling: 3.0°C/sec (Median), 2.5°C/sec (Average) Accuracy: ± 0.2°C or better at typical annealing, amplification, and denaturation temperatures
Dynamic Range	9
Experiment Types	Quantitative PCR with dye, Quantitative PCR with probe, Allele Discrimination with HRM, Allele Discrimination with probe, Comparative Quantitation, User Defined
Uniformity	± 0.4°C
Data Acquisition Time	<3 seconds for all
Electrical Power (input)	100 – 240VAC, 50/60Hz, 1100VA
Operating Environment	20 – 30°C, 20 – 80% non-condensing humidity, 7500 feet, max altitude
Weight	50 lbs. (23 kg)
Dimensions	19.7" W x 18.1" D x 16.5" H (50cm x 46cm x 42cm)

Feature	Description
Sample Containers	96-well plates, strip tubes; 0.2 mL tubes
Warranty	<ul style="list-style-type: none"> • 1-year warranty is standard with the instrument • 5-year warranty and service packages available
Onboard Analytics	<ul style="list-style-type: none"> • Thermal, physical, interactive (sensors) tests • Extended: 125 performance points tested in 30 minutes • Start-up: 59 performance points tested in ~1 minute • Optional bypass of both features
Services (upon request)	<ul style="list-style-type: none"> • Installation and introduction • Standard preventive maintenance • Extended warranty and service contracts available • Onsite repair where available
Operating System	<ul style="list-style-type: none"> • Windows 10 Pro (64-bit) - with preferred language set to English (United States)
MS Office Compatibility	<ul style="list-style-type: none"> • Microsoft 2010 and 2013 compatible
Run Modes	<ul style="list-style-type: none"> • Stand alone • PC connected • LAN connected to PC (more than 20 instruments can be connected and monitored remotely) • USB connected, external devices
Software	<ul style="list-style-type: none"> • Free software including LIMS connectivity • Electronic Tracking software upgrade
Optical Module Calibration and Cleaning	<ul style="list-style-type: none"> • All channels can be tested and calibrated • All attributes of optical channels are calibrated at the factory – LED light output, light path, mirror, and photodiode • Optical modules can be cleaned in the lab without requiring help from an Agilent technician or a factory return.
Selected Applications	<ul style="list-style-type: none"> • Quantitative and qualitative gene expression analysis • miRNA analysis • Genetic mapping • Genetic fingerprinting • NGS library quantification • 2-6 channel multiplex ability • Pathogen quantification

Quick Reference

Useful tools and web links

qPCR decision tree: Determine which qPCR reagents or enzymes best serve your needs.

AriaDx software updates: Ensure your software is the most current version.

Agilent Genomics Biocalculators for PCR and qPCR: Useful for both new and expert users.

Ordering Information

Category	Part Number	Description	Quantity
Base Instrumentation	K8930AA	AriaDx Real-Time PCR system (base instrument)	1
Optical Modules (Select 1-6 filters to add to base instrument. Additional filters can be added to base instrument at any time.)	Option 101	SYBR/FAM Optical module	1/pack
	Option 102	ROX Optical module	1/pack
	Option 103	HEX Optical module	1/pack
	Option 104	CY3 Optical module	1/pack
	Option 105	CY5 Optical module	1/pack
	Option 106	ATTO425 Optical module	1/pack
	Option 300	Electronic Tracking software upgrade	1 authorization code (good for one license)
AriaDx Software Upgrade (post instrument purchase)	K5822AA	Electronic Tracking software upgrade	1 authorization code (good for one license)
Optical Modules (sold without instrument)	G8830-67001	SYBR/FAM Optical module	1/pack
	G8830-67002	ROX Optical module	1/pack
	G8830-67003	HEX Optical module	1/pack
	G8830-67004	CY3 Optical module	1/pack
	G8830-67005	CY5 Optical module	1/pack
	G8830-67006	ATTO425 Optical module	1/pack
Plastics	401490	AriaMx 96-well plates, skirted and low profile	1 x 25/pack
	401491	AriaMx 96-well plates, skirted and rigid	1 x 25/pack
	401494	AriaMx 96-well plates, non skirted low profile	1 x 25/pack
	401492	AriaMx adhesive plate seals	1 x 50/pack
	401493	AriaMx low profile strip tubes for PCR and qPCR applications, without caps	8/strip x 120/box
	401425	AriaMx Strip caps for PCR and qPCR applications	8/strip x 120/box
	Qualification Plate	5190-7708	SYBR Qualification Plate