

AriaMx Real-Time PCR System

DATA SHEET



Introduction

The AriaMx Real-Time PCR System is a fully integrated quantitative PCR amplification, detection, and data analysis system. We have invented a new, [more flexible format for precision qPCR optics](#).

The latest design combines a [state-of-the-art thermal cycler](#), an advanced optical system with LED excitation source, and data analysis software. Continuing the tradition of intuitive software, the instrument now has a touchscreen so plates and analytics can be started with the touch of a finger.

With [enhanced performance](#), the software provides results capturing RDML information required for publishing under the miQE guidelines. Simultaneously, the software is equipped to [export images and raw data in multiple formats](#), allowing results to be viewed in common programs.

Specifications Table

| Feature | Description |
|---|--|
| Excitation Source | 8 dye specific LEDs per optical module |
| Detection Sources | 8 silicon photo-detectors per optical module |
| Dyes (at launch) | SYBR/FAM 462.5 – 516.0nm. Detectable C _t for 0.001ng/DNA per reaction (R ² > 0.980) HEX 535.0 – 555.0nm. Detectable C _t for 0.001ng/DNA per reaction (R ² > 0.980) ROX 585.0 – 610.0nm. Detectable C _t for 0.001ng/DNA per reaction (R ² > 0.980) CY3 542.0 – 568.5nm. Detectable C _t for 0.001ng/DNA per reaction (R ² > 0.980) CY5 635.0 – 665.0nm. Detectable C _t for 0.001ng/DNA per reaction (R ² > 0.980) 6 slots, swappable cartridges – Ask about our custom cartridge design program |
| Dye Selection | Excitation and emission |
| Reaction Volume | 10µL to 30µL |
| Chemistries Supported | SYBR, Probe, 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°C/sec Cooling: 3°C/sec (Median), 2.5°C/sec (Average) Accuracy: ± 0.2°C or better at typical annealing, amplification, and denaturation temperatures |
| Dynamic Range | 10 fold |
| Comparative Quantitation | 2x (Range 1.3x to 3x), 10x (Range 6.5x to 15x) |
| Multiplex | Difference in C _t between single-plex and multiplex assay wells is <0.7 |
| Sensitivity (FAM) | Discriminates between 2 fold populations ranging from 100k to 12 copies with 95% confidence |
| Uniformity | C _t , St Dev (5s/10s) <0.20, 5 colors, SYBR and T _m assays |
| Electrical Power (input) | 100 – 240VAC, 50/60Hz, 1100A |
| 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) |
| Sample Containers | 0.2ml tubes, 96 well plates, strip tubes |
| Warranty | • 2 year warranty is standard with the instrument • 5 year warranty and service packages available |
| Onboard Analytics | • 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) | • Installation and familiarization • Standard and Enhanced Preventative Maintenance • Additional year warranty (+1 increments, up to 5 years coverage) • Return-to-Agilent Instrument Exchange Program • Thermal block verification |

For more firmware and software features, see next page.

Specifications Table (con't)

| Feature | Description |
|--|---|
| Operating System | Windows 7 |
| Run Modes | <ul style="list-style-type: none"> • Stand alone • PC connected • LAN connected: more than 20 instruments can be connected and monitored remotely • External devices/USB connected |
| Optical Module Calibration and Cleaning | <ul style="list-style-type: none"> • All channels can be tested and calibrated • All attributes of channels can be calibrated – LED light, light path, and mirror • Optical modules can be cleaned in lab without Agilent technician or sending back to factory |
| 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 analysis • HRM analysis (including genotyping, mutational analysis, and class IV SNP detection) • Pathogen quantification |

Ordering Information

| Category | Part # | Description | Quantity |
|--------------------------------|-------------|---|-------------------|
| Instrumentation | G8830A | Base Instrument | 1 |
| | G8830-64000 | AriaMx Real-Time PCR System 5 Fixed | 1 |
| | G8830-64010 | AriaMx Real-Time PCR System 4 Fixed | 1 |
| 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 | Agilent 96 Well Plates, Non-Skirted Low Profile | 1 x 25/pack |
| | 401492 | AriaMx Adhesive Plate Seals | 1 x 25/pack |
| | 401493 | AriaMx Low Profile Strip Tubes for PCR and qPCR Applications Without Caps | 8/strip x 120/box |
| | 401425 | Strip Caps for PCR and qPCR Applications | 8/strip x 120/box |
| Reagents and References | 5190-7708 | SYBR Reference Plate | 1/pack |
| | 5190-7702 | HRM AriaMx Calibration Kit | 1 x 96 well plate |
| | 5190-7862 | Brilliant HRM Ultra-Fast Loci Master Mix | 2 ml/200 rxns |
| Optical Modules | G8830-67701 | FAM Cartridge Module | 1/pack |
| | G8830-67702 | ROX Cartridge Module | 1/pack |
| | G8830-67703 | HEX Cartridge Module | 1/pack |
| | G8830-67704 | CY3 Cartridge Module | 1/pack |
| | G8830-67705 | CY5 Cartridge Module | 1/pack |

Useful Tools and Web Links

qPCR Decision Tree

Determine which qPCR reagents or enzymes best serve your needs.

Software Updates

Ensure your software is the most current version by visiting

www.agilent.com/genomics/ariamxsoftware



FOR MORE INFORMATION

(800) 227-9770 | qpcr@agilent.com | www.agilent.com/genomics/ariamx

For a virtual demo, visit www.agilent.com/genomics/ariamxvideos

For a live demo, call your Agilent sales representative.

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