Maverick compact qPCR system

Product overview

Anitoa Maverick is a portable high-performance real time quantitative PCR system. Maverick is equipped with a 4-channel direct imaging fluorescence optical system, powered by Anitoa's ultra-low-light CMOS bio-imager sensor; and a fast Peltier-powered thermal cycler. Maverick is optimally suited for applications where portability, minimal space, fast time-to-result is required. Applications of Maverick are point-of-care molecular diagnostics test (POCT)[1], food safety and environment testing, agriculture, or research lab use where bench space is limited.

Figure 1. Maverick compact qPCR system

Features

- Compact and rugged design. No internal moving parts, and no need for calibration.
- Multi-wavelengths 4-channels fluorescence sensing capability[2].
- Equipped with ultra-low-light sensitive CMOS-based fluorescent imager.
- Multi-lingual, cross platform software, with cloud connectivity for data storage and analytics
- Low power. External 10V supply. <= 90W active power.
- Battery-backup option for outdoor use and power loss protection

[1] Clinical clearance maybe required

[2] Support Intercalating dyes, hydroxyls probes and FRET probes

Key parameters

Capacity (# of wells)	4, 8, 16
Channels (# of Fluorophores per well)	4 (1. FAM/SYBR Green; 2. JOE/HEX/VIC/TET; 3. ROX/Texas Red; 4. CY5/LIZ/Cy5.5)
Multiplex capability	Up to 4 targets per well
Minimum detection threshold	4 copies
Dynamic range	>1.0E9
Signal Interface	USB 2.0, Bluetooth® 2.0
Excitation source	High endurance LED
Detector	Ultra-low-light CMOS bio-imaging chip
Thermal system	Solid-state, Peltier-based
Tube/plate formats	0.2mL, 4 or 8-tube strip
Reaction volume	10uL – 60uL
Filters:	4 sets exchangeable*, **
Excitation Range:	460nm – 670nm
Emission Range	510nm – 720nm
DNA probes supported:	DNA binding dyes (e.g. SybrGreen), hydrolysis probes (e.g. TaqMan probe) and hybridization probes (e.g. FRET probes)
Programming modes:	qPCR amplification with touchdown option; iso-thermal amplification; melting curve analysis; manual fluorescence measurement and quantification
Temperature Uniformity	< +-0.2°C
Temperature control resolution	+-0.1 °C
Temperature Ramp Rate	Up to 6.5°C / s heating; 4°C / s cooling
Size and weight	165mm (L) x 115mm (W) x 75mm (H)
Weight	950g (4 well model)
Power supply	DC 10.5V, 90W (CE-approved adapter provided that accepts 110V/240V AC)

*: Wavelength characteristics can be modified by changing filter modules.

**: We support 1 – 4 channels in different configurations.

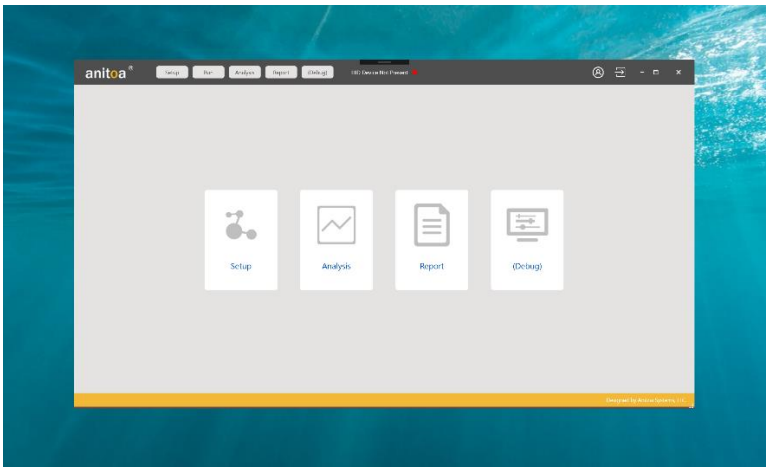
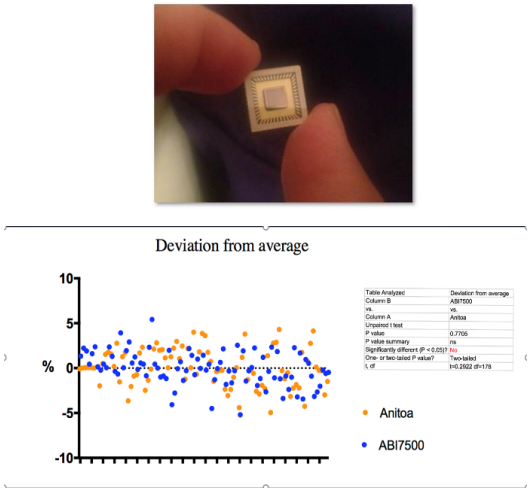


Figure 2. Maverick™ software, multi-language and multi-platform (PC, Android)

Figure 3. Size comparison of Maverick 8, 4, and 16 well models



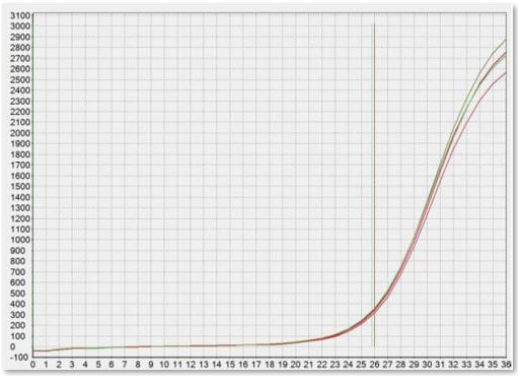


Figure 4. Maverick uses Anitoa's ultra-sensitive CMOS Image Sensor (CIS) for fluorescence detection

Applications

- Point-of-care molecular diagnostics[3]
- Food safety test
- Environmental microbial-threat monitoring
- Agriculture DNA testing
- Forensic testing
- Research and educational lab use
- Drug quality assurance testing

Contact

Anitoa Systems, LLC
149 Commonwealth Drive Suit 1001
Menlo Park, CA 94025
www.anitoa.com
info@anitoa.com

[3] Clinical clearance required.