



## CFX Opus 96 Dx Real-Time PCR System

### Robust Performance Ensures Reliable Patient Results



The CFX Opus 96 Dx Real-Time PCR System provides a robust and reliable open platform for development and performance of in vitro diagnostic assays. With enhanced thermal performance, this system ensures consistent data from well to well. When used with CFX Maestro Dx SE Software for security and traceability, the integrity of patient results is ensured. Quickly set up runs and easily monitor run progress and analyze data using the comprehensive data management and analysis tools of CFX Maestro Dx SE Software.

#### Benefits

- Assist with U.S. FDA 21 CFR Part 11 regulations using CFX Maestro Dx SE Software security, audit, and electronic signature capabilities
  - View, sign, save, and print an audit report with CFX Maestro Dx SE Software
  - Control access to protocols and run files on the instrument with User Management through use of user name and password
  - Utilize thermal gradient function to assist with assay optimization during development
  - Control up to 4 CFX Opus Dx Systems with CFX Maestro Dx SE Software for Windows 10 (64-bit)
  - Email your completed run
  - Save protocols and completed runs in a network folder
- The system's intuitive touch-screen user interface supports both experienced and new real-time PCR users.
- Create new real-time PCR protocols or easily modify existing protocols
  - Set up unique User Names, with optional passwords, to easily organize and find your protocols and experiments

## Specifications

<b>System</b>		Gradient	
Licensed for real-time PCR	Yes	Operational range	30–100°C
Sample capacity	96 wells	Programmable span	1–24°C
Sample size	1–50 µl (10–50 µl recommended)	<b>CFX Maestro Dx SE Data Management and Analysis Software</b>	
Dimensions (W x D x H)	33 x 56 x 36 cm (13 x 22 x 14 in.)	Operating system	Windows 10 (64-bit)
Weight	22 kg (48 lb)	Memory	Minimum of 1 GB
Touch-screen user interface	Adjustable, with angle of rotation 12–55°	Data analysis modes	PCR quantification with standard curve Melt curve analysis Gene expression analysis by relative quantity ( $\Delta Cq$ ) or normalized expression ( $\Delta\Delta Cq$ ) Multiple-file gene expression analysis for comparison of an unlimited number of Cq values Allelic discrimination Endpoint analysis
Communications	USB 2.0 or above, Ethernet		Data analysis options include bar charts, box-and-whisker plots, dot plots, clustergrams, and scatter plots
Electrical approvals	IEC, CE		
Operating system	Windows 10 IoT		
<b>Optical Detection System</b>			
Excitation	6 filtered LEDs		
Detection	6 filtered photodiodes		
Range of excitation/emission wavelengths	450–730 nm		
Scan time			
All channels	12 sec		
Single channel	3 sec		
Dynamic range	10 orders of magnitude		
Sensitivity	Detects 1 copy of target sequence in human genomic DNA	Data export	Save, copy, and print all graphs and spreadsheets from right-click menu Export specified data in multiple formats Copy and paste into a Microsoft Excel, Word, or PowerPoint file Print directly or save as PDFs customizable reports containing run settings, data graphs, and spreadsheets Export to RDML
Multiplex analysis	Up to 5 targets per well		
<b>96-Well Reaction Block</b>		Image export	Export images at any pixel size and at a resolution up to 600 dpi Save images as .bmp, .jpg, or .png files
Sample block type	Fixed 96-well sample block		
Heating and cooling method	Peltier		
Lid heating	30–110°C		
Temperature range	4–100°C		
Maximum ramp rate	5°C/sec		
Average ramp rate	3.3°C/sec		
Thermal accuracy	±0.2°C		
Thermal uniformity	±0.3°C, measured 10 sec after the block reaches the target temperature		

## Ordering Information

Catalog #	Description
12014330*	<b>CFX Opus 96 Dx Real-Time PCR System</b> , for use in countries other than China
12014334*	<b>CFX Opus 96 Dx Real-Time PCR System</b> , for use in China
12014349	<b>CFX Maestro Dx SE Software</b> , English version
12014350	<b>CFX Maestro Dx SE Software</b> , Chinese version
12014351	<b>CFX Maestro Dx SE Software</b> , Russian version
1845098	<b>CFX Qualification Plate</b> , 96-well
1814000	<b>PX1 PCR Plate Sealer</b> , includes heat sealing instrument
1814030	<b>PCR Plate Heat Seal</b> , pkg of 100, optically clear seals for use with the PX1 PCR Plate Sealer
MSB1001	<b>Microseal 'B' PCR Plate Sealing Film</b> , pkg of 100, optically clear seals for PCR plates
HSP9655	<b>Hard-Shell 96-Well PCR Plates</b> , pkg of 50, low profile, thin wall, skirted, white shell/white wells
HSP9955	<b>Hard-Shell 96-Well PCR Plates</b> , pkg of 50, low profile, thin wall, skirted, white shell/white wells, barcoded

\* The CFX Opus 96 Dx System ships with power cord, USB cable, Ethernet cable, and CFX Maestro Dx SE Software, English version.

Visit [bio-rad.com/CFXOpusDx](http://bio-rad.com/CFXOpusDx) for more information.

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Hard-Shell Plates are covered by one or more of the following U.S. patents or their foreign counterparts owned by Eppendorf AG: U.S. Patent Numbers 7,347,977; 6,340,589; and 6,528,302.

Notice regarding high resolution melt analysis:

No rights are granted by Bio-Rad for the use of high resolution melt analysis in the fields of human or veterinary in vitro diagnostics. In addition, it is the responsibility of the purchaser to obtain any intellectual property rights which may be required for its specific applications.



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