

**新 CFX Connect™ 实时定量 PCR 仪**

订货信息请参见第 321 页

CFX Connect 可同时检测 2 个基因的表达，可使用 SYBR® Green/EvaGreen 或其他双通道实验方案。系统采用长寿命的固定光路技术，提供最大程度上的灵活性并确保稳定性。此外，通过界面友好、强大的 CFX Manager™ 数据分析软件可进行实验的设置与数据的分析。

- 出厂即经过校正，快安装简单，快速进行实验并得到结果
- 通过梯度功能优化反应条件，节约时间与试剂成本
- CFX Manager 数据分析软件可快速、准确地处理原始数据
- 运行结束后，数据文件会作为附件通过电子邮件发送，随时随地分析数据
- 通过电脑，最多可控制 4 台仪器，满足高通量实验室的要求
- 将数据导入 qbase<sup>PLUS</sup>，进行更专业的统计学分析

更多信息，请访问 [www.bio-rad.com/cfxconnect](http://www.bio-rad.com/cfxconnect)，  
参考或下载资料 # 6102, 6103 和 6105。

**新 CFX 96 Touch™ 实时定量 PCR 仪**

订货信息请参见第 322 页

CFX 96 Touch 实时定量 PCR 仪最多可同时检测 5 个基因的表达，满足所有定量的应用。整个系统由出色的热循环模块、使用友好的软件、设计先进的光学模块等组成。

主要特点如下：

- 出厂即经过校正，快安装简单，快速进行实验并得到结果
- 可通过超大的彩色触摸屏进行实验的设置以及反应的监控，无需 PC
- 通过梯度功能优化反应条件，节约时间与试剂成本
- 同时检测 5 个基因的表达，有效节约试剂与宝贵的样品，反应体系可低至 10 μl

更多信息，请访问 [www.bio-rad.com/cfx96-pcr](http://www.bio-rad.com/cfx96-pcr)，  
参考或下载资料 # 6075, 6076 和 6093。



# CFX Connect™ Real-Time PCR Detection System

## Specifications

### Real-Time PCR

Bulletin 6102

### Advancing qPCR Together

The CFX Connect Real-Time PCR Detection System incorporates industry-leading optics with a Peltier-based reaction block for precise and reliable quantitative PCR (qPCR) data acquisition. The system offers an integrated solution for all your SYBR® Green/EvaGreen and duplex experiments. A thermal gradient is easily generated across the 96-well reaction block to support rapid optimization of real-time PCR assays. The CFX Connect System includes the powerful CFX Manager™ Software for system operation, experiment setup, and data analysis.



### Specifications

<b>CFX Connect Thermal Cycler with 96-Well Reaction Module</b>			
Maximum ramp rate	5°C/sec	Temperature range	0–100°C
Average ramp rate	3.3°C/sec	Temperature accuracy	±0.2°C of programmed target at 90°C
Heating and cooling method	Peltier	Temperature uniformity	±0.4°C well-to-well within 10 sec of arrival at 90°C
Lid	Heats up to 105°C		
Gradient			
Operational range	30–100°C		
Programmable span	1–24°C		
<b>Optical Detection</b>			
Excitation	3 filtered LEDs	Dynamic range	10 orders of magnitude
Detection	3 filtered photodiodes	Scan time	
Range of excitation/ emission wavelengths	450–580 nm	All channels	12 sec
Sensitivity	Detects 1 copy of target sequence in human genomic DNA	Single channel fast scan	3 sec
<b>CFX Manager Software</b>			
Operating systems	Windows 7, Windows 8	Data export	Save, copy, and print all graphs and spreadsheets from right-click menu
Memory	Minimum of 1 GB		Export specified data in multiple formats
Multiplex analysis	Up to 2 targets per well		Copy and paste into Microsoft Excel, Word, or PowerPoint file
Data analysis modes	PCR quantification with standard curve Melt curve analysis Gene expression analysis by relative quantity ( $\Delta C_q$ ) or normalized expression ( $\Delta\Delta C_q$ ) with multiple reference genes and individual reaction efficiencies Data analysis options include bar chart, clustergram, scatter plot, volcano plot, and heat map Multiple file gene expression analysis for comparison of an unlimited number of $C_q$ values Allelic discrimination End-point analysis		Customizable reports containing run settings, data graphs, and spreadsheets can be directly printed or saved as PDFs
<b>System</b>			
Licensed for real-time PCR	Yes	Electrical approvals	IEC, CE
Sample capacity	96 wells	Dimensions (W x D x H)	33 x 46 x 36 cm (13 x 18 x 14 in.)
Sample size	1–50 $\mu$ l (10–25 $\mu$ l recommended)	Weight	21 kg (47 lb)
Communications	USB 2.0		

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# CFX96 Touch™ Real-Time PCR Detection System

## Specifications

### Real-Time PCR

Bulletin 6075

### Advancing qPCR Together

The CFX96 Touch Real-Time PCR Detection System lets you quickly set up runs, easily monitor their progress, and use powerful analysis tools. Solid-state optical components provide sensitive detection for precise quantification and target discrimination. Five-target multiplexing enables powerful simultaneous analyses. Tailor the run to detect SYBR® Green in the single-color fast scan mode. Set up runs and view data traces in real time on the integrated touch screen. CFX Maestro™ Software is customizable for all levels of users and different experiment needs. A startup wizard and intuitive experiment setup make it easy to get started with real-time PCR. Extract meaningful information from runs and visualize data using bar charts, box-and-whisker plots, dot plots, clustergrams, scatter plots, and volcano plots. Further analyze data using statistics, including *t*-tests and one-way ANOVA.



### Specifications

<b>C1000 Touch™ Thermal Cycler with 96-Well Reaction Module</b>			
Maximum ramp rate	5°C/sec	Temperature range	0–100°C
Average ramp rate	3.3°C/sec	Temperature accuracy	±0.2°C of programmed target at 90°C
Heating and cooling method	Peltier	Temperature uniformity	±0.4°C well-to-well within 10 sec of arrival at 90°C
Lid	Heats up to 105°C		
Gradient			
Operational range	30–100°C		
Programmable span	1–24°C		
<b>Optical Detection</b>			
Excitation	6 filtered LEDs	Dynamic range	10 orders of magnitude
Detection	6 filtered photodiodes	Scan time	
Range of excitation/ emission wavelengths	450–730 nm	All channels	12 sec
Sensitivity	Detects 1 copy of target sequence in human genomic DNA	Single-channel fast scan	3 sec
		Multiplex analysis	Up to 5 targets per well
<b>Software</b>			
Operating systems	Windows 7, 8, and 10, Mac OS X El Capitan and OS Sierra (Mac version for data analysis only; not for instrument control)	Data export	Save, copy, and print all graphs and spreadsheets from right-click menu
Memory	Minimum of 1 GB		Export specified data in multiple formats
Data analysis modes	PCR quantification with standard curve		Copy and paste into Microsoft Excel, Word, or PowerPoint file
	Melt curve analysis		Customizable reports containing run settings, data graphs, and spreadsheets can be directly printed or saved as PDFs
	Gene expression analysis by relative quantity ( $\Delta Cq$ ) or normalized expression ( $\Delta\Delta Cq$ )	Image Export	Export images at any pixel size and at resolution up to 600 dpi. Save images as bmp, jpg, or png files
	Data analysis options include bar charts, box-and-whisker plots, dot plots, clustergrams, scatter plots, and volcano plots		
	Statistics, including <i>t</i> -tests and ANOVA		
	Multiple-file gene expression analysis for comparison of an unlimited number of Cq values		
	Allelic discrimination		
	End-point analysis		
<b>System</b>			
Licensed for real-time PCR	Yes	Electrical approvals	IEC, CE
Sample capacity	96 wells	Dimensions (W x D x H)	33 x 46 x 36 cm (13 x 18 x 14 in.)
Sample size	1–50 $\mu$ l (10–25 $\mu$ l recommended)	Weight	21 kg (47 lb)
Communications	USB 2.0 or above		

**BIO-RAD**

### CFX96 Touch™ Deep Well Real-Time PCR Detection System

The CFX96 Touch deep well real-time PCR detection system offers precise quantification and target discrimination for up to five targets in large reaction volumes. The system incorporates industry-leading technology to provide robust and reliable results.

The CFX96 Touch deep well real-time PCR detection system makes it easy to:

- Use reaction volumes up to 125 µl
- Rapidly screen expression from a few to hundreds of genes with PrimePCR™ assay panels. Just drag and drop the run file to start runs with a single click
- Monitor amplification traces on the touch screen in real time. At run completion, automatically receive the data file for remote monitoring and data analysis
- Conserve your samples and reagents with true five-target multiplexing
- Conduct powerful statistical analysis and data visualization with CFX Maestro™ software
- Save time and reduce costs by optimizing assays in a single run using the thermal gradient



#### For More Information

Web: [bio-rad.com/CFX96DeepWell](http://bio-rad.com/CFX96DeepWell)

Download bulletins: 6238 and 6243

#### Ordering Information

Catalog #	Description
1844096*	<b>CFX96 Deep Well Optical Reaction Module for Real-Time PCR Systems with Starter Package</b> , for use with C1000 Touch thermal cycler chassis, includes CFX Maestro software, license for qbase+ software, communication cable, reagents, consumables
1844095*	<b>CFX96 Deep Well Optical Reaction Module for Real-Time PCR Systems</b> , for use with C1000 Touch thermal cycler chassis, includes communication cable. Does not include CFX Maestro software. Please order separately
1854096	<b>CFX96 Touch Deep Well Real-Time PCR Detection System with Starter Package</b> , includes C1000 Touch thermal cycler chassis, CFX96 deep well optical module, CFX Maestro software, license for qbase+ software, communication cable, reagents, consumables
1854095	<b>CFX96 Touch Deep Well Real-Time PCR Detection System</b> , includes C1000 Touch thermal cycler chassis, CFX96 deep well optical module, communication cable. Does not include CFX Maestro software. Please order separately

#### Accessories

1845098	<b>CFX Qualification Plate</b> , 96-well format, for use with CFX96, CFX96 Touch, CFX96 Touch deep well, or CFX Connect system, includes 1 predispensed plate containing supermix, primer mix, nuclease-free water
TLS0801	<b>Low-Profile 8-Tube Strips without Caps (0.2 ml)</b> , clear, 120 strips (960 tubes)
TCS0803	<b>Optical Flat 8-Cap Strips</b> , for 0.2 ml PCR tubes and plates, ultraclear, 120
HSP9601	<b>Hard-Shell Low-Profile 96-Well Skirted PCR Plates</b> , white shell, clear well, 50
MSB1001	<b>Microseal 'B' Adhesive Seals</b> , optically clear, package of 100
1814000	<b>PX1 PCR Plate Sealer</b> , includes heat sealing instrument, 96-well/384-well plate support block, sealing frame, power cord
1814030	<b>Optically Clear Heat Seal</b> , package of 100

\* Order to upgrade an existing C1000 or C1000 Touch thermal cycler.

## CFX96 Touch Deep Well™ Real-Time PCR Detection System

### Advancing qPCR Together

The CFX96 Touch deep well real-time PCR detection system offers industry-leading performance for large-volume reactions. Solid-state optical components provide sensitive detection for up to five targets with precise quantification and target discrimination. Easily start a run and monitor its progress on the integrated touch screen for a truly stand-alone experience. CFX Manager™ software provides intuitive experiment setup and data analysis modules, including gene expression by normalized expression ( $\Delta\Delta Cq$ ) using multiple reference genes and individual reaction efficiencies in the calculations, for all levels of users.



### Specifications

<b>C1000 Touch™ Thermal Cycler with 96-Deep Well Reaction Module</b>			
Maximum ramp rate	2.5°C/sec	Temperature range	0–100°C
Average ramp rate	2°C/sec	Temperature accuracy	±0.2°C of programmed target at 90°C
Heating and cooling method	Peltier	Temperature uniformity	±0.4°C well-to-well within 10 sec of arrival at 90°C
Lid	Heats up to 105°C		
Gradient			
Operational range	30–100°C		
Programmable span	1–24°C		
<b>Optical Detection</b>			
Excitation	6 filtered LEDs	Dynamic range	10 orders of magnitude
Detection	6 filtered photodiodes	Scan time	
Range of excitation/ emission wavelengths	450–730 nm	All channels	12 sec
Sensitivity	Detects 1 copy of target sequence in human genomic DNA	Single channel fast scan	3 sec
<b>Software</b>			
Operating systems	Windows XP, Windows 7	Data export	Save, copy, and print all graphs and spreadsheets from right-click menu
Multiplex analysis	Up to 5 targets per well		Export specified data in multiple formats
Data analysis modes	PCR quantification with standard curve		Copy and paste into Microsoft Excel, Word, or PowerPoint file
	Melt curve analysis		Customizable reports containing run settings, data graphs, and spreadsheets can be directly printed or saved as PDFs
	Gene expression analysis by relative quantity ( $\Delta Cq$ ) or normalized expression ( $\Delta\Delta Cq$ ) with multiple reference genes and individual reaction efficiencies		
	Data analysis options include bar chart, clustergram, scatter plot, volcano plot, and heat map		
	Multiple file gene expression analysis		
	Allelic discrimination		
	End-point analysis		
<b>System</b>			
Licensed for real-time PCR	Yes	Electrical approvals	IEC, CE
Sample capacity	96 wells	Dimensions (W x D x H)	33 x 46 x 36 cm (13 x 18 x 14")
Sample size	10–125 $\mu$ l	Weight	21 kg (47 lb)
Communications	USB 2.0		

## 新 CFX 384 Touch™ 实时定量 PCR 仪

订货信息请参见第 322 页

CFX 384 Touch 实时定量 PCR 仪可同时进行 384 个样品的检测，超大触摸屏设计无需电脑即可运行程序并实时了解样品的扩增情况。

主要特点如下：

- 先进的长寿命、固定光路技术确保定量结果的准确性
- 同时检测 4 个基因的表达，有效节约试剂与宝贵的样品，反应体系可低至 3  $\mu$ l
- 可通过超大的彩色触摸屏进行实验的设置以及反应的监控，无需 PC
- 可与 CFX 自动加样系统配合使用提高实验室的自动化程度
- CFX Manager™ 安全版数据分析软件，使得 CFX 384 Touch 实时定量 PCR 仪满足实验室 GLP 关于数据收集与分析的规范

更多信息，请访问 [www.bio-rad.com/cfx384-pcr](http://www.bio-rad.com/cfx384-pcr)，参考或下载资料 # 6072, 6077 和 6096。



## CFX 实时定量 PCR 仪自动加样系统

订货信息请参见第 322 页

自动加样系统和 CFX Connect™，CFX96 Touch™ 以及 CFX384 Touch™ 实时荧光定量 PCR 仪配合使用，能够进行简单和高通量的操作，而不影响实验结果。即插即用的台式反应板处理装置，能够同时上载 20 块 384 孔反应板。该系统能够全自动进行实验操作，得到大量数据并快速进行数据分析，完全和目前的药物研发所需要的高通量检测需求契合，可以在 CFX384 Touch™ 系统上一次实验运行 20 块反应板，分析 7680 个样品。

CFX 自动加样系统方便进行以下操作：

- 和一台 CFX Connect，CFX96 Touch 或 CFX384 Touch 系统整合，无需手动操作，可以运行最多 20 块反应板，最大限度的提高实验效率
- 改进实验流程，自动化操作确保最大的产出
- 利用整合的条形码阅读器追踪样品信息
- 直观的 CFX 自动加样系统控制软件，可以进行多重 PCR 实验的导航设置和操作等
- 一次设定即可设置所有的反应板的 PCR 反应程序



- 实验运行结束后，即可接收到附带有数据文件或运行报告的电子邮件通知

更多信息，请访问 [www.bio-rad.com/cfxautomation](http://www.bio-rad.com/cfxautomation)，参考或下载资料 # 5879。

# CFX384 Touch™ Real-Time PCR Detection System

## Specifications

### Real-Time PCR

Bulletin 6072

### Advancing qPCR Together

The CFX384 Touch Real-Time PCR Detection System brings flexibility and ease of use to researchers performing high-throughput real-time PCR in a 384-well format. Solid-state optical components provide sensitive detection for precise quantification and reliable performance. The CFX384 Touch System offers a single-color fast scan option for data acquisition and four-target multiplex reaction capabilities. Set up runs and view data traces in real time on the integrated touch screen. CFX Manager™ Software streamlines data management, from experiment setup to analysis. Enter or edit well information on your own time — before, during, or after a run. CFX Manager Software offers enhanced data analysis modules and export options that let you output only the data you need in the format you want. Integrate with any laboratory information management system (LIMS) using built-in LIMS file management. For laboratories operating in regulated environments, CFX Manager Software, Security Edition offers tools for compliance with U.S. FDA 21 CFR Part 11 regulations.



### Specifications

<b>C1000 Touch™ Thermal Cycler with 384-Well Reaction Module</b>			
Maximum ramp rate	2.5°C/sec	Temperature range	0–100°C
Average ramp rate	2°C/sec	Temperature accuracy	±0.2°C of programmed target at 90°C
Heating and cooling method	Peltier	Temperature uniformity	±0.4°C well-to-well within 10 sec of arrival at 90°C
Lid	Heats up to 105°C		
Gradient			
Operational range	30–100°C		
Programmable span	1–24°C		
<b>Optical Detection</b>			
Excitation	5 filtered LEDs	Dynamic range	10 orders of magnitude
Detection	5 filtered photodiodes	Scan time	
Range of excitation/ emission wavelengths	450–690 nm	All channels	<20 sec
Sensitivity	Detects 1 copy of target sequence in human genomic DNA	Single channel fast scan	8 sec
<b>Software</b>			
Operating systems	Windows 7, Windows 8	Data export	Save, copy, and print all graphs and spreadsheets from right-click menu
Memory	Minimum of 1 GB		Export specified data in multiple formats
Multiplex analysis	Up to 4 targets per well		Copy and paste into Microsoft Excel, Word, or PowerPoint file
Data analysis modes	PCR quantification with standard curve Melt curve analysis Gene expression analysis by relative quantity ( $\Delta Cq$ ) or normalized expression ( $\Delta\Delta Cq$ ) with multiple reference genes and individual reaction efficiencies Data analysis options include bar chart, clustergram, scatter plot, volcano plot, and heat map Multiple file gene expression analysis for comparison of an unlimited number of Cq values Allelic discrimination End-point analysis		Customizable reports containing run settings, data graphs, and spreadsheets can be directly printed or saved as PDFs
<b>System</b>			
Licensed for real-time PCR	Yes	Electrical approvals	IEC, CE
Sample capacity	384 wells	Dimensions (W x D x H)	33 x 46 x 36 cm (13 x 18 x 14 in.)
Sample size	1–30 $\mu$ l (5–20 $\mu$ l recommended)	Weight	21 kg (47 lb)
Communications	USB 2.0		

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