



## CFX Duet Real-Time PCR System

### Powerful Two-Color Genomics Analysis, Accessible for Most Laboratories



The CFX Duet Real-Time PCR System makes uniform and precise quantitative PCR (qPCR) accessible for any lab. The CFX Duet provides the thermal performance and the proprietary, accurate optical shuttle system of our premium CFX Opus Real-Time PCR Systems for customers that run only singleplex or duplex assays.

The CFX Duet System utilizes CFX Maestro Software through an attached computer as its control and analysis system. The economical user can quickly get started with gene expression, genotyping, thermal gradient optimization, quantification, and even protein characterization using fluorescence resonance energy transfer (FRET). The two-color CFX Duet System is factory calibrated for common dyes such as SYBR® Green and EvaGreen®. This system is not compatible with the Br.io cloud platform.

#### Benefits

- Easy entry point into basic qPCR with 2-color system
- No calibration or passive reference dyes required
- Versatile capabilities for essential molecular biology and protein characterization
- Additional FRET LED channel, enabling protein melt analysis

- Time-saving experiment optimization with thermal gradient feature
- Optimal thermal performance equivalent to the premium CFX Opus Systems
- Continued support for and control of up to 4 CFX instruments with CFX Maestro Software, and Security Edition

#### Specifications

##### System

Sample block type	Fixed
Sample capacity	96 wells
Sample size	1–50 µl (10–50 µl recommended)
Dimensions (W x D x H)	33 x 56 x 36 cm (13 x 22 x 14 in.)
Weight	22 kg (48 lb)
Communications	USB 2.0 or above
Electrical approvals	IEC, CE

##### Optical Detection System

Excitation	3 filtered LEDs
Detection	3 filtered photodiodes
Range of excitation/emission wavelengths	450–580 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
Multiplex analysis	Up to 2 targets per well

continues

## Specifications

### 96-Well Reaction 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 (max – min ≤ 0.6°C), measured 10 sec after the block reaches target temperature

Gradient	
Operational range	30–100°C
Programmable span	1–24°C

### CFX Maestro Data Management and Analysis Software

Operating system	Windows 10 (64-bit)
Memory	Minimum of 1 GB
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 quantification cycle (Cq) values Allelic discrimination Endpoint analysis Data analysis options include bar charts, box and whisker plots, dot plots, clustergrams, scatter plots, and volcano plots Statistics include <i>t</i> -test and analysis of variance (ANOVA)
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
Image export	Export images at any pixel size and at a resolution up to 600 dpi Save images as .bmp, .jpg, or .png files

## Ordering Information

Catalog #	Description
<b>Instrument</b>	
12016265	<b>CFX Duet Real-Time PCR System</b> , includes power cord, USB cable
<b>Software</b>	
All software for Windows unless otherwise noted.	
12013758	<b>CFX Maestro Software</b> , includes USB installation drive, video quick guides, PDF instruction manual
12012832	<b>CFX Maestro Software, Security Edition</b> , 1 license
12013028	<b>CFX Maestro Software, Security Edition</b> , 5 licenses
12012833	<b>CFX Maestro Software, Russian Edition</b> , 1 license
12012834	<b>CFX Maestro Software, Chinese Edition</b> , 1 license
1845025	<b>Precision Melt Analysis Software</b> , includes 2 user licenses, installation CD, 2 HASP HL keys, melt calibration kit
<b>Consumables</b>	
HSP9655	<b>Hard-Shell™ 96-Well PCR Plates</b> , pkg of 50, low profile, thin wall, skirted, white shell/white wells
HSP9601	<b>Hard-Shell 96-Well PCR Plates</b> , pkg of 50, low profile, thin wall, skirted, white shell/clear wells
MSB1001	<b>Microseal™ 'B' PCR Plate Sealing Film</b> , pkg of 100, optically clear seals for PCR plates
TLS0851	<b>0.2 ml 8-Tube PCR Strips without Caps</b> , low profile, white
TLS0801	<b>0.2 ml 8-Tube PCR Strips without Caps</b> , low profile, clear
TCS0803	<b>0.2 ml Flat PCR Tube 8-Cap Strips</b> , optical, ultraclear
<b>Reagents</b>	
1845098	<b>CFX Qualification Plate</b> , 96-well
12010176	<b>Reliance One-Step Multiplex RT-qPCR Supermix</b> , 1 ml (1 x 1 ml), 200 x 20 µl reactions
1725270	<b>SsoAdvanced Universal SYBR® Green Supermix</b> , 2 ml (2 x 1 ml), 200 x 20 µl reactions
1725016	<b>SsoAdvanced Universal Inhibitor-Tolerant SYBR® Green Supermix</b> , 2 ml (2 x 1 ml), 200 x 20 µl reactions
1725095	<b>SingleShot SYBR® Green One-Step Kit for Cell Lysis and RT-qPCR</b> , 100 x 50 µl reactions
17005726	<b>SEQuoia Complete Stranded RNA Library Prep Kit</b> , 24 reactions
12011928	<b>SEQuoia Dual Indexed Primers Set</b> , 12 vials of unique dual indexed primers, 96 reactions

Search **CFX qPCR Systems** in the Apple App Store and Android Play Store for an augmented reality tour. Contact your local sales representative for an in-person demonstration.

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

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