СИСТЕМА КОНТРОЛЯ CELLASIC ONIX 2

Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70
Казахстан +7(7172)727-132
Киргизия +996(312)96-26-47

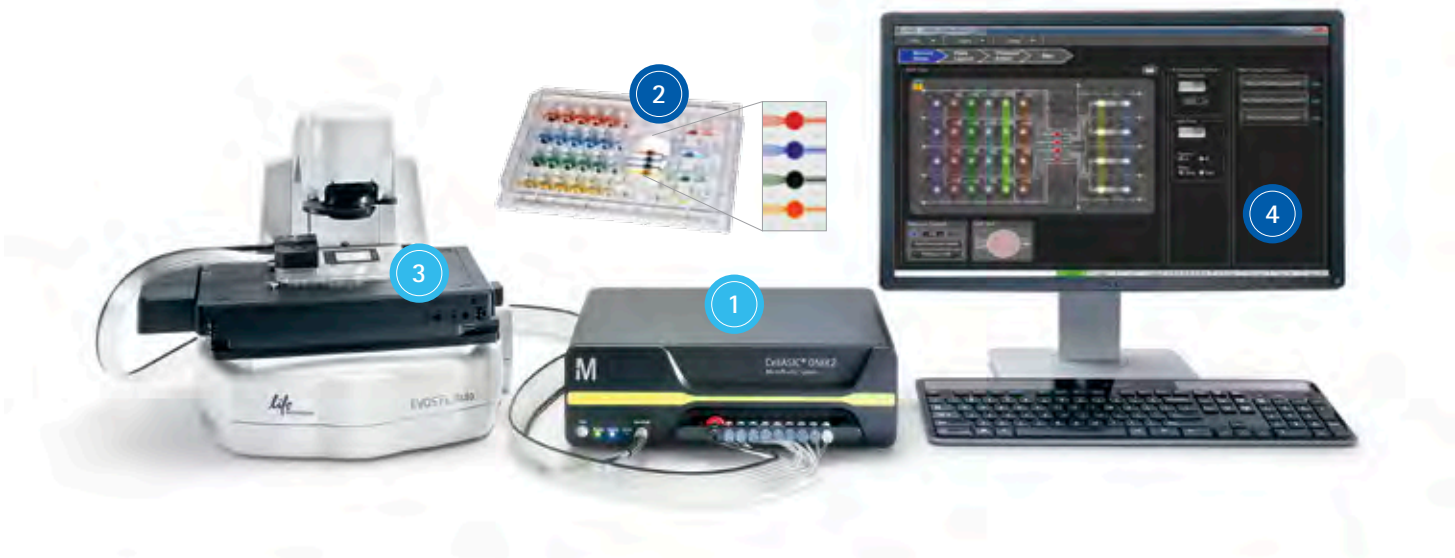
https://millipore.nt-rt.ru || mailto:mer@nt-rt.ru

The CellASIC® ONIX2 Microfluidic System

Precision control of your cell culture environment for advanced live cell imaging and microscopy.

The ability to grow, observe and manipulate complex cultures requires precision control over the cell culture environment. The second generation CellASIC® ONIX2 Microfluidic System is a refined, yet powerful, automated platform for precise manipulation of multiple key cell culture parameters, enabling measurement of cellular responses to pre-programmed media, temperature, and gas environment changes.

The CellASIC® ONIX2 Microfluidic System uses high quality, optically clear microfluidic plates and intuitive software, while integrating with a broad range of inverted microscopes to allow continuous, high magnification observation of live cells—as they react to their environment in time.



1

Controller System: Small footprint, integrated microincubator controller maintains fluid movement, reagent additions, temperature, and gas conditions.

2

Microfluidic Plates: Application specific plates bring new cell culture capabilities for live cell imaging.

3

Manifold: Low-profile, high quality, high optical clarity culture chambers and manifold, mount easily on an inverted microscope—without the need for a bulky environmental chamber.

4

Software: Intuitive software enables quick and easy set-up of detailed protocols for truly automated hands-free cell culture.

Nikon 139-Eclipse Ti-E System. Image Courtesy of Nikon, Inc.

The boost your microscope needs for advanced live cell imaging.

The CellASIC® ONIX2 System turns your microscope into a powerful live cell culture and imaging system that works in conjunction with your capture and analysis software.

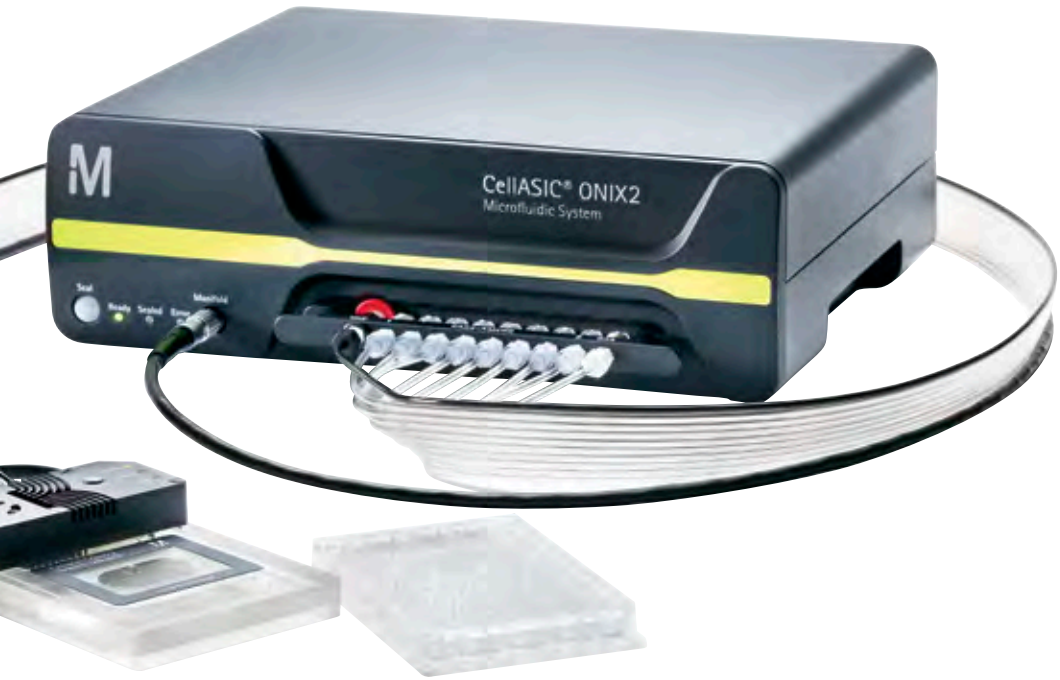
You've invested in a powerful microscope; don't limit its use to observing live cells in a static fashion. Enhance your return on investment and obtain more meaningful data using the CellASIC® ONIX2 Microfluidic System as your live cell imaging platform. The low-profile manifold and plate assembly are easily positioned and removed from the microscope stage providing maximum ease of use and flexibility.

> "... the key advantage of live cell imaging is that you get to actually watch things unfold before your eyes. It's very powerful to see, visually what the cells are doing and how they change in space and as a function of time, because biology is a dynamic process...**and watching the cells do what they do is something that really appeals to us and is driving our science.**"
>
> *- Dr. Gurol Suel, UCSD*

There is simply no better way to conduct live cell analysis.

Watch cells change through time and space, all with the precision of the CellASIC® ONIX2 System. Automatically control flow rates, gas and temperature shifts, standing gradients, nutrient/drug additions, and media changes. With uninterrupted high resolution microscopic culture observation and truly consistent, controlled cell culture, you'll answer the questions that set your research apart.

1 Small footprint, integrated microincubator controller maintains fluid movement, reagent additions, temperature, and gas mixture.

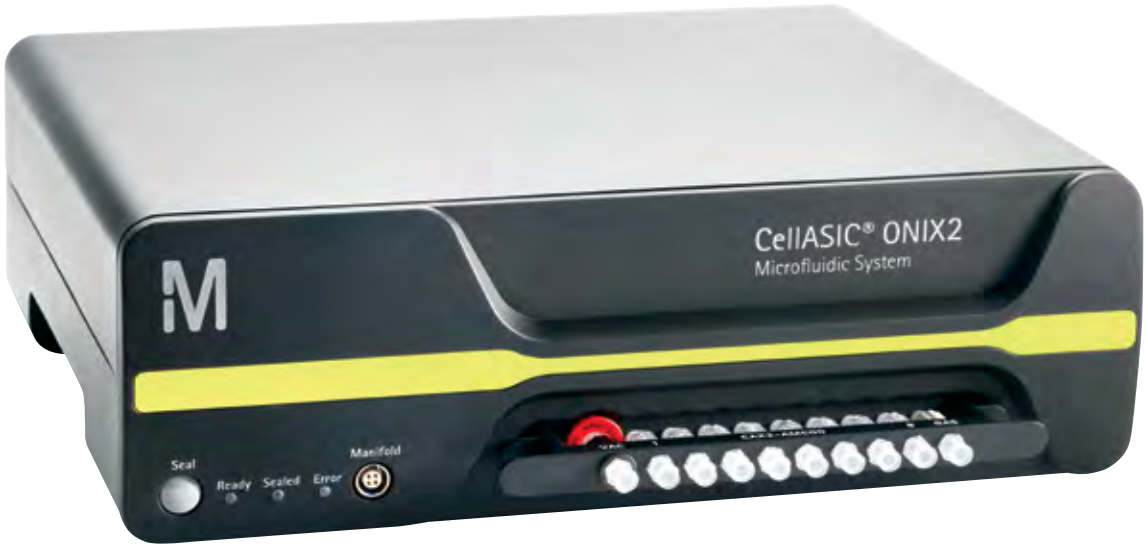


Eight critical cell culture parameters can be controlled by the CellASIC® ONIX2 Microfluidic System:

Parameter	If too low, can cause:	If too high, can cause:
Temperature	Decreased cell response	Increased respiration / protein damage
Oxygen Level	Decreased pH / increased glycolysis	Increased ROS, membrane damage
Growth Factors	Increased apoptosis / decreased protein synthesis	Increased angiogenesis and cell division
Humidity	Increased osmolarity / cell metabolism / oxidative stress	Could damage imaging equipment
pH	Protein and membrane denaturation	Increased alkalosis and dehydration
Osmolality	Decreased cell division / increased autophagic proteolysis and cell rupture	Increased oxidative stress, DNA breakage, and nutrient digestion
Glucose	Decreased autophagy and metabolism	Increased apoptosis and ROS
ECM and Adhesion	Decreased angiogenesis / aberrant differentiation	Increased cell adhesion, chemotaxis, proliferation

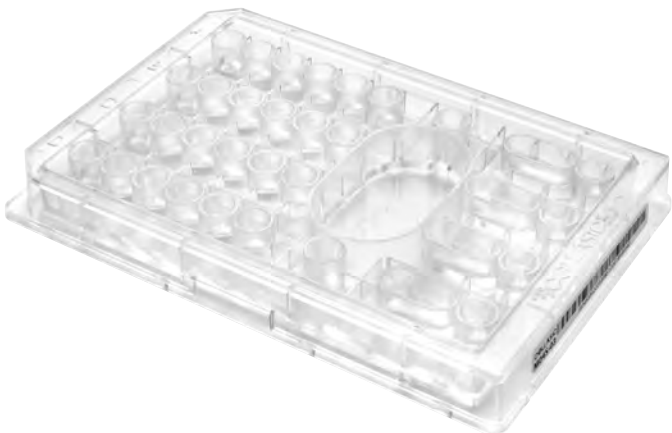
Technical Specifications

General	
Dimensions	System: 330 mm wide × 306 mm deep × 108 mm high (13 in. × 12 in. × 4.25 in.)
Weight	System: 6.7 kg (14.75 lb)
Power consumption	100–240 VAC, 50/60 Hz 40 W
Cooling mode	Air cooled (natural convection)
Environmental conditions	For indoor laboratory use
Operating temperature	20 °C to 30 °C
Storage temperature	5 °C to 35 °C
Stability of sample chamber temperature	± 0.2 °C
Rise time (25 °C to 37 °C)	< 30 minutes
Cooling time (37 °C to 25 °C)	< 30 minutes
Flow Control	
Number of outputs	8 (each addressable by either of two pressure controllers)
Pressure range	-50 to 70 kPa (-7.25–10.2 psi)
Pressure accuracy	± 1.5 kPa (0.22 psi)
Pressure stabilization time	within ± 5 kPa (0.73 psi) in < 5 seconds
Gas Environment Control	
Control capabilities	Option to electronically select between two premixed gasses and set flow rate to slow or fast.
Gas input requirements	Clean, dry, premixed gas mixtures containing air, CO2, N2, and oxygen (up to 25%), regulated to between 100 kPa and 700 kPa (15 psi and 100 psi)
Gas consumption	Slow flow: 5 mL/min ± 2 mL/min
	Fast flow: 50 mL/min ± 20 mL/min
Cell culture region gas environment accuracy	For gas flow at 3 mL/min: < 10% deviation from delivered gas concentration
	For gas flow at 30 mL/min: < 2% deviation from delivered gas concentration
Temperature Control	
Temperature control range	Room temperature to 40 °C
Control method	Bi-directional PID
Accuracy of sample chamber temperature	± 1 °C (using the CAX2-ACT20 ONIX2 Temperature Calibration Plate can result in accuracy as high as ± 0.2 °C)
Computer Requirements	
Operating system	Windows® 7, or Windows® 10 (32 or 64 bit)
Random access memory (RAM)	4 GB or higher
Monitor	1920x1080 resolution or higher
Hard drive	200 MB or higher
Hardware interface	USB 2.0 or higher
Microscope Requirements	
Type	Inverted microscope
Stage weight capacity	For CAX2-MXT20 CellASIC® ONIX2 Manifold XT and filled plate: 325 g (11.1 oz)
	For CAX2-MBC20 CellASIC® ONIX2 Manifold Basic and filled plate: 150 g (5.3 oz)
Minimum condenser working distance	For CAX2-MXT20 CellASIC® ONIX2 Manifold XT: 28 mm (0.9 in)
	For CAX2-MBC20 CellASIC® ONIX2 Manifold Basic: 28 mm (0.9 in)
Maximum condenser diameter	For CAX2-MXT20 CellASIC® ONIX2 Manifold XT: 70 mm (2.8 in)
	For CAX2-MBC20 CellASIC® ONIX2 Manifold Basic: no limit



Ordering Information

Description	Qty	Catalog No.
CellASIC® ONIX2 Microfluidic System and Manifolds		
CellASIC® ONIX2 Microfluidic System	1	CAX2-S0000
CellASIC® ONIX2 Manifold XT (Temperature Controlled)	1	CAX2-MXT20
CellASIC® ONIX2 Manifold Basic (No Temperature Control)	1	CAX2-MBC20
Microfluidic Plates		
CellASIC® ONIX Plate for Haploid Yeast Cells	5	Y04C-02-5PK
CellASIC® ONIX Plate for Diploid Yeast Cells	5	Y04D-02-5PK
CellASIC® ONIX Plate for Bacteria Cells	5	B04A-03-5PK
CellASIC® ONIX Switching Plate for Mammalian Cells	5	M04S-03-5PK
CellASIC® ONIX Gradient Plate for Mammalian Cells	5	M04G-02-5PK
CellASIC® ONIX Open-Top Plate for Mammalian Cells	5	M04L-03-5PK
CellASIC® ONIX Plate for *Chlamydomonas* Cells	5	C04A-01-5PK



Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70
Казахстан +7(7172)727-132
Киргизия +996(312)96-26-47

https://millipore.nt-rt.ru || mailto:mer@nt-rt.ru