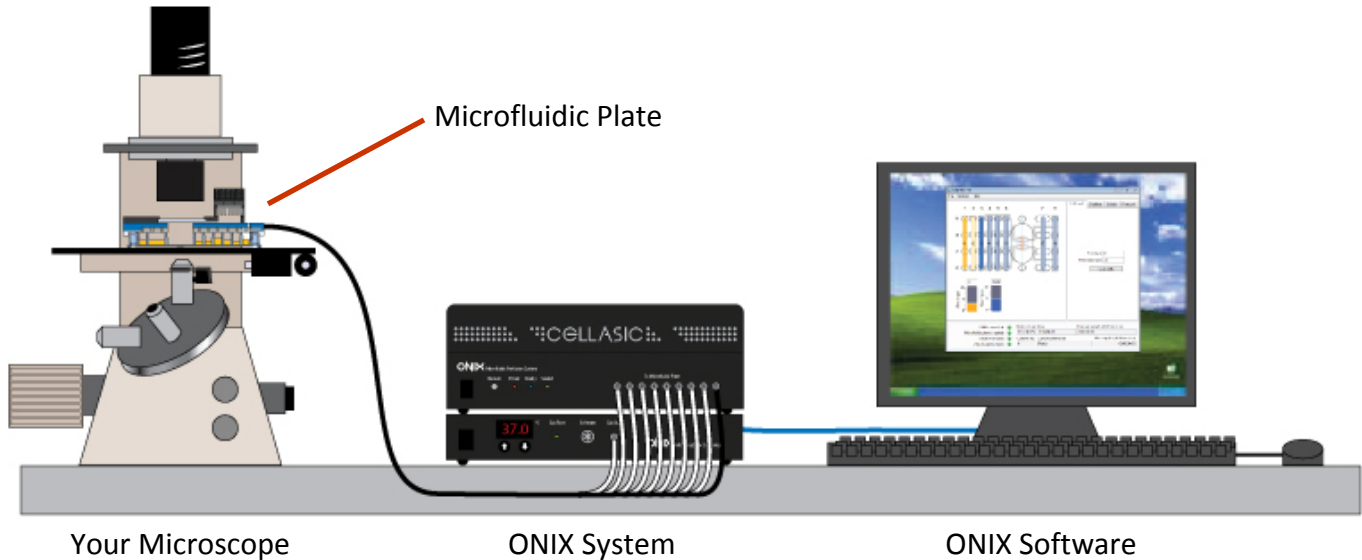


# Microfluidic Perfusion System



## Advanced Control for Live Cell Imaging

The ONIX enhances cell culture quality with cutting edge microfluidic perfusion technology. The system complements your microscope to provide a total solution for capturing the highest quality data with minimal effort. The integrated Micro-Incubator Controller maintains a temperature and gas environment directly on the microfluidic plate for long term cell culture on any microscope stage.



### ONIX System

The system integrates all the components necessary for high quality cell culture on your microscope stage. Our innovative media, temperature, and CO<sub>2</sub> delivery method optimizes cell health during long term experiments. Intuitive software automates all operation to make data collection simple and painless.



### ONIX Microfluidic Plates

Our microfluidic cell culture plates provide a highly stable cell environment for unprecedented cell culture quality. ONIX plates are available in a range of application specific designs to match your research needs.

## Technical Specs

### Microfluidic Perfusion System

Pressure Output: 0-10 ± 0.02 psi  
8 Pressure Channels  
Power Input: 110-240 V AC  
USB Data Connection  
Built-in Pressure/Vacuum Pumps  
Operated via FG Software

### Micro-Incubator Controller

Temperature\*: RT-45 ± 0.2°C  
Heat/Cool Rate\*: 1°C/min  
Use with objective heater for Im-  
mersion lenses  
Gas Flow Rate: 1 mL/min  
Gas Input: 15 psi, premixed  
No Humidity Control Necessary

### Microfluidic Plates

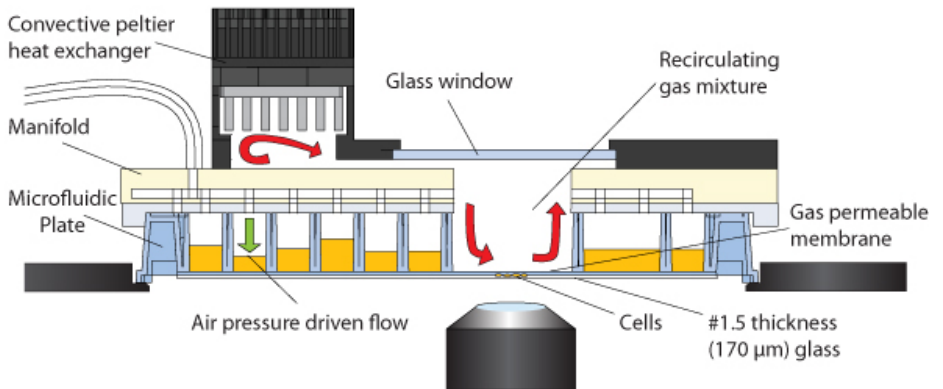
Standard 96-well Plate footprint  
#1.5 glass coverslip bottom  
Uninterrupted Flow Time: 3+ Days  
Perfusion Flowrate: 1-100 µL/hr  
Typical Chamber Volume: 1 µL  
Input Volume: 300 µL per well  
For Inverted Microscopes Only

### FG Software

Computer Requirements:  
Windows 7, Vista, XP, 2000 Vista  
USB 1.0 Connection or Higher  
Pentium III-Class PC (500 MHz or  
higher)

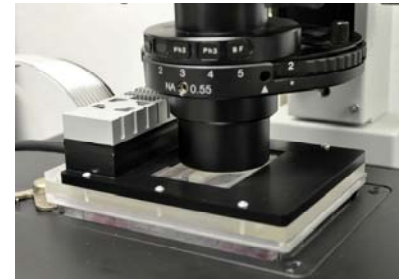
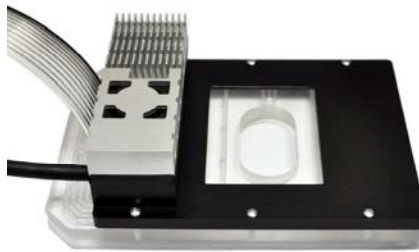
\* Under typical ambient conditions.

## Micro-Incubation Configuration



The advanced microincubation method maintains temperature and gas control to the cells during long term perfusion imaging. The chamber formed between the microfluidic plate and manifold creates an incubator for temperature and gas control that is in direct contact with the cultured cells.

## Innovative Manifold Interface



The low profile manifold seals to the standard footprint microfluidic plate for imaging on any inverted microscope. Flow, temperature, and gas lines route through the manifold to the microfluidic plate without hindering microscope function.

## Application Examples

- Cell Response to Media Change
- Chemotaxis and Migration
- Apoptosis and Toxicity
- Gene Expression
- 3D Culture
- Protein Localization/Transport
- Drug Response
- Phase Contrast, Fluorescence, DIC

## Example Cell Types

- Adherent Cell Lines
- 3D Tissue
- Non-Adherent Cell Lines
- Primary Cells
- Stem Cells
- Yeast Cells
- Bacterial Cells
- Plant Cells

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