

SPECIFICATIONS

# Visualize live cell function at scale with Pixel

Pixel™ enables high-resolution, multiplexed, real-time assessment of live-cell characteristics, providing deeper understanding of cell function. Pixel consists of plate and reader options to suit your application with different throughputs from low-throughput research to high-throughput screening.



Pixel Octo

Pixel Primo

### Product Highlights

<b>Benefits</b>	<ul style="list-style-type: none"> <li>Multiplexed live-cell readouts</li> <li>Resolution at single-cell scale</li> <li>High-dimensional functional phenotyping</li> </ul>	<ul style="list-style-type: none"> <li>Extensible across cell and organoid models</li> <li>Build to scale with cloud services</li> </ul>
<b>Application Modules</b>	<ul style="list-style-type: none"> <li>Electrical imaging (impedance)</li> <li>Cardiac (electrophysiology &amp; contractility)</li> </ul>	<ul style="list-style-type: none"> <li>Neural (electrophysiology)</li> </ul>
<b>Selected Applications</b>	<ul style="list-style-type: none"> <li>Endothelial &amp; epithelial biology</li> <li>Cancer cell biology</li> <li>Stem cell biology</li> </ul>	<ul style="list-style-type: none"> <li>Cardiac function</li> <li>Cardiac toxicology/safety</li> <li>Neuron function</li> </ul>

### Pixel System Specifications

Product	Pixel Primo	Pixel Octo
<b>Plate Capacity</b>	1 plate	Up to 8 plates
<b>Well Count per Plate</b>	96 or 384	96 or 384
<b>Operation</b>	In-incubator	Benchtop
<b>Environment Control</b>	Temperature	Temperature, CO <sub>2</sub> /O <sub>2</sub> , & humidity
<b>Dimensions (l x w x h)</b>	35.8 cm x 12.5 cm x 7.7 cm	64.2 cm x 32.5cm x 62 cm
<b>Data Storage</b>	CytoTronics-AWS cloud	CytoTronics-AWS cloud
<b>Connection Speed</b>	Ethernet 1 Gbps	Ethernet 1 Gbps
<b>Local Device Storage/Buffer</b>	512 Gb	4,096 Gb

### Pixel Application Specifications

Product	Pixel Primo	Pixel Octo
Electrical Imaging (Impedance)	Electrodes: $\geq 69,000$ per well Spatial Resolution: $12.5 \mu\text{m}$ Frequency Range: 250Hz - 60kHz	Electrodes: $\geq 17,250$ per well Spatial Resolution: $12.5 \mu\text{m}$ Frequency Range: 250Hz - 60kHz
Electrophysiology	Recording channels: $>64$ Spatial resolution: $400 \mu\text{m}$ Sampling rate: 12.5 kHz	Recording channels: $>16$ Spatial resolution: $400 \mu\text{m}$ Sampling rate: 12.5 kHz
Electrical Stimulation	Electrodes: Defined patterns (all electrodes stimulation capable)	Electrodes: Defined patterns (all electrodes stimulation capable)
Cardiac Contractility	Sampling rate: 2.5 kHz (400 $\mu\text{s}$ response)	Sampling rate: 2.5 kHz (400 $\mu\text{s}$ response)

### Pixel Microplate Specifications

Product	Pixel-96	Pixel-384
Well Count	96	384
Electrode Count	138,000 per well	34,500 per well
Electrode Pitch	$12.5 \mu\text{m}$	$12.5 \mu\text{m}$
Recording Area	$\geq 3.5 \text{ mm} \times 3.5 \text{ mm}$	$\geq 1.5 \text{ mm} \times 1.5 \text{ mm}$
Plate Surface Material	Glass	Glass
Electrode Material	Gold	Gold
Working Well Volume	140 $\mu\text{L}$	35 $\mu\text{L}$
Max Well Volume	170 $\mu\text{L}$	50 $\mu\text{L}$

