

CellAssist[®] and CellAssist 50 Solutions

- Imaging
- Analytics
- Automation
- Documentation



Setting new standards for
reproducible live cell imaging[™]

CellAssist and CellAssist 50 Solutions

CellAssist Solutions Take Your Live Cell Imaging to 100 Focal Planes

- Automatically, rapidly, and consistently acquire, organize, analyze, and visualize many 1,000's of phase contrast and bright-field images at 4x, 10x, and 20x
- Characterize the biology of cells and organoids, with time series scans at 100 focal planes each 2 μm to 50 μm apart with a z-range of up to 3.5 mm
- Access from your lab, office or home, a centralized database of images and metrics
- Consistently image cells, suspension cells, 3D cell structures, tissues, and organs-on-a-chip in 6-well through 384-well plates.



CellAssist Benchtop Imager
Size 0.51m x 0.51m x 0.49m Weight 32kg



**CellAssist Software and
Analysis Workstation**
with up to 60 terabytes storage



**CellAssist 50 Imager
& 50-Plate Incubator**
Size 0.95m x 0.68m x 1.80m Weight 116kg

▶ CellAssist Solution

- Benchtop, single-plate imager which allows users to automatically capture a single scan or many scans of a single plate over minutes, several hours or days
- Supports many users and many experiments while maintaining easy access to the cell culture plates

▶ CellAssist 50 Solution

- Standalone, environmentally and robotically controlled 50-plate imager with each plate having a separately defined imaging schedule
- Frequent, consistently timed, around-the-clock, remote imaging of up to 50 of a single plate

▶ Included in Both CellAssist and CellAssist 50 Solutions

- **CellAssist Imager** -- High-quality phase-contrast and bright-field imaging at 4x, 10x, and 20x in 6-well through 384-well plates at up to 100 focal planes
- **CellAssist Documentation System** -- Easily captures, with time-stamped barcode scans, critical information about researchers' experiments
- **Environmental Control** -- Temperature, humidity, and gas controlled, with the CellAssist 50
- **CellAssist Software and Analysis Workstation** -- A suite of project set-up tools, secure data-handling, centralized database of projects and scan activity, and charting and analysis tools

Automate Your Live Cell Imaging with **Repeatability** and **Comparability**

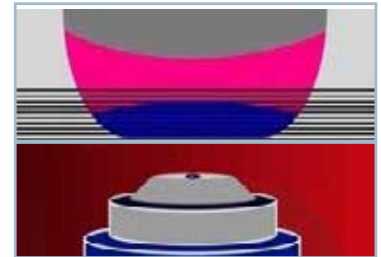
The CellAssist Imager and the powerful CellAssist Software and Analysis Workstation are standard to both the CellAssist and CellAssist 50.

▶ CellAssist Imager

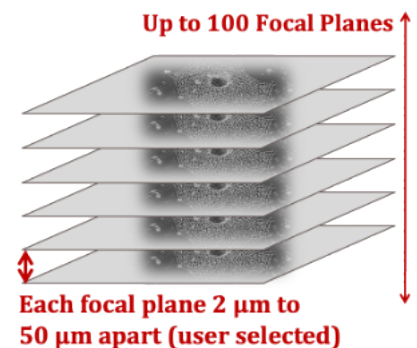
- Automatically images suspension cells, adherent cells, 3D cell structures (e.g., organoids and spheroids), organs-on-a-chip, and tissues
- Provides phase contrast and bright-field illumination at 4x, 10x, and 20x in 6- through 384-well flat bottom and round bottom plates
- Captures 1,000's of images with up to 100 focal planes, each 2 μm to 50 μm apart (user-selectable), with a z-range of up to 3.5 mm
- Acquires high quality images utilizing three 5-megapixel cameras with advanced focus and stitching algorithms
- Scanning modes of whole well, center-of-well, and regions of interest

▶ CellAssist Software & Analysis Workstation

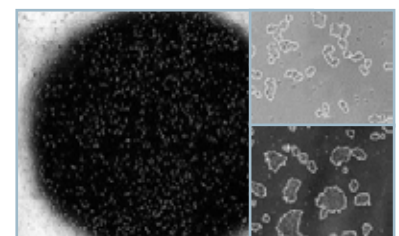
- Calculates and stores metrics, including growth rates, confluence, colony size, and monoclonality
- Builds a centralized database of cell culture projects and scans to manage, track, and compare images, data, and workflows over time and across instruments
- Provides remote viewing of scan results (images and cell analytics) from the laboratory, office, home, or with collaborating researchers
- Time-lapse viewing of images with excellent registration to track and characterize single cells, colonies, or plaques
- Multi-client remote access and instrument management across networked CellAssist and CellAssist 50s
- Archive data and images locally on 30 to 60 TB of internal RAID 10 storage, add-on storage, mapping to selected servers, and cloud options



Multiple Focal Planes



Project Set-up Tools



Stitched Images

CellAssist Solutions: Capabilities and Benefits

▶ Example Capabilities

Quantitatively assess cell growth and confluence, including doubling rates

Capture 1000's of 5-megapixel images at up to 100 focal planes each 2 μm to 50 μm apart (user-selectable), with a z-range up to 3.5 mm

Acquire comparable center of well, standard scan, and stitched whole well scans for an entire plate with excellent registration of images across multiple scans

Capture and record key workflow details and status of cells through imaging

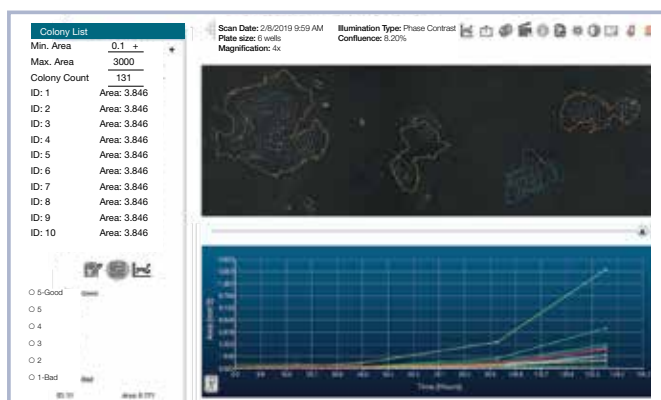
▶ Benefits

- Users define time periods of interest
- Enables accurate assessment of cell health and cell migration

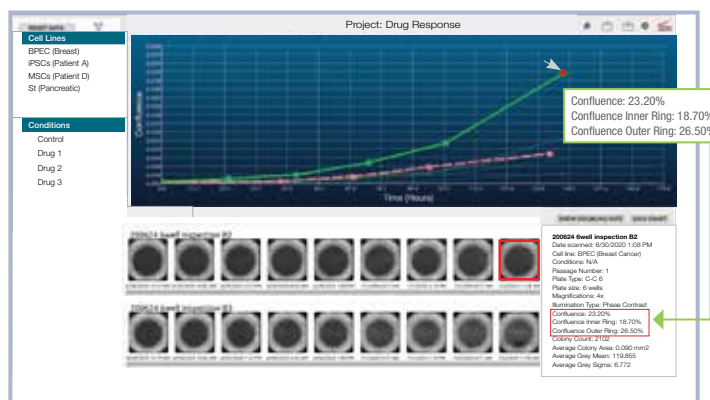
- Enables superior imaging and characterization of suspension cells, organoids, organs-on-a-chip, and tissues
- Provides better characterization and deeper insight into cell morphology and changes

- Images from designated regions of interest to all the cells in all the wells
- Allows for colony or single-cell tracking over time, even though plates may be sparsely seeded, or inserted and removed multiple times

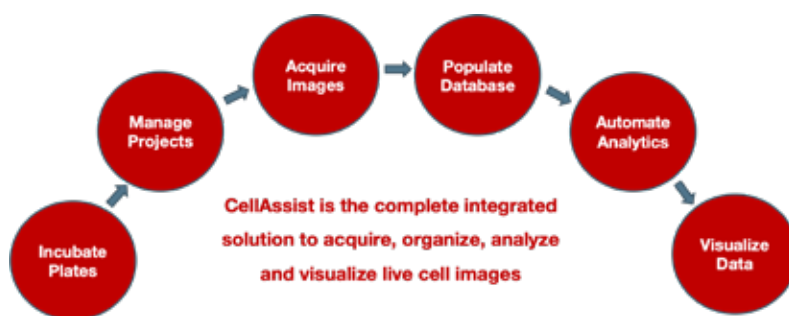
- Automatically time stamp and enter barcode scans into a searchable tracking history
- Enables comparison of previous experiments to optimize and ensure reproducibility



Numbers and measures all colonies



Objective metrics for better insights



Learn more at: www.thrivebio.com

Thrive Bioscience, located in the Boston, Massachusetts area, provides instruments and software solutions that for imaging, analytics, automation, and reproducible cell and tissue culture imaging. Our products empower biologists by combining advanced software, microscopy, and robotics, to acquire, organize, and analyze images of all the cells, in all the wells, in all the plates, across labs and across time.

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