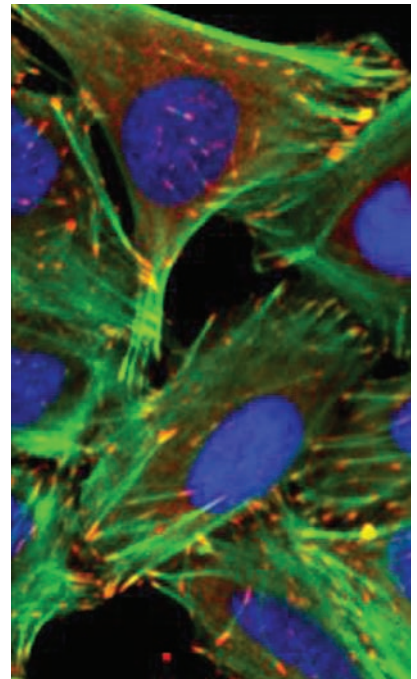


Opera LX

High Content Screening System

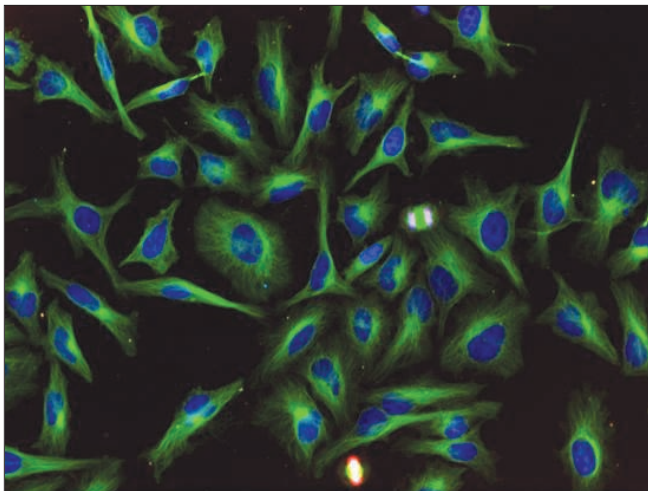


High resolution high content analysis –
fully scalable from Assay Development
to High Content Screening

Opera LX -

a high **resolution** high **speed** platform

The Opera confocal microplate imaging reader now comes in an extendable starter configuration for three color applications. Many upgrades are available such as environmental control and reagent dispensing for live cell applications, multi-color parallel image acquisition and many automation options. With this new system, the Opera platform provides a unique opportunity to grow with your needs in High Content Analysis.



HeLa cells labeled with anti-tubulin Alexa 488 antibody, anti-phospho histone Alexa 633 antibody and HOECHST 33342. 20x water immersion objective.

Flexibility and superior performance

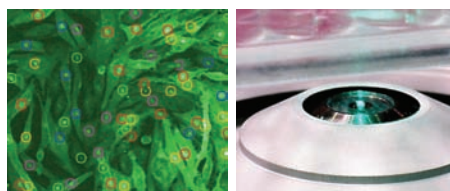
The Opera™ LX is a high content screening instrument capable of producing high quality three-color confocal images. It uses proven Opera high speed imaging technology with a point scan confocal spinning disc principle and an ultra-fast laser-based auto-focus. This ensures the highest resolution and very low photo-bleaching for live cell applications as well as high throughput.

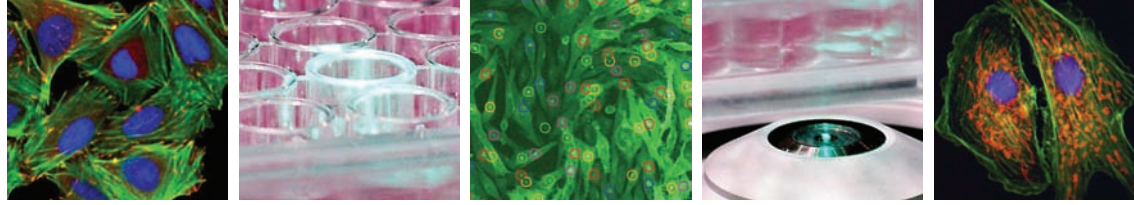
Automated supply of immersion fluid is integrated and water immersion objectives can be used in screening mode for superior image quality and significant reduction in exposure time when compared to air objectives.

The Opera LX comes with three lasers and one high sensitivity CCD camera for sequential three color acquisitions. Emission crosstalk is avoided by sequential imaging. The standard configuration enables applications using UV dyes, green fluorescent proteins or green fluorescent dyes and far red dyes, and ensures a minimum of overlap between emission spectra. Other excitation combinations are optional.

Basic features:

- Fully automated system
- Truly confocal
- Three solid-state excitation lasers
- Peltier-cooled, high sensitivity CCD camera
- Filter set for three color applications
- 20x water immersion objective
- Acapella™ Software including Cellular Assay Libraries as on-board solution
- Open software architecture for user-defined applications
- Scalable High Throughput Image Analysis System for on-line image analysis





Unlimited possibilities for the cell screening lab

The Opera LX is a starter configuration of the Opera platform which is upgradeable to grow with the needs of a cell screening lab.

A variety of air and water objectives can be used for various magnifications and sample carriers. The Opera LX is prepared for implementation of the environmental control unit in order to run live cell experiments under temperature, CO₂ and humidity control.

A kinetics version is available including reagent dispensing. A non confocal UV option is available for the Opera LX, providing a second parallel detection channel.

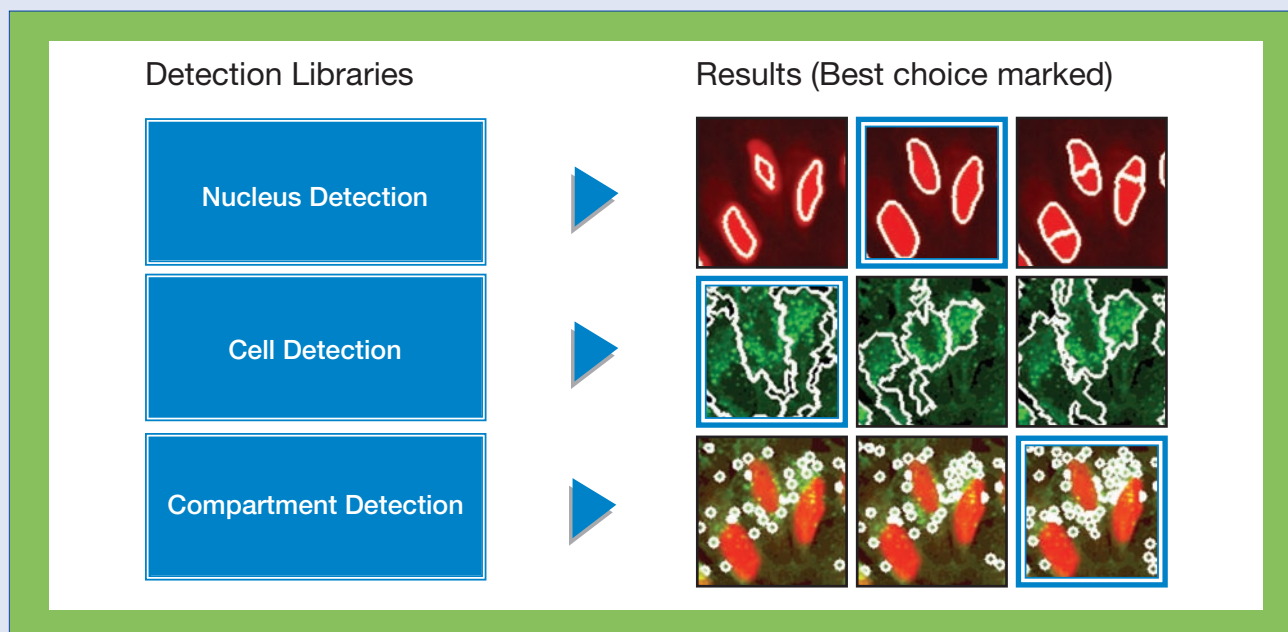
It comes with a Xenon™ lamp and a second CCD camera enabling simultaneous image acquisition for two color applications using a UV dye and green or far red dyes.

Automate your assay by integrating your Opera LX to a plate handling robot, an incubator or to the cell::explorer™ live cell screening platform.

The Opera LX can be upgraded to the Opera QEHS with all its options: Four lasers plus non-confocal UV excitation, four parallel CCD detection channels and up to 14 emission bands. This guarantees full flexibility for the user – starting with a high resolution device for the most frequently used functional cell assays and growing into the full range of multi-color HTS applications.

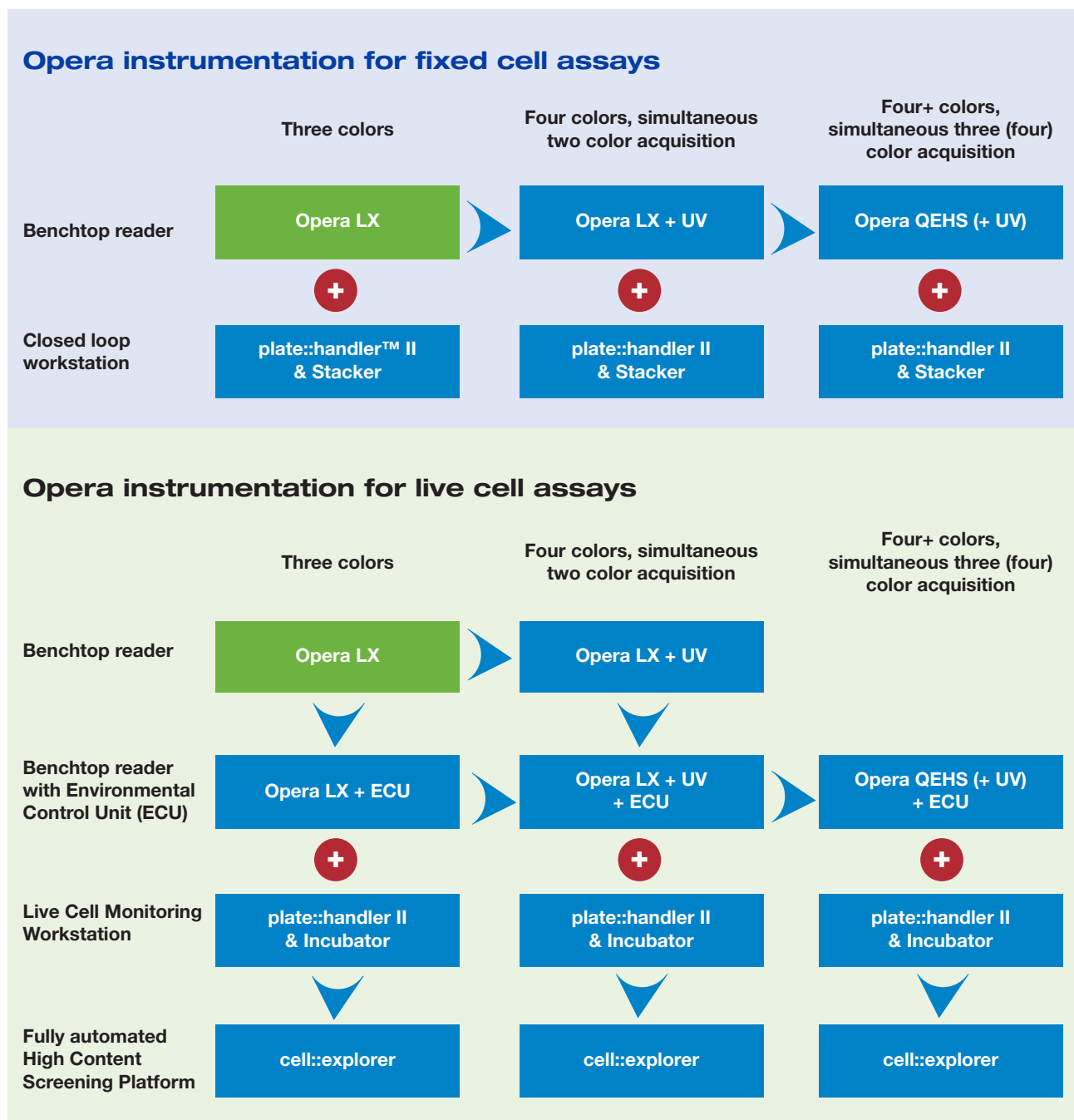
Acapella Cellular Assay Library: The ultimate toolkit for a great variety of cell assays

The Opera LX also includes full Acapella Image Analysis Software including the Cellular Assay Library for on-line image analysis. This highly flexible toolbox has a very open architecture for development of new assays. Building blocks for essential analysis steps such as nucleus detection, cytoplasm detection, and cell compartment detection are provided as the basis for every application via an intuitive interface providing visual feedback for algorithm selection.



Upgrade paths

— unlimited possibilities for the cell screening lab:



Disclaimer: A use license to the Thermo Fisher™ Scientific (Cellomics®) HCS patent portfolio is included with each Opera and Acapella product. For the use of the assays described additional licenses may be required.

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