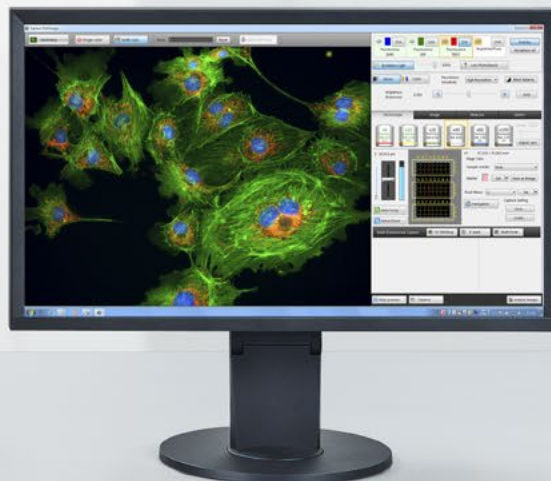


## Inverted All-in-One Fluorescence Microscope

# LINEUP GUIDE

- > Entry-level fluorescence microscope with motorized operation and high-sensitivity CCD  
**Basic System**
- > Wide area navigation, high-resolution image stitching, Z-stack, and multi-point image capture  
**Multi-dimensional Observation/Capture System**
- > Structured illumination captures high-contrast images equivalent to confocal microscopes  
**Optical Sectioning System**
- > Long-term, live-cell imaging using incubation  
**Live-cell Incubation System**



# Basic System

Entry-level fluorescence microscope with advanced functions

- › Built-in darkroom
- › Standard equipped with a fully-motorized operation system
- › Large motorized stage supports observation of entire microtiter plates
- › Supports fluorescence, bright field, and phase-contrast images
- › High-sensitivity cooled monochrome/color CCD camera



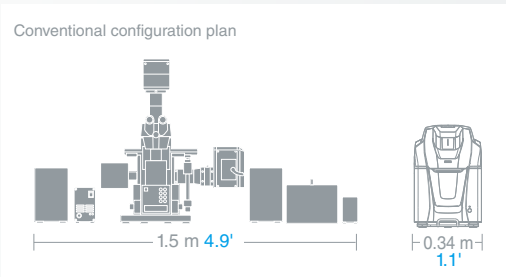
## Basic Concept

### || Built-in darkroom

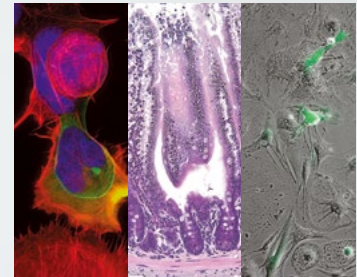


Flexible fluorescence observation wherever it's needed

### || Space saving



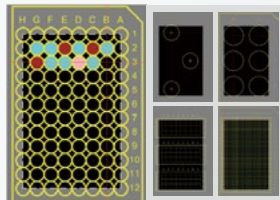
### || Flexible operation



Single unit supports fluorescence, bright field, and phase-contrast images

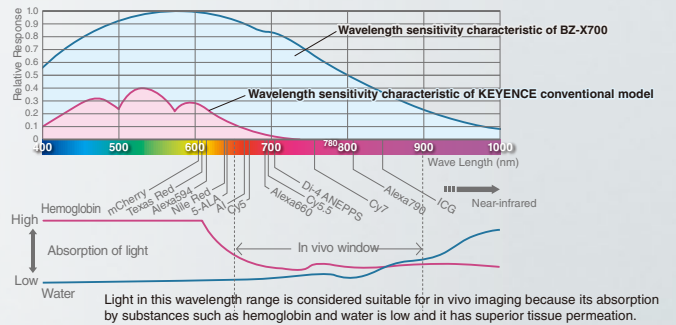
## Substantial basic performance

### || Fully automated system with a large motorized stage supports the observation of entire microtiter plates



Stage view function allows positioning based on a map image representing various sample wells

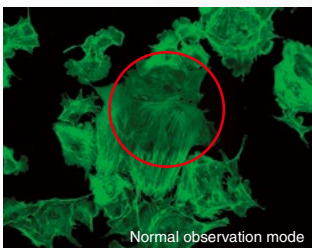
### || High sensitivity cooled monochrome camera



## KEYENCE original functions

### || Low photobleach mode

Reduces photobleaching during field-of-view adjustment



Due to photobleaching during observation at high resolution, part of the image is dark and the brightness is not distributed evenly.



Image with less photobleaching and uniform brightness

### || High-speed auto focus

Quick focus adjustment with a single click

### || Capture condition reproduction function

The settings can be read from a captured image, including the lens used, filter, exposure time, position coordinates, image correction conditions, and so on, so the image can be reproduced.

### || Quick full focus

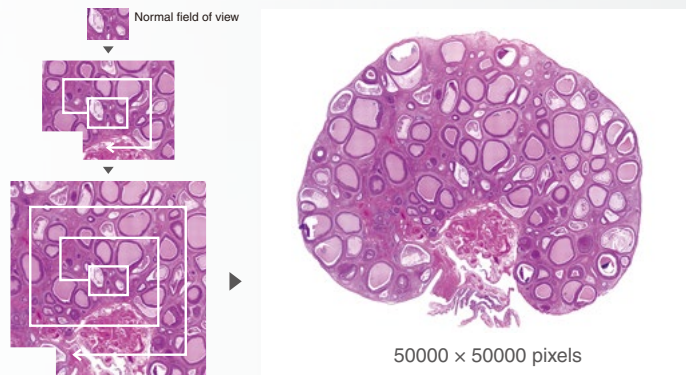
An image is automatically scanned in the Z direction with a single click to compose a fully-focused image.



Achieves both high-speed screening and high-resolution capture

# Multi-dimensional Observation/Capture System + Multi-dimensional observation/capture

Wide-field, ultra high-resolution images can be captured in full focus.



Automatic capture function for extremely efficient screening

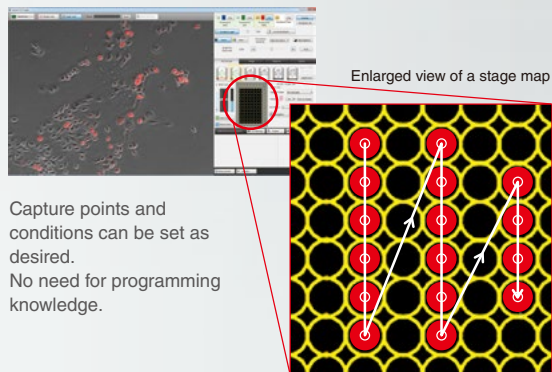
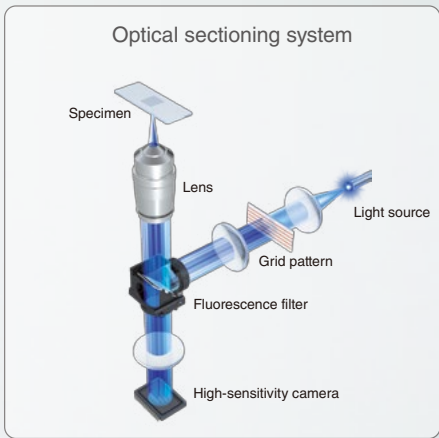
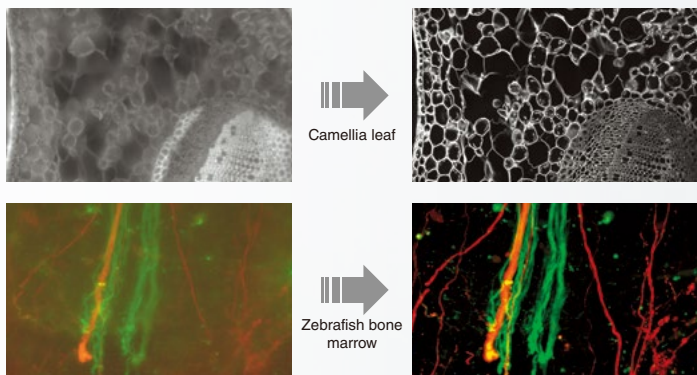


Image without fluorescence blurring achieved with a laser-free optical system

# Optical Sectioning System + Optical sectioning + Multi-dimensional observation/capture

Anyone can capture clear images without mastering special techniques.



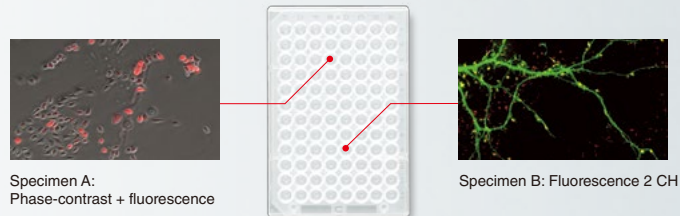
Capture everything including the observation area, target, and focus

# Live-cell Incubation System + Live cell imaging + Multi-dimensional observation/capture

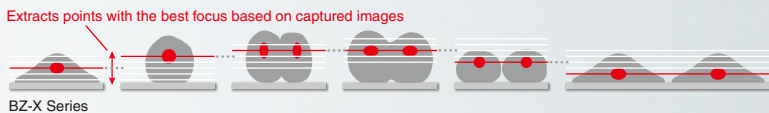
Chamber for CO<sub>2</sub> concentration/temperature control included



Capture conditions can be set differently for each capture point.



Automatic focus adjustment depending on the change in the specimen



# Wide range of applications for enabling advanced analysis

## Hybrid Cell Count

High-precision measurement can be performed on various specimens.



- Area
- Circumference
- Longest diameter
- Shortest diameter
- Brightness (INT/MAX/MIN/AVE)
- RGB brightness (INT/MAX/MIN/AVE)
- Feret diameter (X/Y)
- Count
- Area ratio, etc.

No.	Area	Perimeter	Major axis	Minor axis	Brightness	Brightness	Brightness	Brightness
1	0.5µm²	18.0µm	4.7µm	3.0µm	67845.0	845.0	318.0	368.9
2	0.5µm²	8.0µm	6.0µm	6.0µm	437.0	437.0	437.0	437.0
3	1.2µm²	6.0µm	2.2µm	1.7µm	21487.0	571.0	358.0	443.8
4	0.7µm²	3.0µm	6.7µm	6.7µm	6165.0	557.0	399.0	448.0
5	2.0µm²	7.7µm	2.5µm	1.7µm	33718.0	551.0	349.0	455.7
6	1.0µm²	3.0µm	1.2µm	0.9µm	13708.0	564.0	379.0	464.3
7	0.5µm²	1.1µm	0.5µm	0.5µm	1847.0	457.0	433.0	461.8
Average	4.7µm²	8.0µm	2.5µm	1.7µm	81287.7	725.1	343.5	469.9
Standard Dev.	18.0µm²	6.0µm	2.4µm	1.4µm	228481.2	377.2	54.6	61.9
Max	118.0µm²	57.0µm	21.7µm	11.7µm	2603615.0	2455.0	558.0	1161.4
Min	0.5µm²	6.0µm	0.5µm	0.5µm	356.0	356.0	0.0	356.0
Total	9876.0µm²	6076.0µm	3063.0µm	1863.0µm	60663305.0	687603.0	418868.0	507668.0

Measurement of biventricular fibrosis of a crab-eating macaque

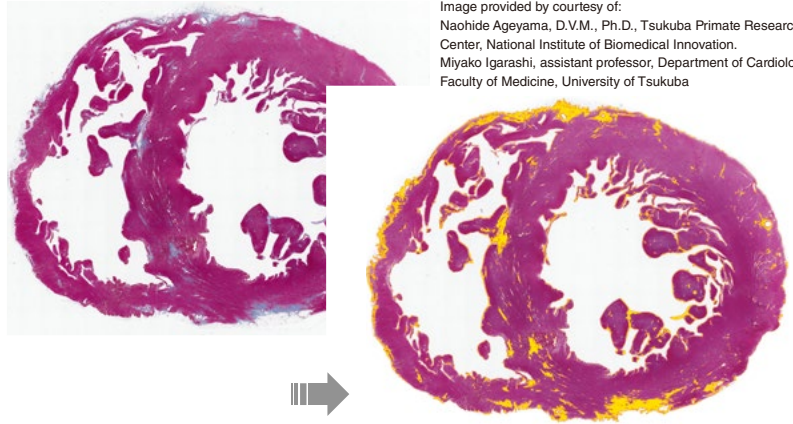
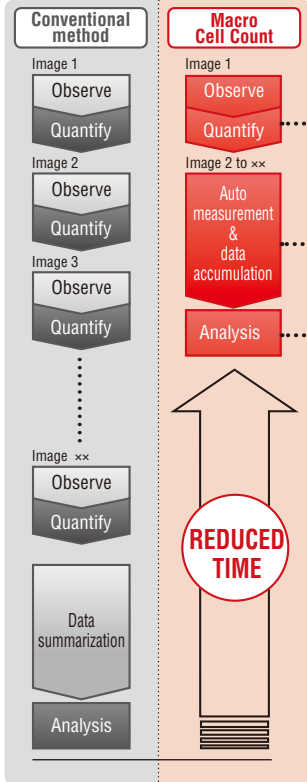


Image provided by courtesy of:  
Naohide Ageyama, D.V.M., Ph.D., Tsukuba Primate Research Center, National Institute of Biomedical Innovation.  
Miyako Igarashi, assistant professor, Department of Cardiology, Faculty of Medicine, University of Tsukuba

## Macro Cell Count

Enables quick, high-accuracy quantification while eliminating variation in measurement results



Output various conditions

- Threshold setting
- Correction values
- Mask setting
- Measuring range (Upper/lower limits)
- Colocalization setting, etc.

Condition file

Drag & drop

All images are measured under the same conditions, which eliminates variations.

Accurate measurement is possible without the influence of variation and arbitrariness!

## 3D Imaging

Rotation Drag with the left mouse button.

Sectional view Drag with the right mouse button.

From Z-stack images, a 3D image can be created with a single click. Spatial localization can be analyzed and determined accurately.

Zoom in/out Mouse wheel

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