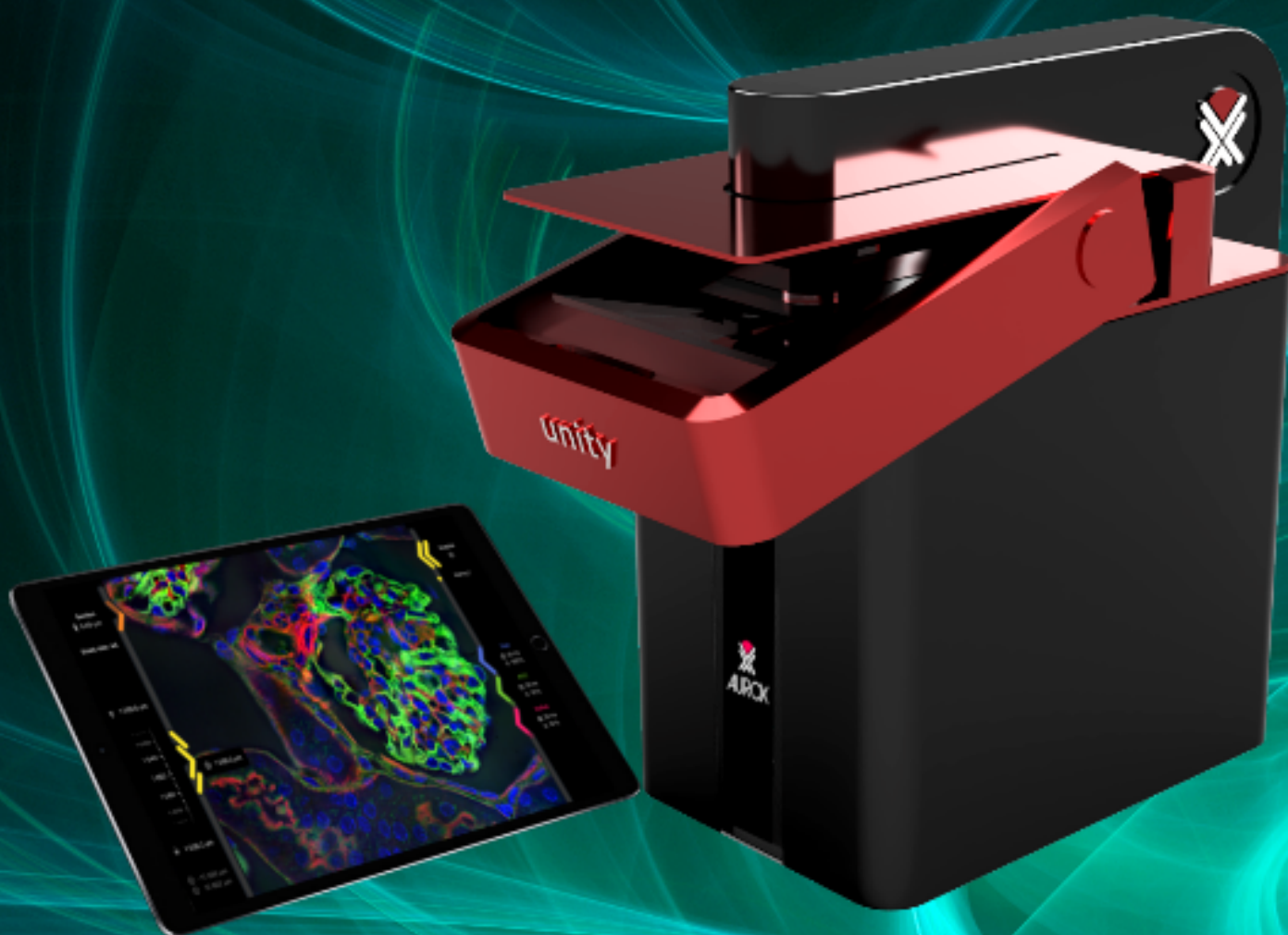# unity

## The all-in-one bench-top
## laser-free confocal microscope

# Imagine **unity**

Introducing the Aurox **unity**, the first in a new breed of all-in-one, compact laser-free confocal microscope systems designed for ease of access and ease of use in your laboratory, at your bench.

**Patent pending.**

**unity** makes confocal microscopy faster, easier, more affordable and more accessible for the wet-lab biologist and medical researcher.

*Professor Tony Wilson FREng, Oxford University & Aurox Ltd.*

# Discover **unity** inside...

## KEY SPECIFICATIONS

| | |
|---|---|
| Confocality: | 0.6 µm (FWHM) with 1.4 N.A oil objective |
| Disc: | 1 sector structured illumination disc. |
| Min exposure: | 20 ms |
| Max frame rate: | Up to 40 fps (1 colour) Up to 13 fps (3-colours) |
| Imaging channels: | 3 integrated filter channels, DAPI, FITC, TRITC. |
| Channel switching: | Instantaneous. |
| Detector: | Integrated sCMOS 2x (2048 x 2048), 6.5 µm pixels. |
| Excitation range: | 370 - 700 nm |
| Emission range: | 410 - 750 nm |

# Explore **unity**

True to its name, **unity** brings together in one fully integrated, compact and easy to use microscope, everything you need for confocal imaging:

## ■ MOTORISED XYZ STAGE

**unity**'s motorised XYZ stage has been designed for use with a wide range of samples and sample mounts commonly used in biological research, including slides, multi-well plates and petri-dishes.

## ■ LASER FREE CONFOCAL

Designed around Aurox's laser-free confocal technology, **unity** combines Aurox's patented structured illumination spinning disc with state-of-the-art technology and a unique, novel optical arrangement. The results are high quality confocal images recorded quickly and easily in your laboratory.

# Experience **unity**



*The large format tablet running the Aurox **unity** software.*

## ■ INTEGRATED LED LIGHT SOURCE

Laser-free, **unity** uses a proven multi-spectral LED light source based on the CoolLED pE-300 Ultra. The result is a high performance confocal microscope, which is free of laser safety restrictions and benefits from low photo-toxicity, low photo-bleaching, low maintenance and low cost of ownership.

## ■ INTEGRATED sCMOS DETECTOR

At the heart of **unity** is a specially designed large format, high performance sCMOS digital detector. This detector is used to record both high resolution confocal and wide-field images as well as ultra-large field of view (4mm x 4mm) full overview images of the sample / mount.

## ■ CUSTOMISABLE OBJECTIVE LENS

**unity** comes with both a low magnification overview objective; used for bulk sample imaging and an integrated high magnification objective lens for detailed study. The high magnification objective is customisable at point of order and can be selected from 20-60x magnification Nikon oil, water or dry lenses.

## ■ INTEGRATED IMAGE SERVER

**unity** does more than just collect high quality confocal imaging data. It also stores your data on 2x 2Tb SSD in an integrated image server database and makes your data accessible to you, wherever you are over a secure network.

## ■ TABLET INTERFACE

For ease of user interface and control, **unity** comes complete, with a large format tablet computer, which communicates directly with **unity** over a secure private wireless connection.
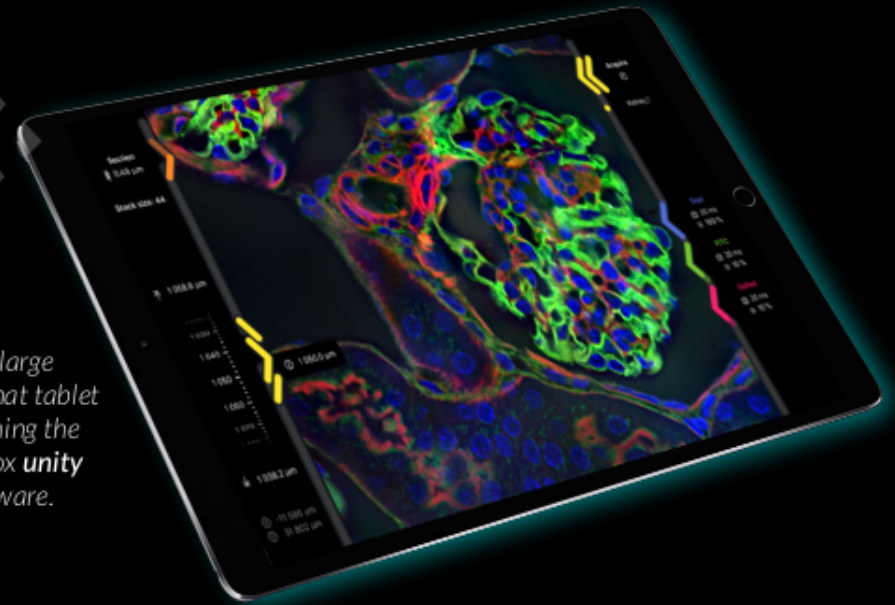
## ■ UNITY SOFTWARE

Set-up, control and review of your imaging experiment has never been easier.

Designed for use with a tablet, the **unity** software is intuitive and presents all experiment set-up and device controls in one colour coded work-flow under a single graphical user interface window. Simply swipe across the image to reposition the XY stage & the field of view. Expand or pinch your fingers to switch between sample holder, overview and high magnification imaging modes and drag the focus wheel to adjust the focus and or the depth in Z.
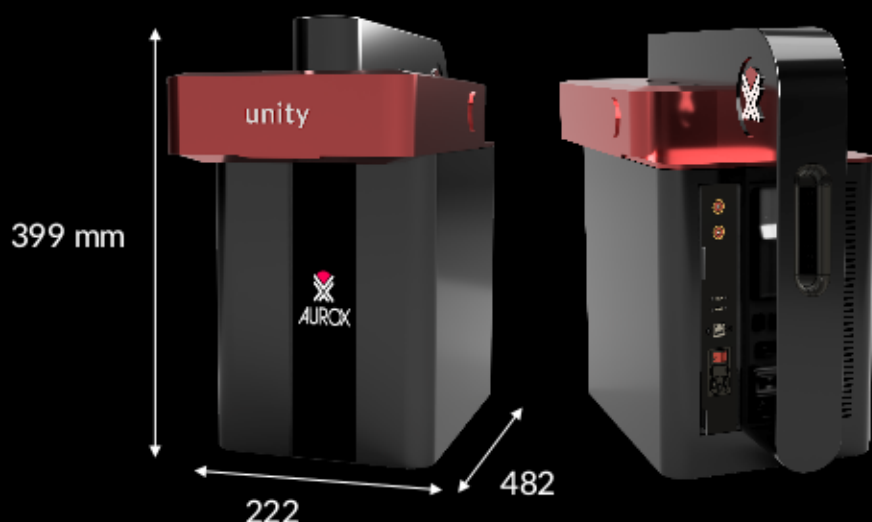
The **unity** software enables:

- Sample holder, overview & high magnification modes.

- Z-stack, tiling, time-lapse & multi-channel imaging.

- Confocal, wide-field & bright-field modes.

- OME-TIFF format.

# Connect **unity**



399 mm

222

482

Designed for the laboratory bench-top, **unity** is extremely compact and weighs <22 Kg.

Gone are the tangle of cables. **unity** requires a single power cable and optionally a network cable.

**unity** also has multiple USB-3 ports and 2x 2Tb removable SSD.

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