

# vt-iSIM – Imaging Beyond All Limits

Introducing the world’s first high speed super resolution imaging system

## Unique Advantages of VT-iSIM

World’s first Multi-Point Super Resolution Imaging System:

VT-iSIM is the world’s first Multi Point Super Resolution Imaging System. This enables parallel processing of emitted photons through our emission micro-lens array optic thus allowing super resolution images to be collected at up to 200fps at a pixel resolution of 1024x1024 and FOV of 66.56x66.56um. Spatial resolution at this rate of acquisition is maintained at 125nm in X & Y and 350nm in Z.

Super resolution without computation:

VT-iSIM produces images beyond the diffraction limit in real time onto a 2 dimensional array detector such as an sCMOS camera chip. There is no requirement for post processing or image manipulation.

Parallel Multi-Colour Image Acquisition:

VT-iSIM can chromatically split the fluorescence emission by wavelength onto multiple array detectors or even onto a single array detector to enable parallel multi-colour image acquisition at spatial resolutions of 135x135x365 and temporal resolutions of up to 1KHz.

No specific imaging requirements:

VT-iSIM does not require any specific fluorophores, immersion oils, objective lenses or even microscope frames to work. If you have a sample which fluoresces you can enhance your spatial and axial resolution by up to 2X.

## Comparison Table:

	STED	STORM / PALM	AiryScan	SIM	VT-iSIM
<b>Multi Point/High Speed Super Resolution Imaging</b>	No	No	No	No	Yes
<b>"Real Time" Image Acquisition</b>	Yes	No	No	No	Yes
<b>Parallel multi-colour imaging</b>	No	No	No	No	Yes
<b>Set-up free Super Resolution Imaging</b>	No	No	Yes	No	Yes