VisiTech international
Vision Technology for Science

VT-iSIM – Imaging Beyond All Limits

Introducing the world's first high-speed, super-resolution, imaging system

Unique Advantages of VT-iSIM

- Produce super resolution images at up to 200fps with a field of view of 97x65µm @100x and 162.5x110µm @60x magnification, and with a spatial resolution of X,Y = ~100nm and Z = ~280nm, and without any requirement for intermediary magnification, i.e. 100x objective magnification results in a 100x magnification image.
- No requirement for intermediary magnification results in super resolution images being generated without any loss in signal and with very low levels of photo-bleaching
- Re-assignment micro-lens array is positioned after pin-hole array in emission path so as to ensure optimal confocality
- Produce super-resolution images in real-time onto a 2 dimensional array detector such as an sCMOS camera chip without any requirement for post-processing, reconstruction or image manipulation
- The super resolution image with X,Y resolution of ~100nm and Z resolution of ~280nm is generated by a single image capture
- Emission pin hole array is in first conjugate plane to reduce imaging cross-talk and spherical aberrations
- Upgrades available to enable simultaneous multi-colour imaging of up to 4 fluorescent colours each with a field of view of 97x65µm @100x and 162.5x110µm @60x magnification, and with a spatial resolution of X,Y = ~100nm and Z = ~280nm
- Super-resolution image is generated with the requirement for specific fluorophores
- Enables scan speeds at up to 1000 frames per second whilst maintaining super resolution imaging
- Multi Point 2-D Array Scanning Super Resolution System, scanning all images with the same scanning beams to minimise image to image variations
- Perfect camera synchronisation with galvanometer scanning element
- Can be integrated with FRAP system to enable simultaneous FRAP and super resolution imaging