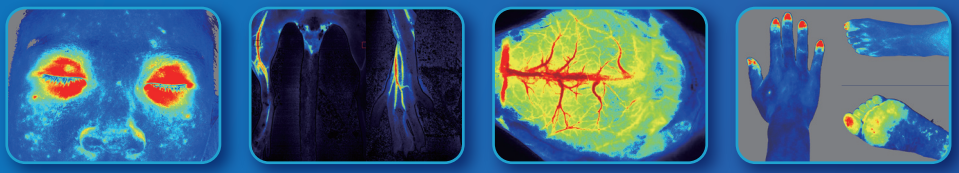
RWD

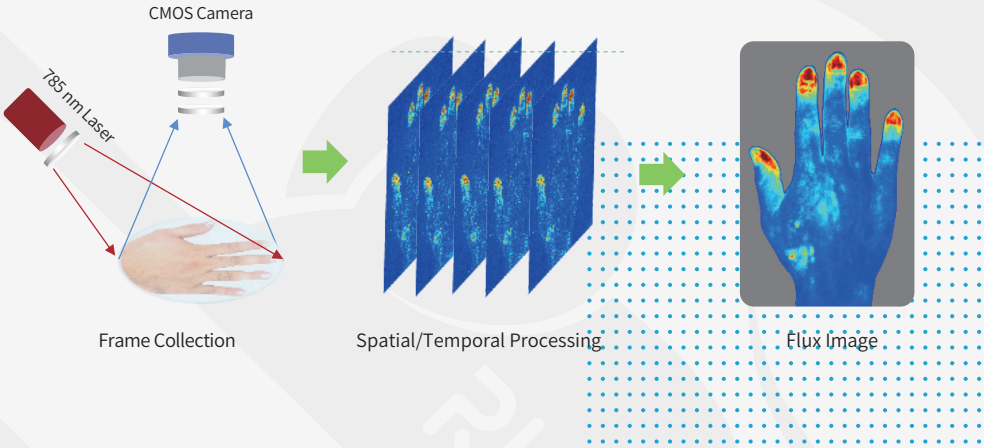
RFLSI ZW

Laser Speckle Imaging System



Laser Speckle Imaging System

RFLSI ZW laser speckle imaging system is an even better tool for microcirculation research based on laser speckle contrast imaging technology (LSCI). With the advanced optical design and improved image processing algorithm, RFLSI ZW shows greater performance in imaging field size, image quality, full-field frame rate and optical resolution, and provides a powerful and efficient means for tissue microcirculation measurement.



Product Features

- Non-contact, non-contrast agent depending measurement
- Best optical resolution of 3.9 μm/pixel, providing more detailed tissue structures
- Max frame rate (full field) up to 100 fps, acquiring real-time changes in larger areas
- Image size ranges from 0.57×0.75 to 22.5×30 cm^2 in all-in-one imager, covering multiple research applications
- Fast auto and fine manual focus, improving focus efficiency and accuracy on various tissues
- Optimal lens assembly, filtering the ambient and reflecting light
- Class 1 of measurement and indicating lasers, safe to use without eye protection
- System calibration with Calibration Box
- Trigger In/Out BNC connections for communication with external devices
- Unlimited installation of analysis software in PC

Software

Setting

- Free zoom adjustment
- Auto focus/manual fine focus
- Multiple options of image resolution/frame rate
- Continuous/Interval/Fixed frame number collection modes
- Multiple trigger in/out modes for the communication with external device

Analysis

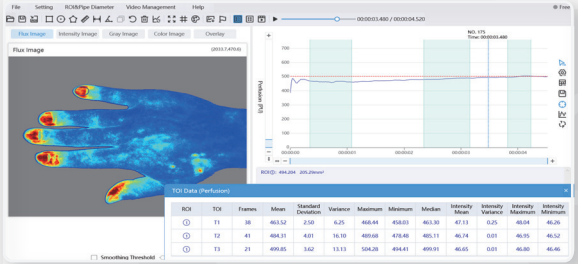
- Flux/Gray/Intensity/Color/Overlay image display
- Multicolor coding for flux images
- Background removal with adjustable threshold
- Image magnification by free selection
- Montage display and image comparisons
- Max/Min/Mean/SD statistic analysis of ROIs/TOIs
- 1~200 magnitudes for image smooth processing

Record

- Convenient data collection with easy operation
- Multiple kinds of ROIs for Draw/Copy/Delete/Edit
- Intuitive display of the real-time perfusion image/ graph
- Free scaling of X- and Y-axis in perfusion graph
- Event marker

Export

- Export single/all Flux and Gray images
- Export video with different play rate
- Export perfusion graph as .txt/.csv/.jpg format for convenient data analysis by other software



Simultaneous display of perfusion image/graph, and statistic analysis of ROI/TOI

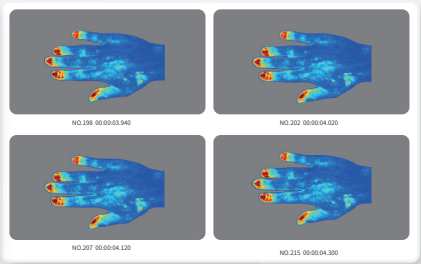


Image comparison from different time points

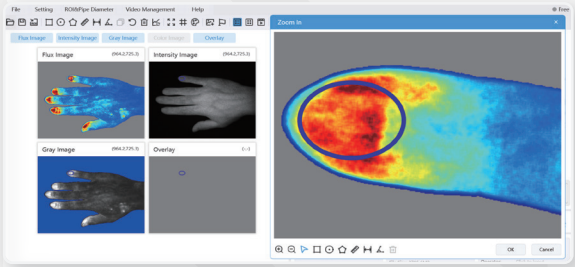
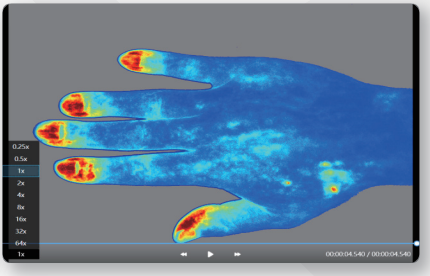
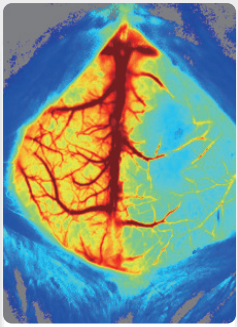


Image magnification by free selection

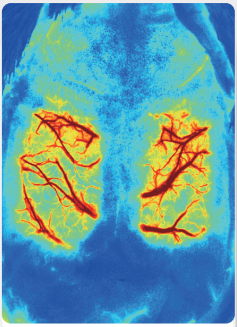


Video preview/export with selected play rate (0.25×-64×, all 9 kinds)

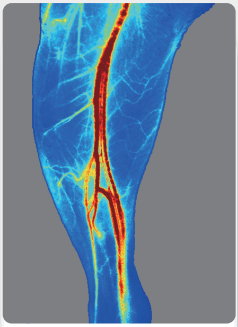
Applications



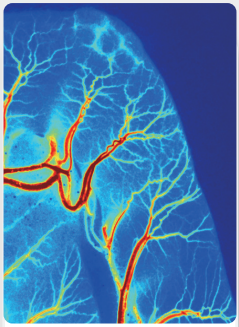
MCAO Mode



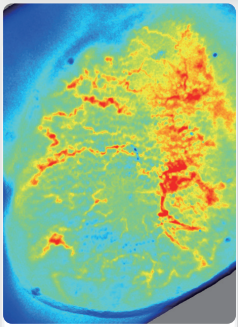
CBF Monitoring



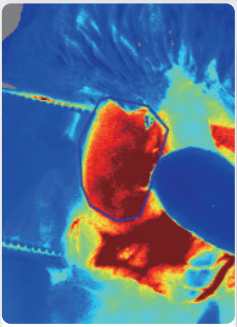
Hind limb Ischemia



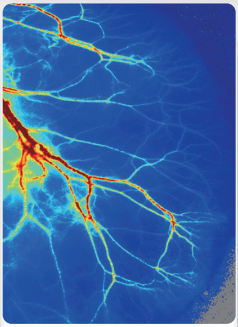
Septic Shock



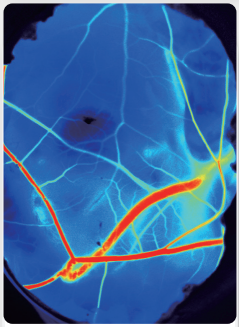
Tumor Angiogenesis



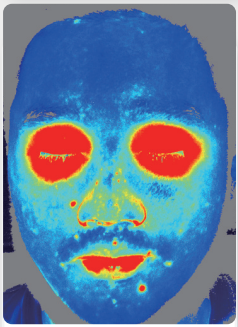
Kidney blood Flow Monitoring



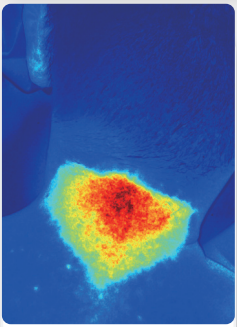
Thrombus



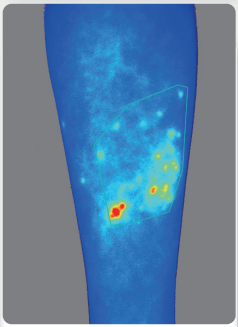
Chicken Chorioallantoic Membrane Assay



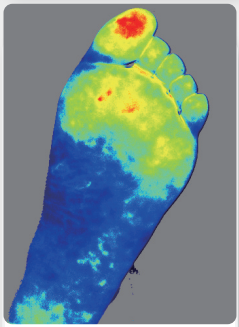
Skin allergies



Laser Therapy



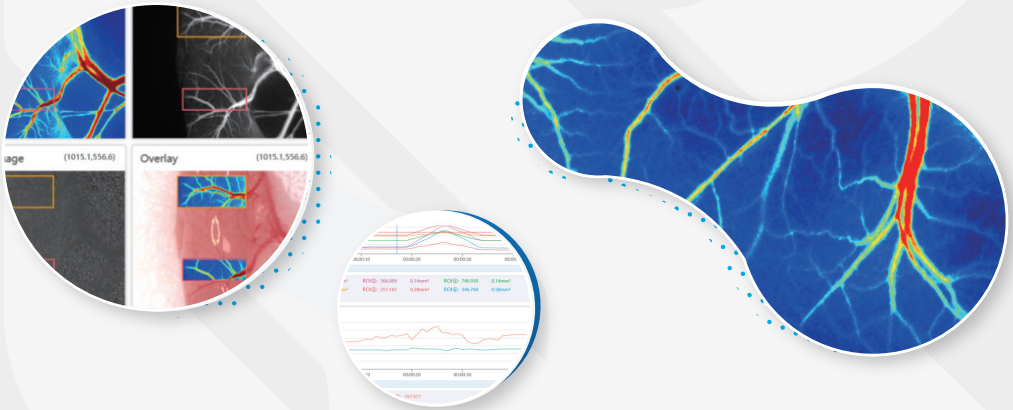
Eczema



Diabetic Foot

Technical Parameters

Resolution	Max Camera Resolution：2064×1544 pixels Best Resolution：3.9 μm/pixel
Image	Flux/Gray/Intensity/Color/Overlay
Measurement Laser	785 nm, Class 1
Indicating Laser	650 nm×2, Class 1
Focus	Auto/Manual (fine focus)
Trigger	2×BNC
Image Size	0.57× 0.75-22.5×30 cm^2
Max Frame Rate	100 fps (full field)
Zoom	10×
Working Distance	10-40 cm, continuous
System Calibration	Calibration Box
Software	Acquisition Software and Analysis Software



Customers

Publications

nature neuroscience

NsMJ transmission drives NVC and open up a new avenue for studying stroke

Gut

Rapid gut dysbiosis induced by strokeexacerbates brain infarction in turn

Science Robotics

Tracking and navigation of a microswarm under laser speckle contrast imaging for targeted delivery

BRAIN

Prolonged myelin deficits contribute to neuron loss and functional impairments after ischaemic stroke

blood

14-3-3ζ-c-Src-integrin-β3 complex is vital for platelet activation

Circulation Research — American Heart Association.

Spatiotemporal Control of Vascular CaV1.2 by α 1C S1928 Phosphorylation

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A Combination Therapy Using Electrical Stimulation and Adaptive, Conductive Hydrogels Loaded with Self-Assembled Nanogels Incorporating Short Interfering RNA Promotes the Repair of Diabetic Chronic Wounds

Science Advances

tPA-anchored nanorobots for in vivo arterial recanalization at submillime-ter-scale segments

BMC Medicine

Exogenous mitochondrial transplantation improves survival and neurological outcomes after resuscitation from cardiac arrest

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