

# HIGH-FREQUENCY ULTRASOUND

## PROSPECT T2



The **Prospect T2** is an innovative high-frequency ultrasound system designed for *in vivo* preclinical imaging in small animals such as mice, rats and zebrafish. This compact and cost-effective tablet-based system provides high-resolution images (up to 30  $\mu\text{m}$ ) and advanced capabilities to monitor changes in hemodynamics and observe anatomical structures in real-time.

There are three available probes with frequencies ranging from 15-50MHz. The system comes with all standard imaging modes including B-mode, M-Mode, Power/Color/PW/Tissue Doppler, and Contrast (linear and non-linear/harmonic) imaging mode.

### Probes

**20 MHz**  
15-25 MHz

**40 MHz**  
33-50 MHz

**50 MHz**  
33-50 MHz



### Applications

#### Cardiovascular Research

The system offers real-time cardiac and vascular imaging, enabling heart function and blood flow assessment from *in utero* to adulthood.

#### Cancer Research

The system is used in various oncology models, enables non-invasive detection and tracking of tumor growth, assessment of blood flow and molecular changes, and facilitates image-guided procedures.

#### Abdominal & Anatomical Imaging

The Prospect T2 offers non-invasive 2D and 3D imaging of abdominal organs, urogenital, musculoskeletal areas, and blood vessels, as well as perfusion assessments.

#### Developmental Biology

The Prospect T2, non-invasively enables pregnancy confirmation, embryonic development monitoring, cardiac assessment, and image-guided interventions.

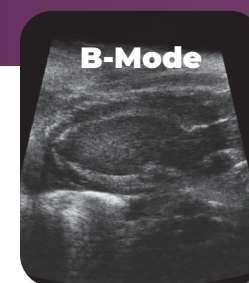
#### Ophthalmology

The Prospect T2 is versatile for visualizing eye structures in various species, supporting 3D imaging, Doppler assessment of blood flow, microbubble perfusion evaluation, and image-guided injections.

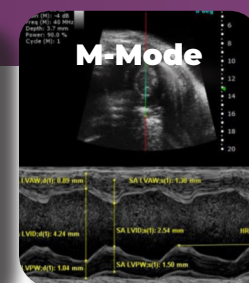
#### Other Species

The Prospect T2 is versatile, and can also be used with other species such as zebra fish, chick embryos, amphibians, bats, hamsters, and more.

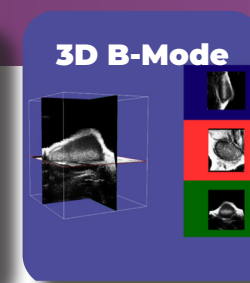
### Imaging Modes



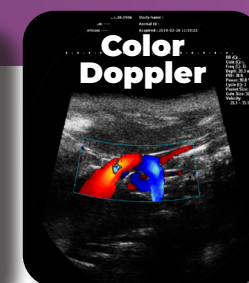
Mouse Left Ventricle in Long Axis



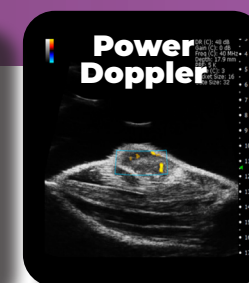
Mouse Left Ventricle in Short Axis



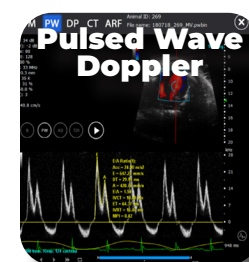
Mouse Mammary Fat Pad Tumor 3D



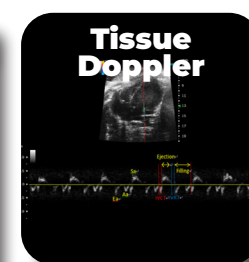
Mouse Aortic Arch



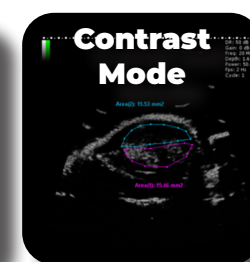
Mouse Subcutaneous Tumor



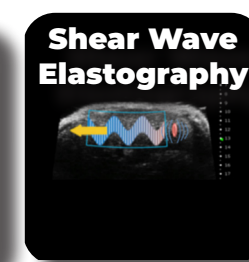
Mouse Mitral Valve Inflow



Mouse Mitral Valve Annulus



Mouse Subcutaneous Tumor



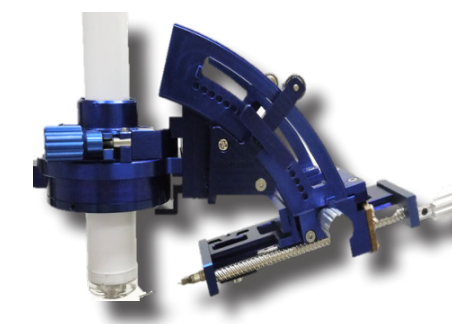
Shear Wave Through Mouse Liver



ECG Gated KiloHertz Visualization

### Features & Specifications

<b>Hardware Add-ons:</b>	<ul style="list-style-type: none"> <li>3D Motor with 5<math>\mu\text{m}</math> step-size</li> <li>Coplanar injection mount for image guided injection</li> <li>Acoustic radiation force push probe</li> </ul>
<b>Animal Handling Platform:</b>	<ul style="list-style-type: none"> <li>Mouse Platform: 17.2 x 14.2 cm (L x W)</li> <li>Rat Platform: 28.3 x 18.2 cm (L x W)</li> <li>Heated</li> <li>Integration for Anaesthesia nose cone</li> <li>Temperature Monitoring</li> <li>Respiratory rate, ECG, and heart rate with triggering</li> </ul>
<b>Resolution:</b>	<ul style="list-style-type: none"> <li>Up to 30 <math>\mu\text{m}</math></li> </ul>
<b>Field-of-View: (FOV)</b>	<ul style="list-style-type: none"> <li>Depth up to 39 mm x Width 23 mm</li> </ul>
<b>Frame Rate:</b>	<ul style="list-style-type: none"> <li>Up to 400 fps (EKV Mode)</li> </ul>
<b>System Dimensions:</b>	<ul style="list-style-type: none"> <li>360 x 280 x 65 mm</li> </ul>
<b>Data Format:</b>	<ul style="list-style-type: none"> <li>Still and movie export: jpg, bmp, tif, DICOM, avi</li> <li>RAW RF data, with MatLab import scrips</li> <li>Proprietary format for saved CineLoop data</li> </ul>



- Compact with Small Footprint
- Tablet Design
- Touch Screen
- Intuitive Workflow