

## *SmartSPIM Technical Specifications*

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|------------------------------|---|
| <b>Light Sheet Formation</b> | Dynamically axially swept light sheet<br>( <i>Dean et al. 2015</i> )                                |
| <b>Specimen Lateral Size</b> | 2.5 cm x 2.5 cm (standard)<br>4 cm x 6.5 cm (extended)  |
| <b>Illumination Optics</b>   | Custom designed objectives, NA = 0.125,<br>broadband chromatically corrected                        |
| <b>Detection Optics</b>      | 180 mm EFL tube lens<br>Objectives: 1.63X, 3.6X, 15X, 22X   |
| <b>Field of View (FOV)</b>   | 3.6X: 3650 $\mu\text{m}$<br>15X: 850 $\mu\text{m}$  |
| <b>Lateral Sampling</b>      | 3.6X: 1.8 $\mu\text{m}/\text{pixel}$<br>15X: 0.42 $\mu\text{m}/\text{pixel}$                        |
| <b>Axial Resolution</b>      | 3.6X : NA = 0.2,<br>PSFz = 3.2-4.0 $\mu\text{m}$<br>15X : NA = 0.4,<br>PSFz = 1.4-2.2 $\mu\text{m}$ |
| <b>Camera</b>                | 2048 x 2048 sCMOS with rolling shutter<br>synchronized to swept lightsheet                          |
| <b>Imaging Rate</b>          | 20 FPS during volumetric acquisition  |
| <b>Laser Lines</b>           | Up to 6, 405 - 785 nm   |