

Description of Additional Supplementary Files

Supplementary Movie 1 | Polygon-based optical gearbox system with dual path configuration.

The optical configuration and scanning sequence of the dual-path gearbox system.

Supplementary Movie 2 | In vivo 2D high-speed calcium recording with the gearbox system.

Supplementary Movie 3 | 3D volumetric recording with the gearbox system.

Supplementary Movie 4 | High-speed blood flow imaging with the gearbox system.