From Eye to Insight

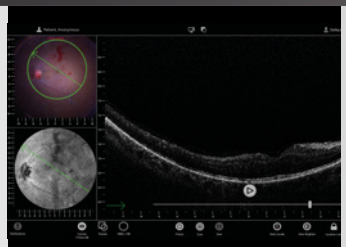
Leica
MICROSYSTEMS

FOCUS ON PERFECTION

EnFocus intraoperative OCT built into the Proveo 8 ophthalmic microscope

FOCUS ON PERFECTION

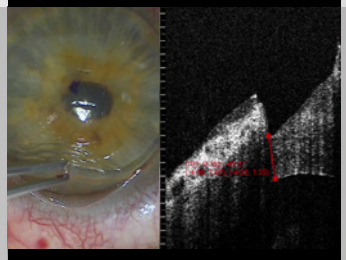
Apply your skills with even greater confidence during eye surgeries with built-in EnFocus intraoperative OCT



EnFocus quad view of a retina scan

Greater insights into subsurface details

Supplement your microscope view with bright, sharp images of previously hidden details to better understand ocular pathology. EnFocus OCT imaging provides greater insight with additional subsurface information for your anterior and posterior segment surgeries.



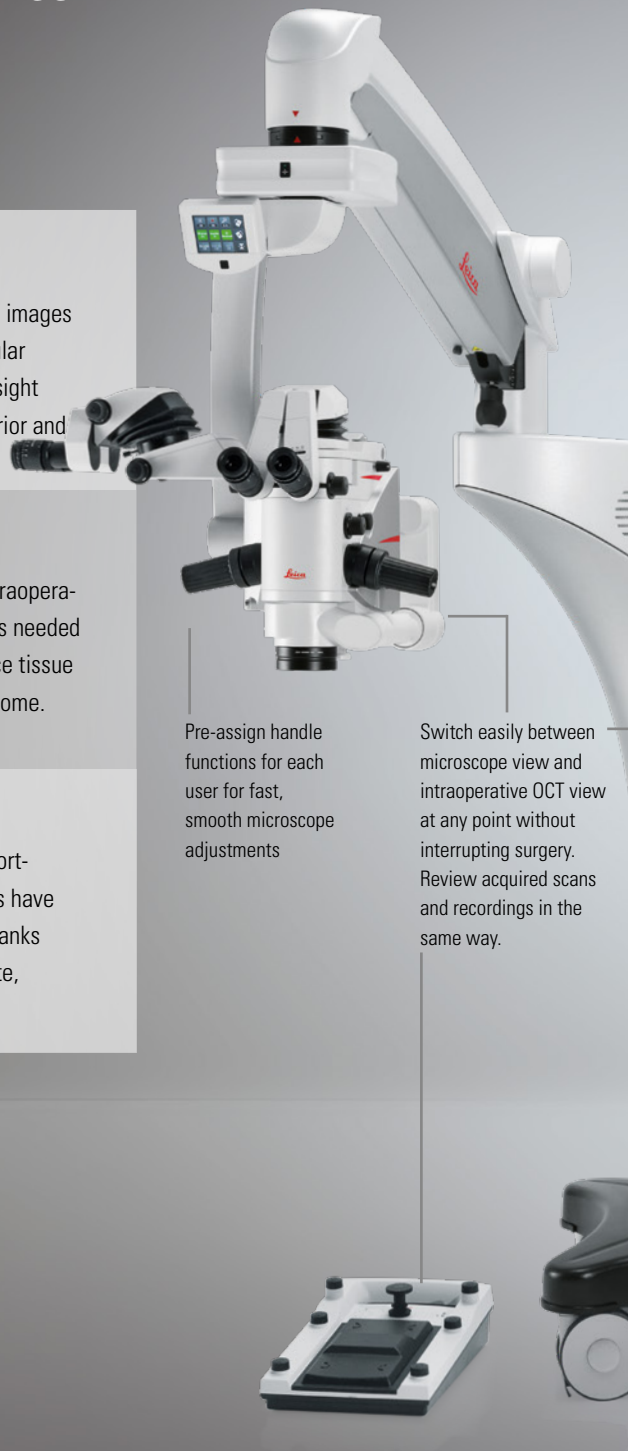
Live measurement of cornea thickness

Immediate confirmation of maneuvers

Confirm in real-time how ocular tissue is reacting intraoperatively to your surgical maneuvers. Adjust your plan as needed thanks to an instant visual confirmation on subsurface tissue reaction. Be even more confident in the surgical outcome.

Maximum freedom in the OR

Work smoothly and independently: Switch views effortlessly via footswitch, handle, or touchscreen. Always have consistent, high-resolution OCT imaging available thanks to one-touch image optimization including auto-locate, auto-brighten, and auto-sharpen.

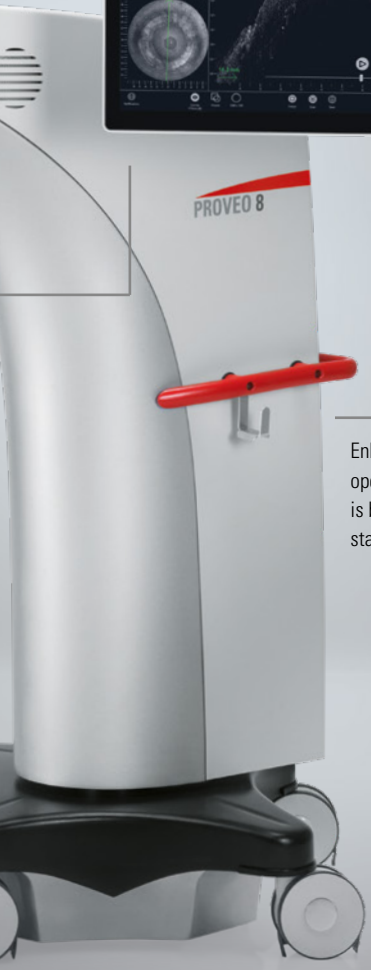


Pre-assign handle functions for each user for fast, smooth microscope adjustments

Switch easily between microscope view and intraoperative OCT view at any point without interrupting surgery. Review acquired scans and recordings in the same way.

With Proveo 8 you benefit from a complete workflow and visualization solution for your ophthalmic OR.

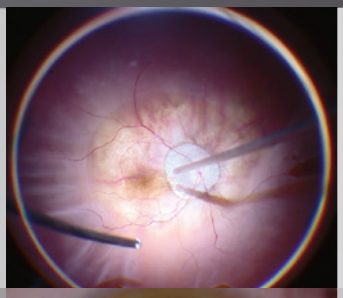
Display your microscope and OCT images in the eyepieces or on the 27" HD monitor for you and your team. For larger screen projections use one out of four video outputs.



EnFocus intra-operative OCT is built into the stand

More details in a texture-rich image

Exclusive FusionOptics technology unites an increased depth of field and high resolution for a crisp and texture-rich image. See all the details you need from the periphery to the membrane layers without the need to continuously refocus.



Reliable, consistent red reflex

Proveo delivers stable, bright red reflex and image contrast, even during phacoemulsification, thanks to CoAx 4 illumination. The technology utilizes four individual coaxial beam paths and an adjustable field of illumination diameter.

Comfortable and efficient surgery

Position your microscope smoothly and work with ease due to long reach, small footprint and electromagnetic brakes. For uniterrupted workflow settings can be pre-programmed by procedure and surgery phase, then controlled via a tap of the wireless footswitch.

"Having confirmation at every step during surgery is a huge advantage and helps enormously in the surgical decision-making and diagnosis. In my experience intraoperative OCT makes the difference between compromise and perfection."

Dr. Barbara Parolini, Eyecare Clinic Brescia, Italy.

TECHNICAL SPECIFICATIONS

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Proveo 8: Construction

Floor stand	Four 360° rotating castors (Ø150 mm), parking brake
Materials	> Conforming with RoHS > Coated with antimicrobial paint
Load	Floor stand max. 8.0 kg from microscope dovetail ring interface
Weight	> Floor stand approx. 380 kg without load and without built-in OCT, 390 kg with built-in OCT > CT42 telescope mount total approx. 200 kg

Proveo 8: Optics and Illumination

FusionOptics	For increased depth of field and high resolution for main surgeon and assistant
OptiChrome optics	For high contrast, high resolution, natural colors without chromatic aberrations
Magnification	6:1 zoom, motorized
Total magnification	4.1× to 24.5× with 10× eyepiece 5.1× to 30.7× with 12.5× eyepiece
Focus range	75 mm
Objective / working distance	WD 175 mm/f = 200 mm WD 200 mm/f = 225 mm WD: Working distance, f: Focal length
Field of view	51.4–8.6 mm Ø with 10× eyepiece
Eyepieces	Wide-field eyepieces for persons wearing glasses 8.3×, 10× and 12.5× dioptric adjustment, ±5 diopter settings, adjustable eyecup
Direct illumination with 2 LED lamps	Main light > Integrated LED illumination system for intensive uniform illumination of the field of view > Continuously adjustable brightness with halogen-like color temperature
	CoAx 4 coaxial illumination > Illumination unit for generating a clear and stable Red Reflex, decreasing stray light through the sclera and increasing the image contrast
Adjustable CoAx 4	Diameter of coaxial illumination is adjustable between 4 and 23 mm via footswitch
Fine focus	Available for assistant and integrated camera or external 1/3 camera with C-mount interface

Proveo 8: Upgradeability

OpenArchitecture	Prepared for integration of video camera systems, digital recording and imaging systems such as EnFocus OCT and monitors
Connectors	> Four built-in video connectors for transfer of video and control data (DIV Out, DIV In, C-video Out, HD-SDI Out) > Internal power supply 12 VDC, 19 VDC, 24 VDC and AC terminals
2D Video	Optional fully integrated 2D HD video and recording

Proveo 8: Technical data

Power connection	> 600 VA 50/60 Hz > 100–240 V~ 50/60 Hz > 2 × T10 AH 250 V
Protection class	Class 1

EnFocus (Ultra-HD) OCT: Optical Performance

Axial resolution in tissue	2.4 - 4.0 µm
Lateral resolution	15-31 µm for 175 mm objective and 16-34 µm for 200 mm objective
Imaging depth in tissue	2.5 mm
Lateral field of view (scan range)	up to 20mm x 20mm across entire range of microscope magnification
Image display resolution	1920 x 1080 pixels
Image acquisition speed	> 36000 scans/s, 30Hz B-scan display refresh rate
OCT optical power	< 750 µW
Imaging center wavelength	860 nm
175 mm objective lens working distance	178 mm
200 mm objective lens working distance	203 mm
Fundus viewing system	Compatible with BIOM 5, BIOM Ready and flat contact lens

EnFocus (Ultra-HD) OCT: Physical Features

Workstation Operating System	64-bit, Windows 10
Removable scan head	Yes
OCT scanner dimensions	Scan head: 6 cm (h) x 10 cm (od) Relay arm: 28 cm (h) x 4 cm (od) Scan assembly: 21 cm (h) x 17.5 cm (w) x 39 cm (l)
Scan head weight	2.6 kg (5.7 lbs)

Not all products or services are approved or offered in every market and approved labeling and instructions may vary between countries. Please contact your local Leica representative for details.

CE Proveo 8 is a Class I surgical microscope

CE EnFocus OCT is a class IIa medical device

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