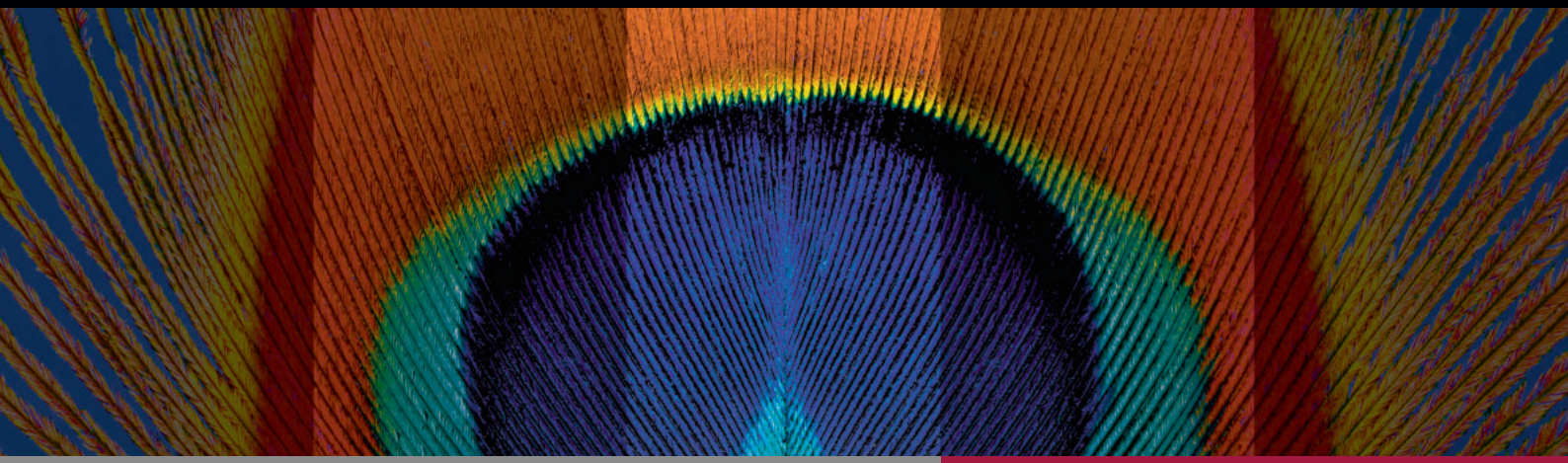
Multimodal Imaging Platform
Optimized for the Posterior Segment



SPECTRALIS®

HEIDELBERG ENGINEERING

Empowering you to improve patient care

SPECTRALIS® optimizes confocal scanning laser ophthalmoscopy, high-resolution SD-OCT and patented real-time image processing technologies to deliver unsurpassed image quality and reproducibility. Resolving and visualizing the smallest details delivers accurate analytics and diagnostic insight over time. The expandable design and multimodal diagnostic imaging approach enable the individualized patient care and precise assessment you need to improve patient outcomes.

Optimizing our core technologies

No matter how you configure your SPECTRALIS, you can be sure it contains the core DNA for high-contrast, high-resolution images that cut through the noise and give you the confidence to pinpoint pathology, identify real change and make more informed clinical decisions.

Confocal Scanning Laser Ophthalmoscopy (cSLO)

By optimizing the selectivity of laser light and the pinpoint resolution of confocal optics, cSLO provides you with high-quality images even in challenging eyes with opacities or small pupils.

Spectral-Domain OCT Technology

High-resolution, three-dimnesional SD-OCT combined with simultaneous cSLO fundus imaging give you structural insight below the surface of the retina.

Real-Time Image Processing

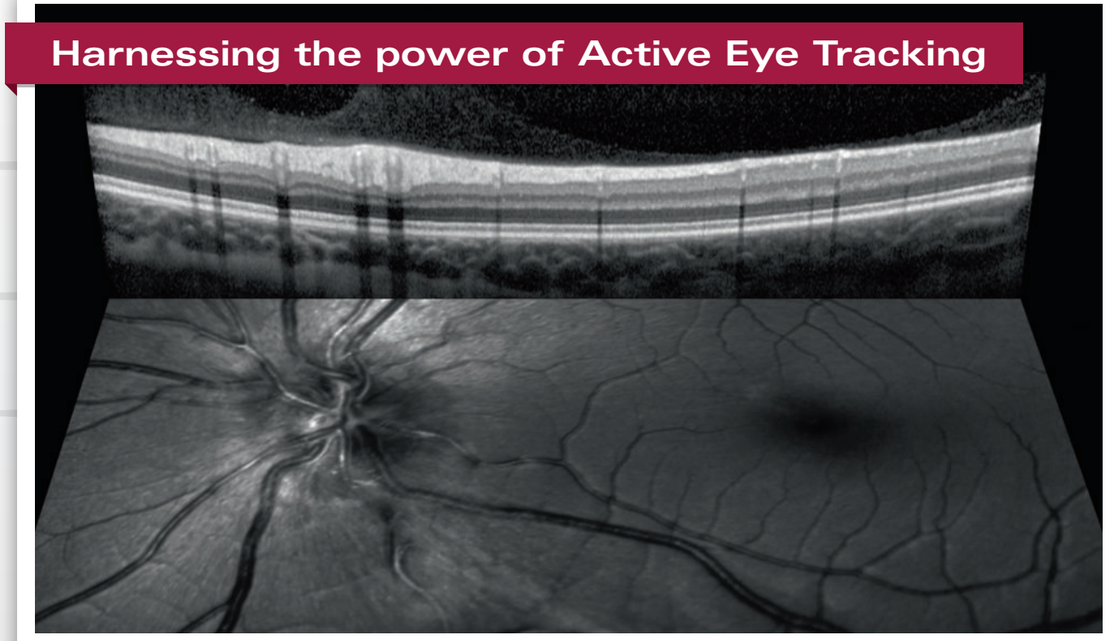
Combining cSLO with OCT and applying real-time image processing technology gave birth to TruTrack Active Eye Tracking, often imitated never duplicated.

"I am completely in love with my SPECTRALIS in so many ways. Heidelberg Engineering technology gives an extra level of confidence because of the degree of information."

Dr. Roberto Gallego-Pinazo, Oftalvist Clinic, Valencia, Spain

SPECTRALIS®

Harnessing the power of Active Eye Tracking



The patented TruTrack Active Eye Tracking uses a second laser beam to actively track the fundus during OCT scanning to minimize motion artifact. The precise alignment of blood vessels from fundus image to the corresponding OCT scan facilitates unsurpassed dynamic visualization.

Freeze time to capture the image you want: TruTrack effectively "freezes" the retina, allowing you to acquire the precise OCT image you need, even if the patient blinks or moves.

Reduce noise to increase image quality: SPECTRALIS averages up to 100 B-scans live for unrivaled high-resolution image quality. Experience the power of averaging even in volume scans.

Scan the same location and monitor change over time: AutoRescan enables follow-up scans in precisely the same anatomic location as previous exams to detect and monitor progression.

Segment individual layers to pinpoint pathology: Precise visualization of 15 structures and reliable segmentation of retinal layers supports you in localizing pathology.

Customize patient care using anatomic landmarks: The Anatomic Positioning System guides your evaluation based on individual anatomic landmarks compared to a normative reference database for objective glaucoma assessment.

"The SPECTRALIS ability to track the eye live is very valuable in providing reliable follow-up data. When I see a change I can rely on it being perfectly matched to previous images."

Professor Sanjay Asrani, Duke University Eye Center, Cary, North Carolina, USA

Delivering individualized patient care

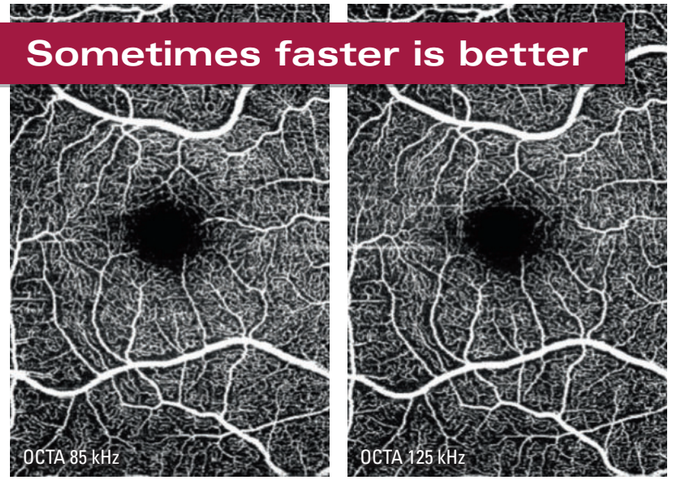
The next generation SPECTRALIS introduces SHIFT technology, the latest addition to the core DNA that optimizes performance without sacrificing quality, delivering individualized patient care.

SHIFT enables you to switch between three OCT scan speeds to find the ideal balance of image quality and clinical workflow.

Standard presets ensure efficiency, and you now have the flexibility to speed up or slow down when needed.

- **Optimized performance**
- **Improved workflow**
- **Customized patient care**

Sometimes faster is better



125 kHz Scan Speed

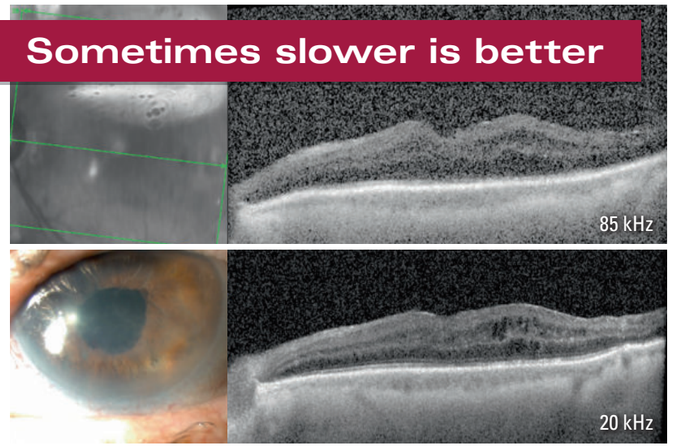
The 125 kHz scan speed allows you to increase efficiency in acquisition of OCT Angiography by up to 30 % without any clinically relevant loss in image quality when compared to the standard 85 kHz scan speed. The faster acquisition of images allows visualization of flow by minimizing artefacts due to natural eye motion, resulting in sharp and detailed images of even miniscule capillaries.

Sometimes balance is best

85 kHz Scan Speed

With the ideal speed-quality ratio for structural OCT imaging, the 85 kHz scan speed helps you balance efficient workflow and high-quality imaging across all applications and scan patterns.

Sometimes slower is better



20 kHz Scan Speed

The 20 kHz scan speed offers you improved image quality due to higher sensitivity and better signal-to-noise ratio, resolving details even in eyes with media opacities.

Capture meaningful, high-resolution images of the posterior segment when other devices or standard imaging modalities cannot deliver sufficient quality.

Experiencing the flexible upgradeable platform

Future proof your investment and the continuity of your data

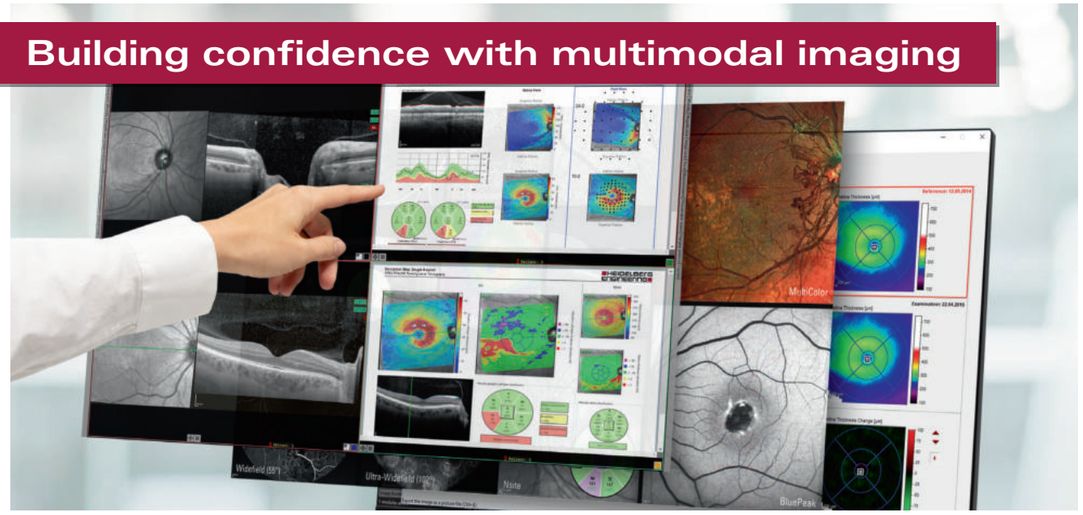
The customizable, scalable design of SPECTRALIS allows you to build your own system based on your specific needs, while ensuring the continuity of your patient data.

SPECTRALIS offers the flexibility to add additional diagnostic functionality in the future. Many upgrades can be seamlessly integrated into the platform, without the need to invest in new devices, preserving patient data for precise follow-up, and future-proofing your investment.

"My team was one of the first users of Heidelberg Engineering imaging devices in the world – our SPECTRALIS platform was the eighth to be produced. We have had several upgrades and continue to be delighted. The value of SPECTRALIS has come to be recognized throughout the world for images that are superior, fast, powerful and reliable – it is indispensable."

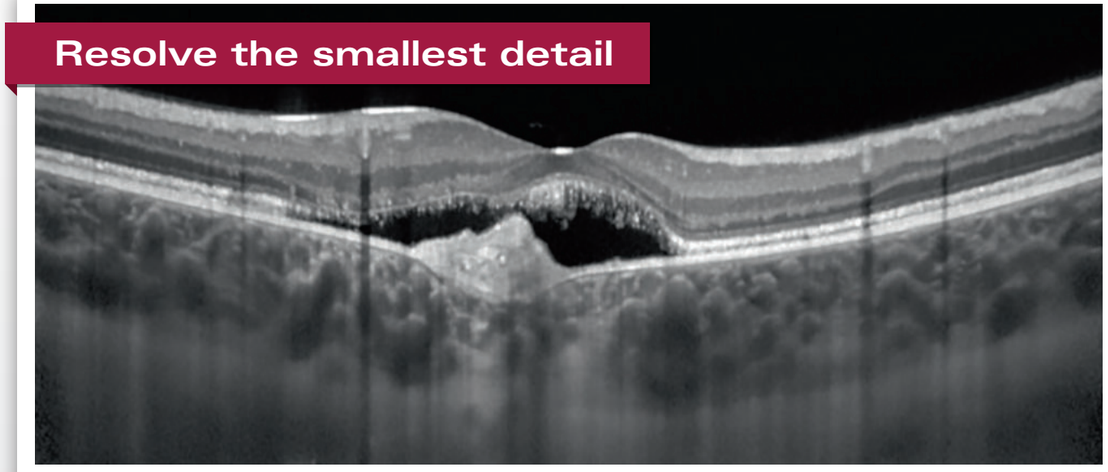
Professor Murat Karacorlu, Istanbul Retina Institute, Turkey

Building confidence with multimodal imaging



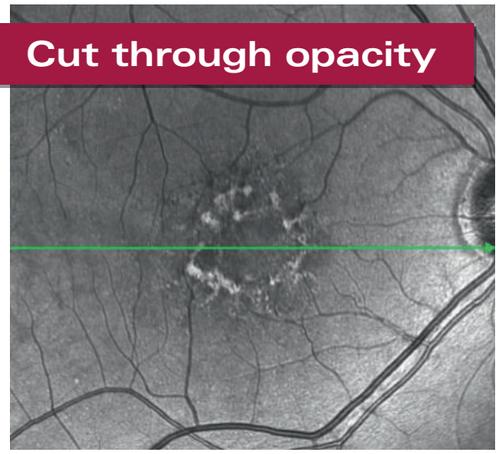
Building confidence with a multimodal diagnostic imaging approach
Use different imaging modules simultaneously to improve your understanding of different pathologies. You can then benefit from efficient clinical workflows without moving patients between devices and examination rooms.

Resolve the smallest detail



SD-OCT
SPECTRALIS high-resolution SD-OCT offers superior visualization of the inner retina. TruTrack Active Eye Tracking enables accurate and repeatable alignment of simultaneous OCT and fundus images. EDI and EVI Modes extend high-resolution OCT imaging to the external retinal layers and detail in the vitreous.

Cut through opacity



Infrared Reflectance
SPECTRALIS infrared reflectance uses a longer wavelength to provide sharp images of intra- and subretinal fluid, the RPE and changes in the outer retina. Infrared light penetrates media opacity.

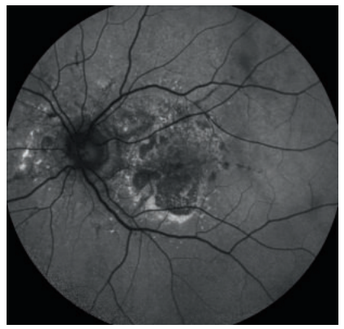
Differentiate disease

Blue Reflectance
SPECTRALIS blue reflectance is specifically helpful in highlighting lesions, microvascular structures, the ILM, and the RNFL.

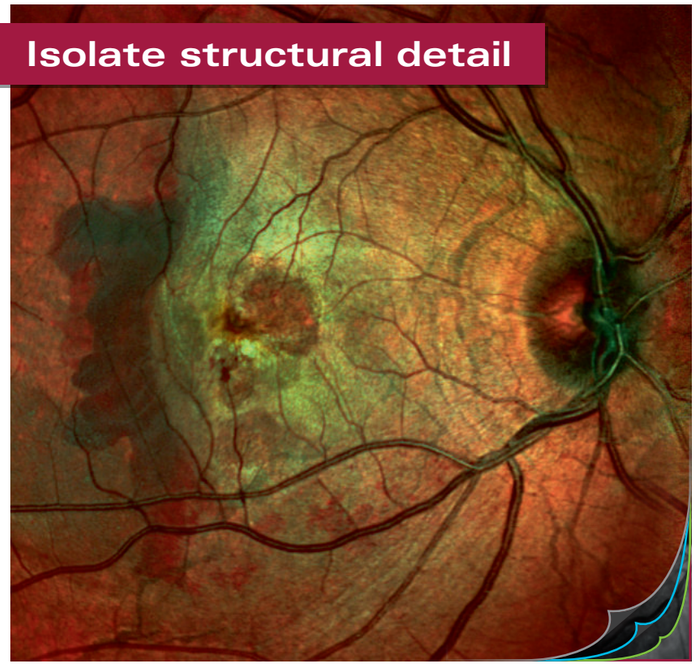
Deliver metabolic insight

BluePeak Module

SPECTRALIS BluePeak combined with SD-OCT provides metabolic and structural information specifically about the RPE. Characteristic autofluorescence patterns visible in BluePeak images show the extent of geographic atrophy.

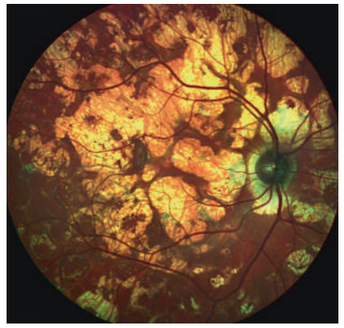


Isolate structural detail

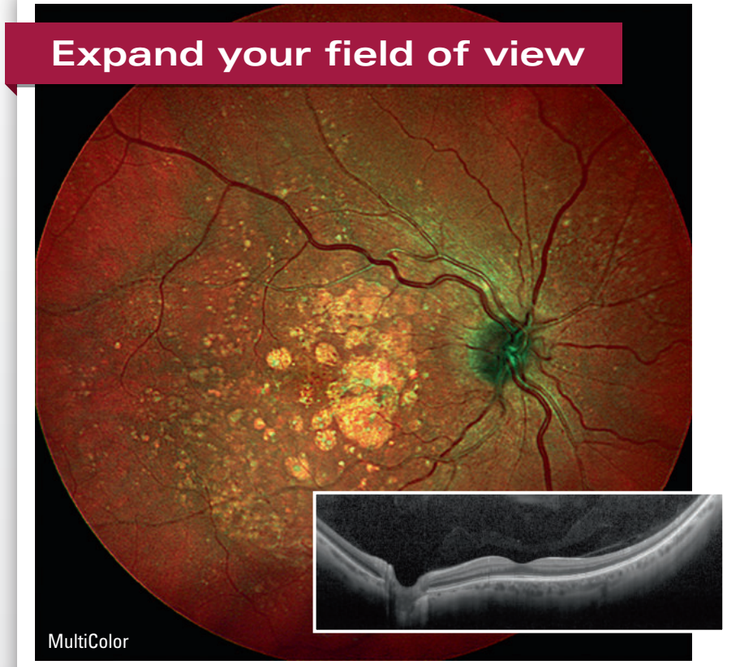


MultiColor Module

SPECTRALIS MultiColor uses simultaneous imaging with multiple laser wavelengths to selectively capture and portrait diagnostic information originating from distinct retinal structures at different depths in a single examination.

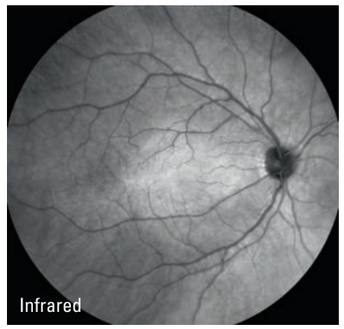


Expand your field of view

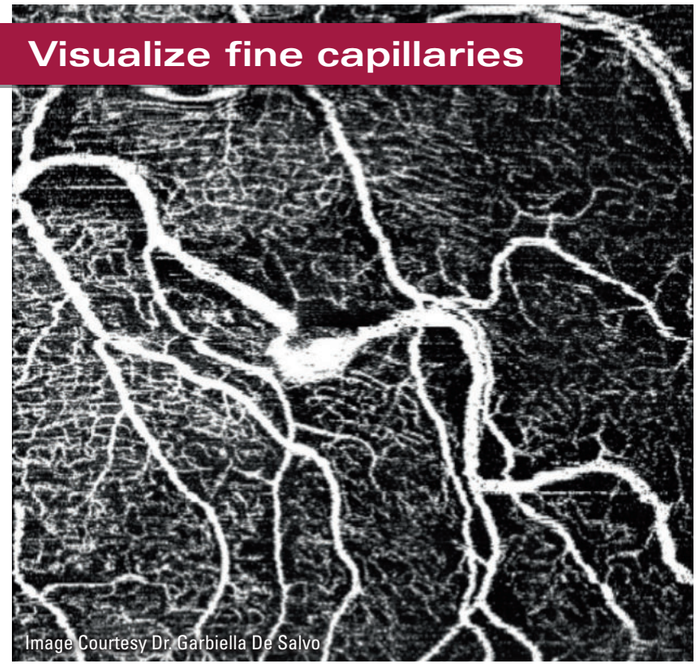


Widefield Imaging Module

SPECTRALIS Widefield Imaging provides a 55° field of view for OCT and all simultaneous fundus imaging modalities, simplifying acquisition, improving workflow and facilitating detection of peripheral pathology.

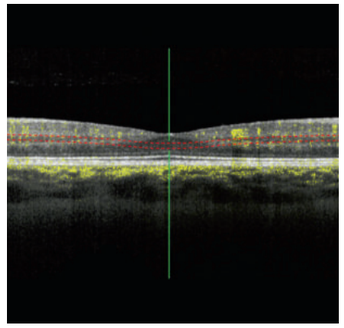


Visualize fine capillaries

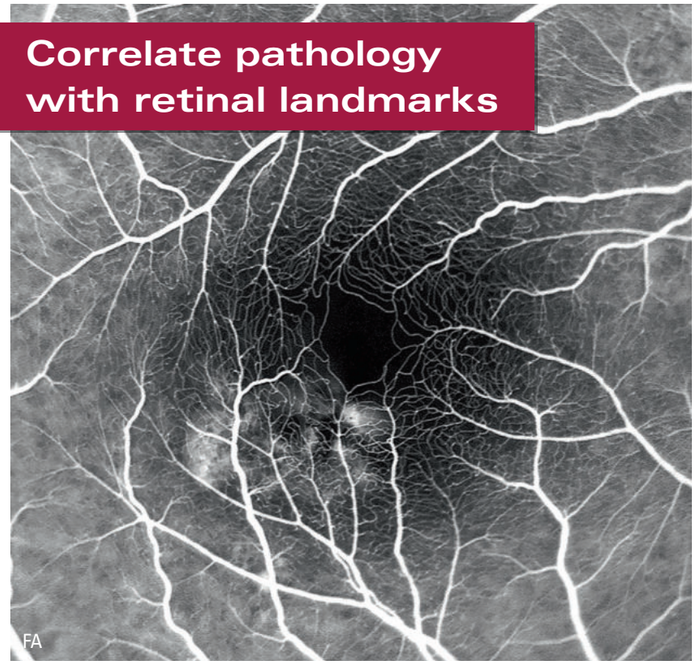


OCT Angiography Module

SPECTRALIS OCTA delivers high-resolution, non-invasive vascular images with a lateral resolution of 5.7 µm providing a 3D representation of retinal vascular flow and enabling fine capillary networks to be visualized in great detail.

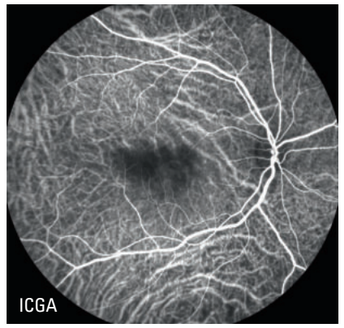


Correlate pathology with retinal landmarks

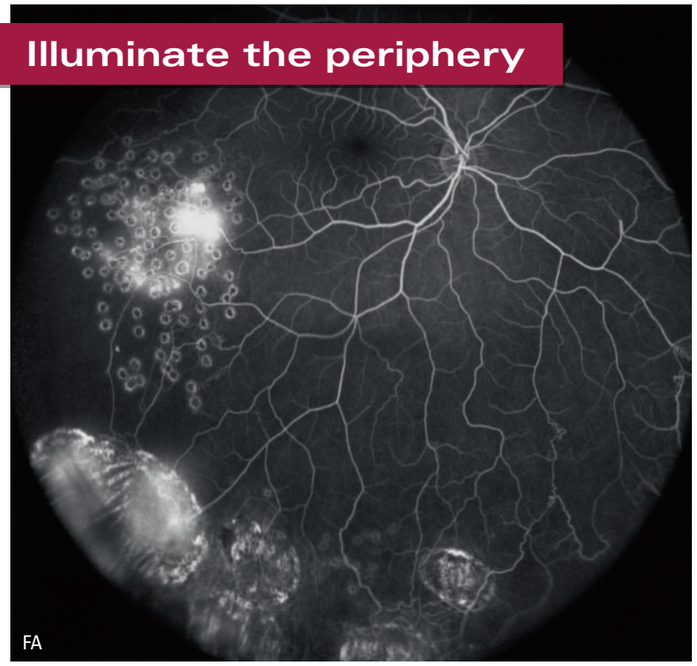


Scanning Laser Angiography

SPECTRALIS FA and ICGA produce high-contrast, high-resolution images and videos that show vessel filling, flow, and leakage. FA and ICGA can be acquired simultaneously and in combination with OCT.

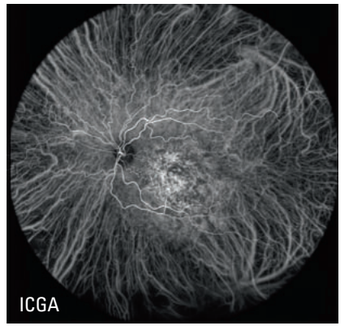


Illuminate the periphery

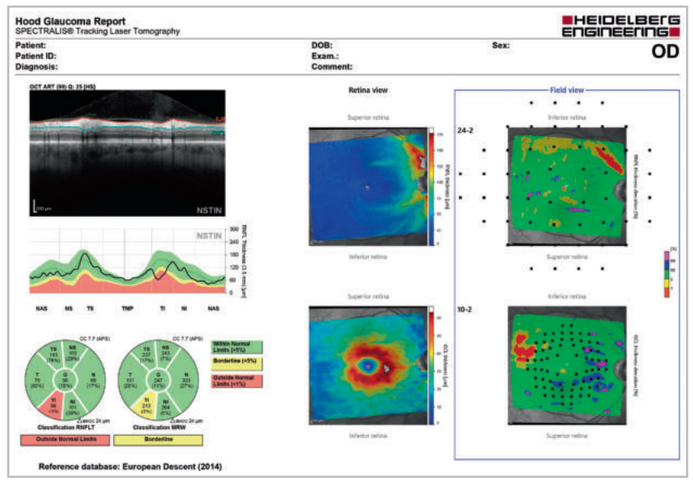


Ultra-Widefield Imaging Module

SPECTRALIS Ultra-Widefield Imaging delivers evenly illuminated and undistorted, high-contrast cSLO angiography images from the macula through the periphery in one acquisition.



Personalize glaucoma care



Glaucoma Module Premium Edition

SPECTRALIS Glaucoma Module Premium Edition provides a comprehensive and personalized analysis of the optic nerve head, retinal nerve fiber layer, and macular ganglion cell layer by precisely matching unique scan patterns to the fine anatomic structures relevant in glaucoma diagnostics.

The Hood Glaucoma Report delivers relevant data at one glance and combines the results of each examination for efficient workflow.

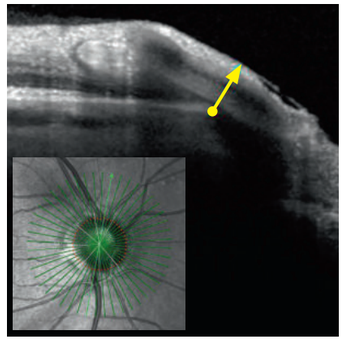
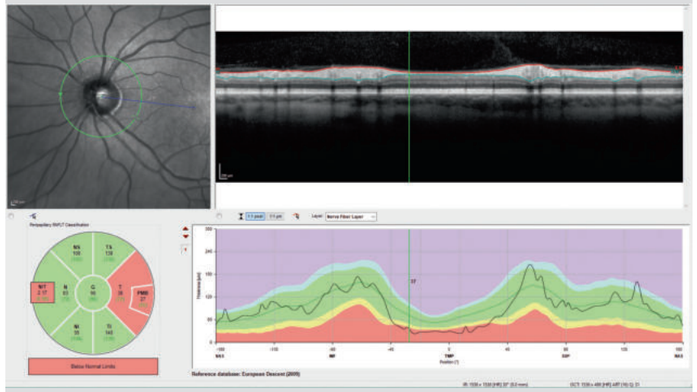


Image from angle to angle

Anterior Segment Module

SPECTRALIS Anterior Segment Module enables high-resolution OCT imaging of the cornea, sclera, and anterior chamber angles, visualizing the entire anterior chamber in one shot.

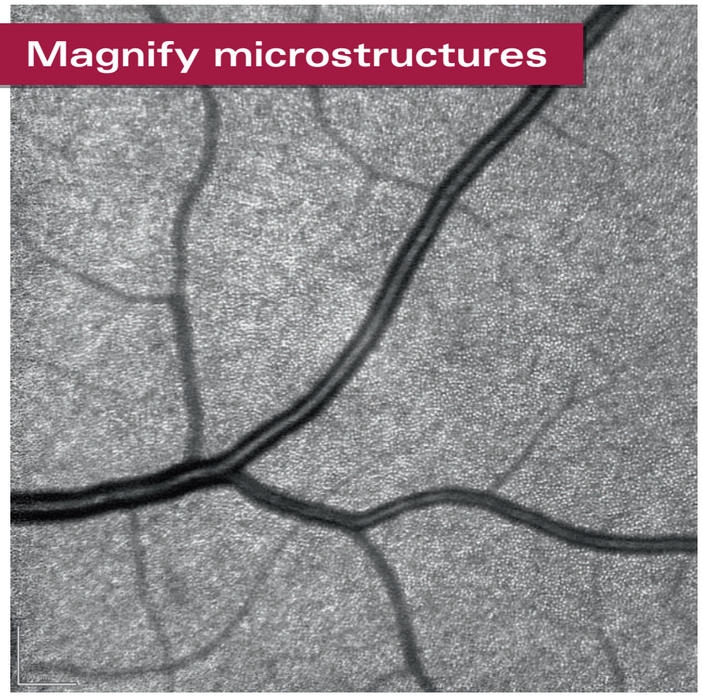
Analyze axonal loss



Nsite Analytics Module

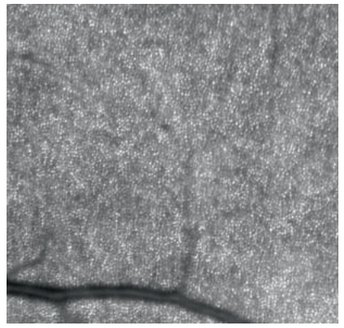
SPECTRALIS Nsite Analytics extends beyond the diagnosis of eye disease and offers a window into the brain with the ability to measure both neuronal and axonal projection within the retina. It provides a comprehensive analysis including color scheme classification diagrams, allowing you to monitor change over time.

Magnify microstructures



High Magnification Module

The SPECTRALIS High Magnification Module enables non-invasive, high-resolution imaging and visualization of previously imperceptible retinal microstructures.



SPECTRALIS®

Be flexible and efficient

Choose complete scanning flexibility or efficient workflow presets

Quickly obtain diagnostic images with live high-resolution image capture, which provides enough control to image challenging patients without the hassle and workflow disruption of a re-do button. The unique combination of cSLO laser imaging and OCT allows you to adjust every aspect of the scan. Choose the type, density, position, size, and axis to help you identify pathology. Transform your workflow with preset scanning protocols customized to patient demographics.

"I have used a few different OCT machines and I feel the SPECTRALIS offers the best results. In my opinion as a photographer, it is very versatile and in the right hands it can capture high quality images of almost all patients. The SPECTRALIS would always be my OCT of choice."

Mark Hope, The Princess Alexandra Eye Pavillion, Edinburgh, UK

Customizing your SPECTRALIS

The modular design of the SPECTRALIS extends beyond the imaging modalities and gives you configuration options that can save space, further improve workflow, and accommodate a wider range of patient needs.

SPECTRALIS OCT

The compact version features a small headrest and a joystick trigger button, for fast image capture and a reduced footprint. The joystick control is designed for ease of use and makes capturing high-quality images simple, even for inexperienced users.

SPECTRALIS HRA / HRA+OCT

The plus version includes the optional panning camera head and is operable with or without a touch panel, for easy access to all the functionality the SPECTRALIS offers at your fingertips.

The exclusive SPECTRALIS **pan and tilt camera** facilitates imaging in challenging patients and assessment in the periphery.

SPECTRALIS Flex Module

The SPECTRALIS Flex Module extends all the functionality and flexibility of your SPECTRALIS multimodal diagnostic imaging platform to patients in a supine position or who may not be able to present to a traditional headrest.

Configuration options

		SPECTRALIS OCT	SPECTRALIS HRA+OCT	SPECTRALIS HRA
Fundus	Infrared Reflectance	☑	☑	☑
	BluePeak (Autofluorescence)	☐	☑	☑
	MultiColor	☐	☐	☐
	High Magnification Module	☐	☐	☐
OCT	Posterior Segment	☑	☑	←
	Anterior Segment	☐	☐	←
	Glaucoma Module Premium Edition	☐	☐	←
	NSite Analytics	☐	☐	←
OCT Scan Speeds	20 kHz (High Sensitivity)	☐	☐	←
	85 kHz	☐	☐	←
	125 kHz	☐	☐	←
Angio-graphy	Fluorescein Angiography	→	☑	☑
	ICG Angiography	→	☐	☐
	OCT Angiography	☐	☐	←
Widefield	Widefield Imaging	☐	☐	☐
	Ultra-Widefield Imaging	→	☐	☐
Hardware	Flex Module	☐	☐	☐
	Panning Camera	☐	☑	☑

Some options can be added anytime, others are only available at initial equipment purchase.

☑ Standard module ☐ Optional → ← Optional after upgrading to HRA+OCT

Notes

Headquarters
Heidelberg Engineering GmbH · Max-Jarecki-Str. 8 · 69115 Heidelberg · Germany
Tel. +49 6221 64630 · Fax +49 6221 646362

AUS
Heidelberg Engineering Pty Ltd · Suite E5, 63 Turner St · Port Melbourne VIC 3207
Tel. +61 396 392 125 · Fax +61 396 392 127

CH
Heidelberg Engineering Schweiz GmbH · Schulstrasse 161 · 8105 Regensdorf
Tel. +41 44 8887 020 · Fax +41 44 8887 024

FIN
Heidelberg Engineering GmbH · Fonseenintie 1 · 00370 Helsinki
Tel. +358 505 226 963

UK
Heidelberg Engineering Ltd. · 55 Marlowes · Hemel Hempstead · Hertfordshire HP1 1LE
Tel. +44 1442 502 330 · Fax +44 1442 242 386

www.HeidelbergEngineering.com