See more. Do more.

Multi-modality ocular surface analysis.

ZEISS ATLAS 500

Next-generation corneal topography system from ZEISS.

ZEISS

zeiss.com/atlas500

Seeing beyond

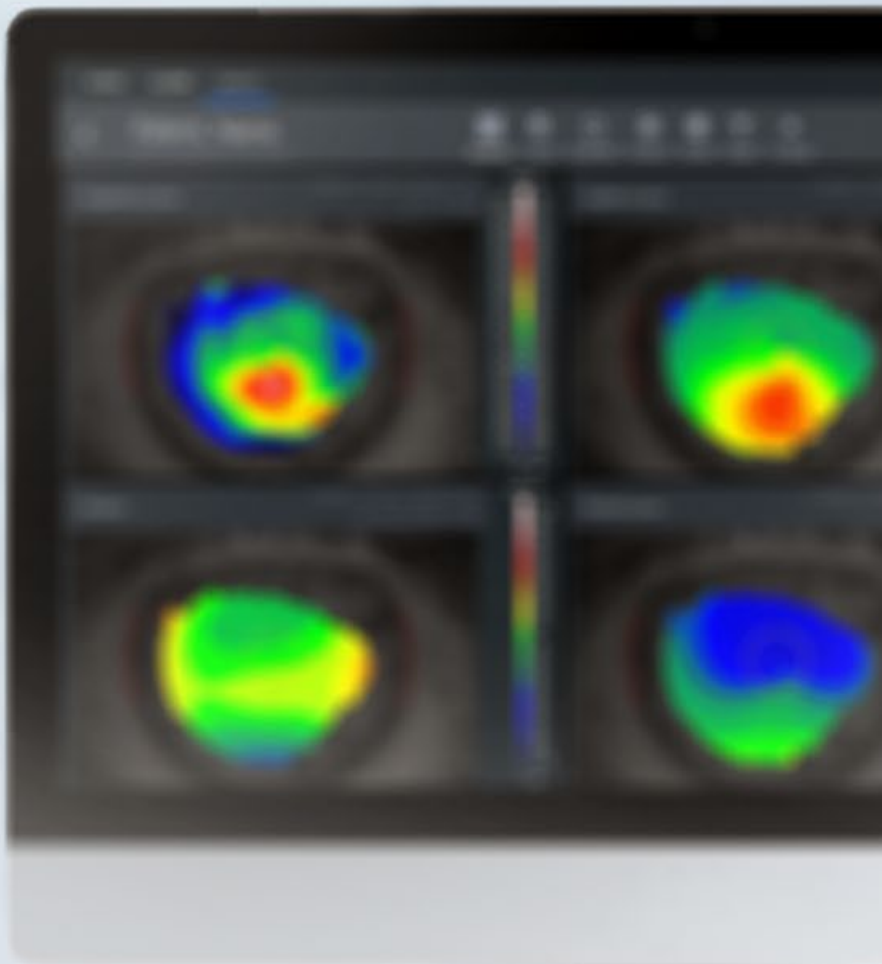
Next-generation corneal topography system from ZEISS.
ZEISS ATLAS 500.

A state-of-the-art, multi-modality solution for the anterior eye segment, **ATLAS® 500 from ZEISS** offers corneal topography. Additionally, the system enables clinicians to carry out dry eye assessments in a single workstation, delivering increased efficiency in a compact design.

Extended insights
- Supports clear decision-making based on corneal topography, pupillometry and dry eye assessment – all in a single device.
- Workflow-optimized visualization focusing on what really matters.

Optimized design
- Intuitive and well-organized user interface for efficient operation.
- Unique swivel-out measurement head to increase the capture area of the cornea.
- Long working distance of 74 mm facilitates a quick and accurate set up for measurements.

Digital documentation
- Connectivity with **FORUM® from ZEISS** for convenient patient scheduling and data storage for efficient patient flow.
- Simple importing of existing ZEISS ATLAS 9000 data for a worry-free upgrade and transition to ZEISS ATLAS 500.



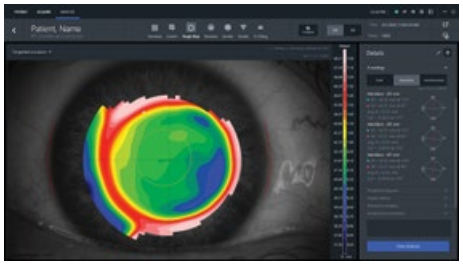
ATLAS
500

Extended insights.
Precise corneal topography and visualization.

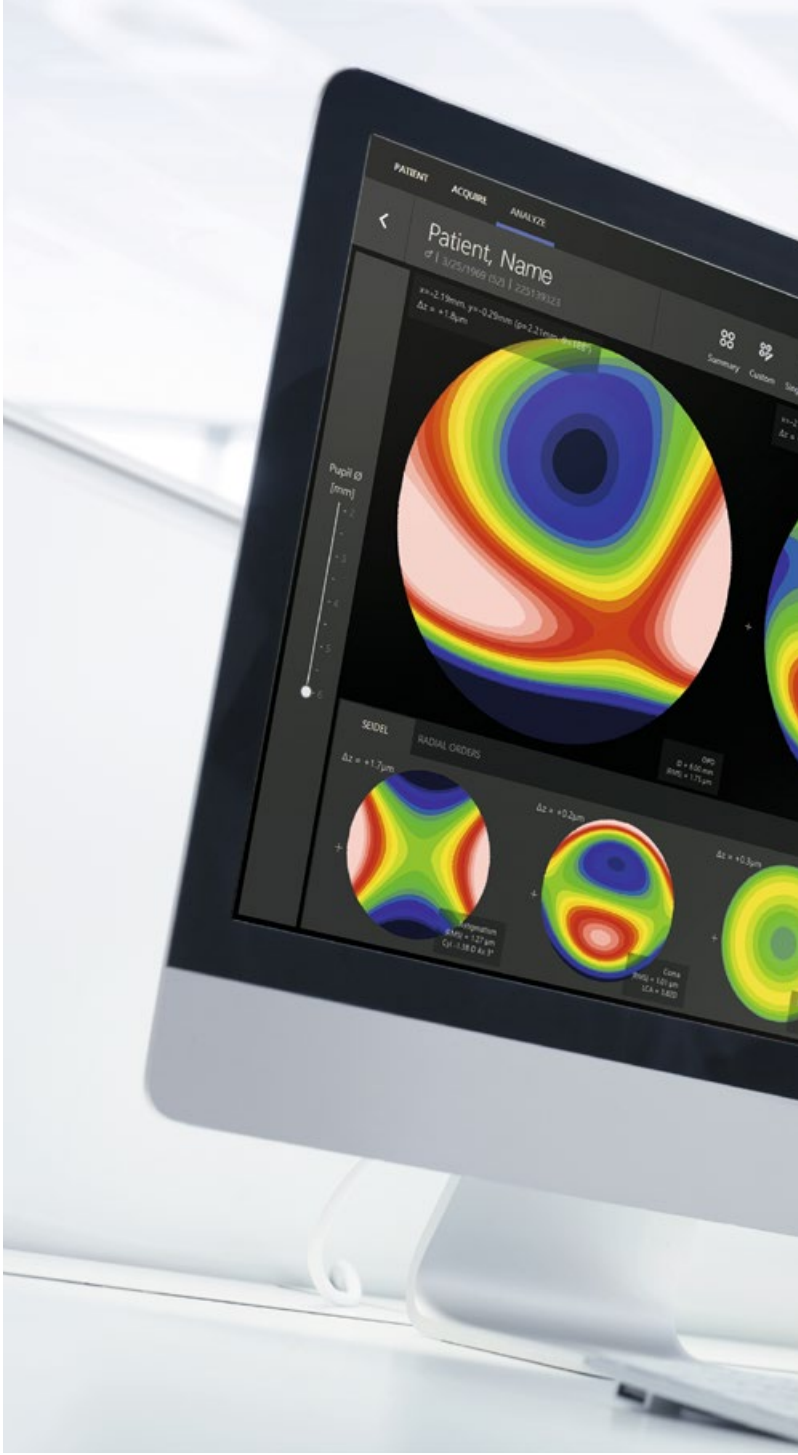
Equipped with a variety of measurement capabilities, the ZEISS ATLAS 500 quickly captures relevant corneal properties with high resolution images and videos.

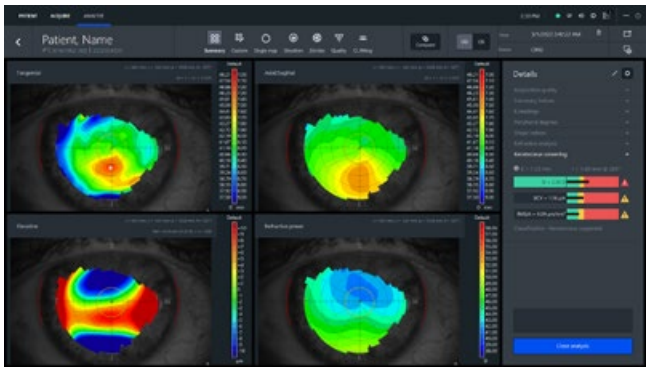
The Placido-based measurements provide a variety of corneal topography analysis options:

- Summary/custom view including all common topographic maps
- Elevation (spheric, aspheric and aspheric-toric)
- Corneal wavefront analysis
- Optical quality analysis
- Contact lens fitting
- Keratoconus screening



Complete corneal topography and visualization including indices with the familiar map design and color scale of ZEISS ATLAS 9000.

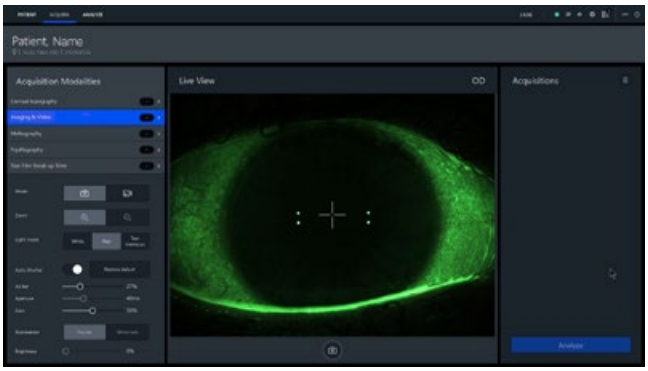


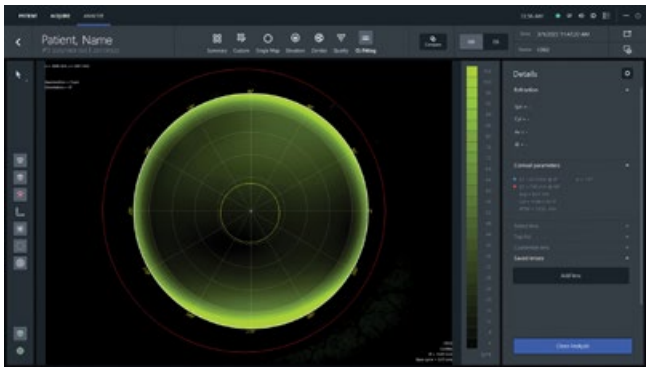


Keratoconus screening including classification
A keratoconus screening system provides information on the potential risk of keratoconus and classifies each patient's cornea into one of the following groups: keratoconus, keratoconus suspect, normal or treated.

Static and dynamic pupillometry
Analyze pupil size and decentration in scotopic, mesopic and photopic light conditions. Choose between static and dynamic acquisition modes.

The ZEISS ATLAS 500 features intuitive, intelligently arranged software and requires only four steps from acquisition to storage of data. In recognition of its innovative, operator-friendly design, the ZEISS user interface concept received the German Design Award 2022.





Contact lens fitting

The luminous source with cobalt blue light allows you to analyze the clearance of rigid contact lenses in fluorescein and detects corneal staining and scars. Simulate the fit of rigid contact lenses based on the internal databases of the lens manufacturers.

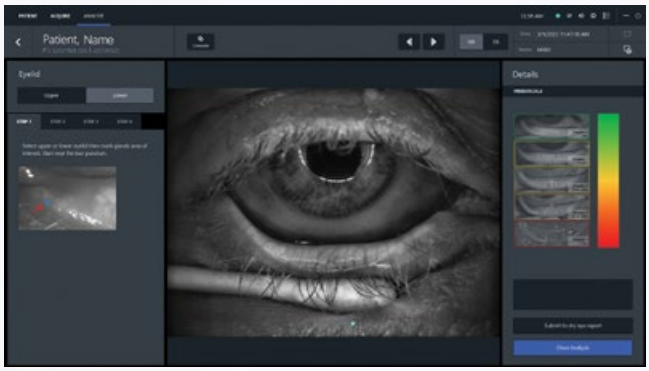
Ensure profound decision-making.
Comprehensive dry eye report.

As a multifactorial disease of the ocular surface, dry eye management requires a collection of measurements and their analysis. The ZEISS ATLAS 500 provides a comprehensive dry eye report, which contains detailed information on a variety of parameters:

- Meibography including calculation of the area of loss
- Ocular redness including grading by Nathan Efron
- Tear meniscus height
- Tear film break-up time
- Ocular Surface Disease Index (OSDI) questionnaire
- Osmolarity (optional data input)

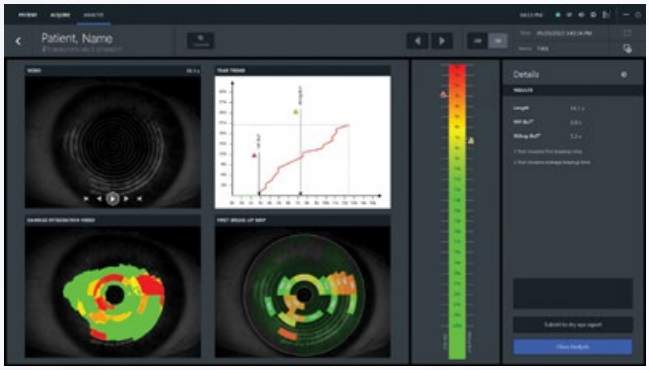
Ocular redness

Grade conjunctival redness and limbal redness according to the scale published by Nathan Efron.[1]



Meibomian glands

Analyze the upper and lower eyelid using a marking wizard that helps identify the meibomian glands loss using the meibomian grading scale by Heiko Pult.[2]



Non-invasive Tear Film Break-Up Time (NIBUT)

Assess the integrity of the tear film on the patient's anterior corneal surface over time through dynamic videokeratoscopy.

[1] N. Efron, "Grading scales for contact lens complications", Ophthalmic Physiol. Opt., vol. 18, no. 2, pp. 182–186, Mar. 1998, doi: 10.1016/S0275-5408(97)00066-5

[2] H. Pult and B. Riede-Pult, "Comparison of subjective grading and objective assessment in meibography", Cont. Lens Anterior Eye, vol. 36, no. 1, pp. 22–7, Feb. 2013, doi: 10.1016/j.clae.2012.10.074.

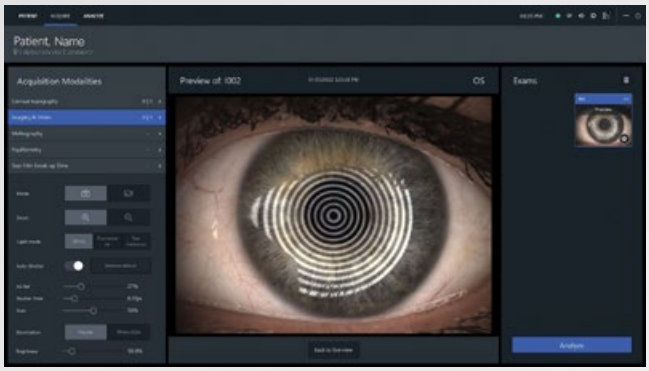
Optimized design.

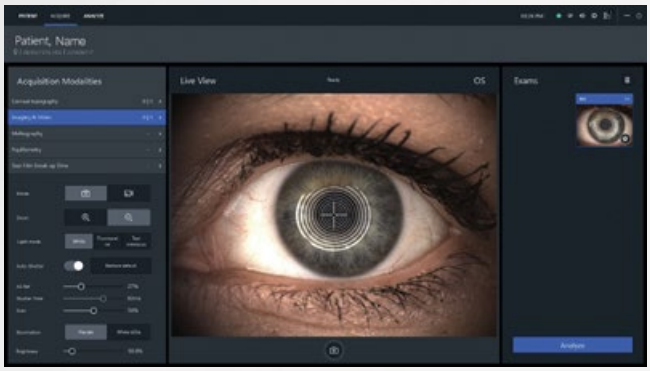
Easy operation and quick data acquisition.

With its proven performance, advanced features and streamlined, contemporary design, the ZEISS ATLAS 500 is designed to fit into any modern clinic or practice environment and provides a positive experience for both operator and patients.

The ZEISS ATLAS 500 is equipped with a variety of illumination capabilities including:

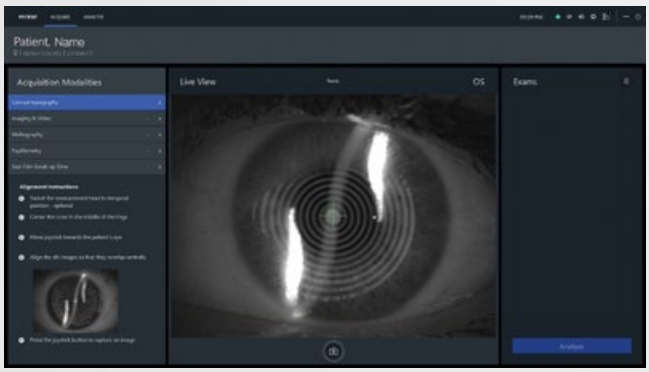
- Placido illumination (topography)
- Infrared LEDs (pupillometry and meibography)
- Blue LEDs including a yellow camera filter (fluorescein examination)
- White auxiliary LEDs (imaging)
- Focusing slit projection (alignment)





Enhanced working distance

ZEISS ATLAS 500 features two image capture options, which provide both close-up and overview images to evaluate the details of the ocular surface and photograph external structures.

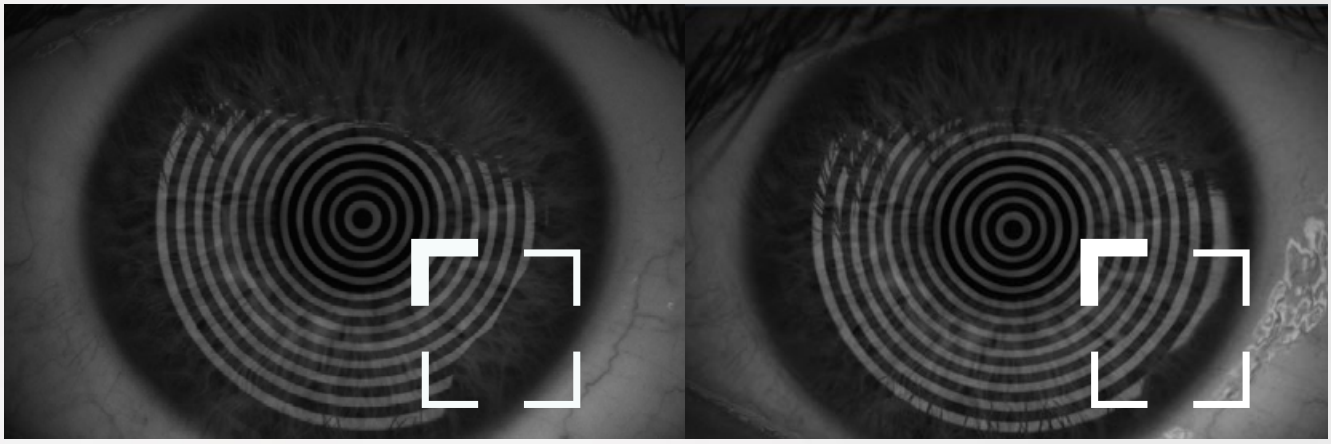


Acquisition support

Alignment instructions guide the operator for correct acquisition.

Swivel-out measurement head

The unique, swivel-out measurement head helps reduce nasal shadows during data acquisition to increase the captured area of the cornea.



Swivel-out measurement head significantly reduces nasal shadows. [left] Measurement in center position: nasal shadows visible. [right] Measurement head in angled position: nasal shadows reduced.

ZEISS ATLAS 500 can be operated with the ZEISS panel PC or with an individual customer PC for a customized integration into most practice or clinic setups.[3]

[3] Customer PC needs to fulfill the minimum hardware requirements.

Digital documentation.

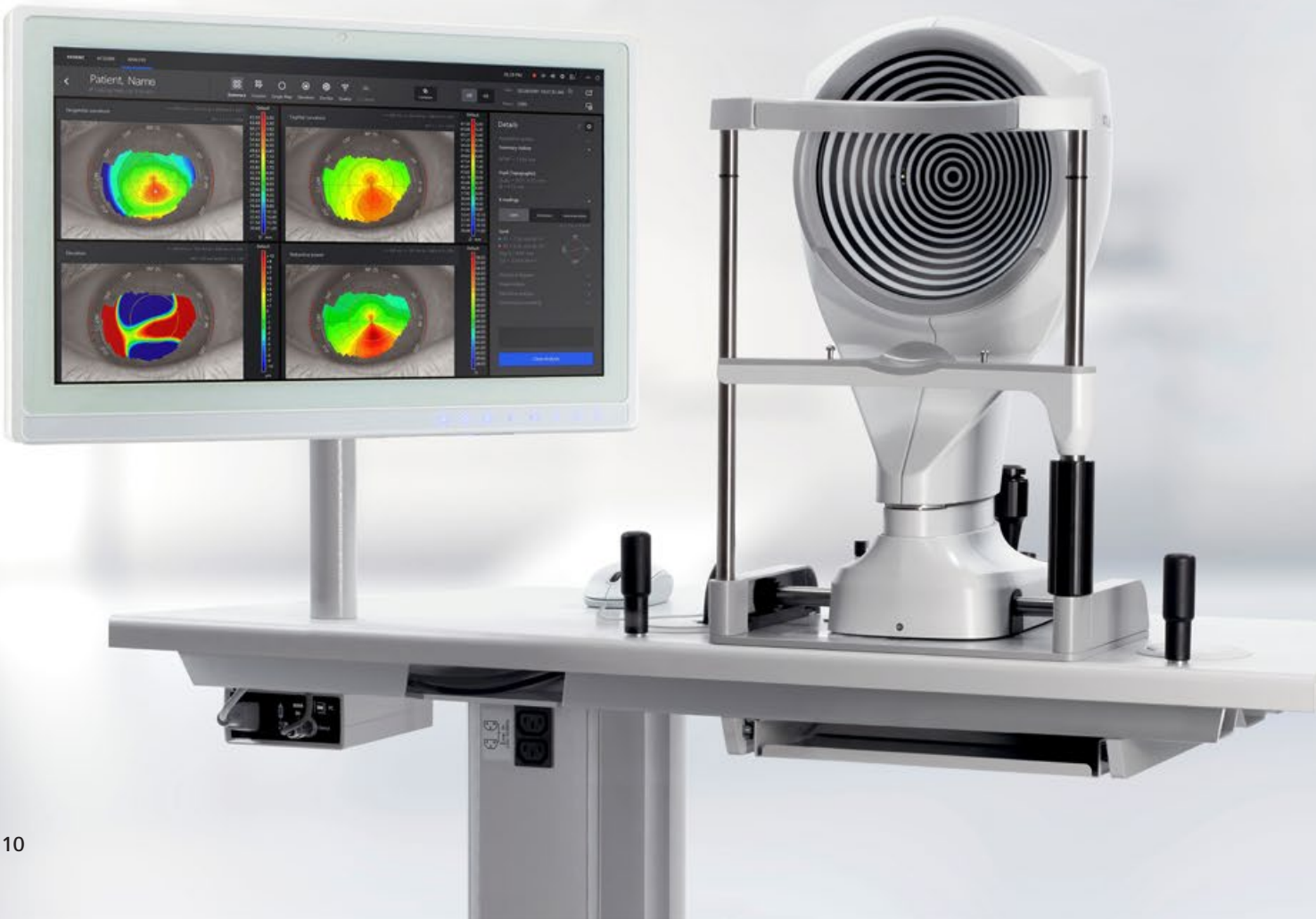
Speed up practice workflow with less manual errors.

The ZEISS ATLAS 500 is optimized for integration into the ZEISS medical ecosystem. The ZEISS FORUM connectivity enables patient data export, including PDF reports, to optimize your workflow.

Multi-modality worklists in FORUM
Link up ZEISS ATLAS 500 with ZEISS FORUM and schedule patients via modality worklists to speed up patient throughput. If required, patient data can also be entered via the ZEISS ATLAS 500 acquisition and analysis suite and transferred to ZEISS FORUM.

Reports and data export
Store images, videos and reports within the ZEISS ATLAS 500 acquisition and analysis software, or directly send PDF reports to ZEISS FORUM, without the need for manual data transfer.

ATLAS 9000 data import
Simply import ZEISS ATLAS 9000 data, continue to review past recordings and compare to the latest recordings without having to switch between old and new systems. Upgrading and transitioning your ZEISS corneal topographer has never been easier.



Technical specifications

ZEISS ATLAS 500 Corneal Topographer

Key Parameters

Placido rings	24
Measurement points	6144
Topographic covering (in 42.2D)	9.3 mm
Dioptric range	up to 95D
Accuracy	Type A (ISO 19980 / ANSI Z80.23, ISO 10343)
Measurement head position	Straight, +/- 15° swivel-out
Working distance	74 mm
Adjustment range instrument base (W × H × D)	110 mm × 30 mm × 110 mm
Light sources Placido Fluorescence stimulation Pupillometry and meibography	 White light LED 450-650 nm LED 465 nm LED 950 nm
Dimensions (W × H × D)	319 mm × 504 mm (+/- 15 mm) × 420 mm
Weight of measurement head	12.2 kg
Power supply	100 V to 240 V AC 50/60 Hz
Data transfer	USB 3.0
Compatibility with standard	DICOM

ATLAS Software – Technical Hardware Requirements

Processor	Intel® Core™ i7 6th generation or higher
SSD capacity	250 GB
RAM	16 GB
Recommended HDD capacity	2 TB
Interface	1× USB 3.0 3× USB 2.0 or higher LAN
Monitor resolution	1,920 × 1,080 pixels (Full-HD) Scaling 100%
Recommended monitor size	22" (15" minimum)
Operating system	Windows 10 × 64 Professional or higher
Data export formats	PDF (report)

ZEISS PC Workstation - 22" Touch Screen Monitor Including: PC Mouse, PC Keyboard

Dimensions (W × H × D)	546 mm × 351 mm × 66 mm	
Weight	Approx. 8 kg	
Monitor resolution	1,920 × 1,080 pixels LCD touch screen	
Processor	Intel® Core™ i5/i7 Quad Core Processor	
Hard disc	2 TB HDD	
RAM	16 GB	
Interfaces	4× USB 3.0 2× Isolated Ethernet Port 2× RS-232	1× HDMI and Display Port Audio (Mic-in/Line-out)

Corneal Topography

Views	Axial/sagittal curvature Tangential curvature Elevation Gaussian map Keratometry	Refractive power Corneal wavefront Point spread function (PSF) Modular transfer function (MTF)

Pupillometry

	Static (photopic, mesopic, low mesopic, scotopic)	Dynamic

Dry Eye Report

	Ocular redness grading Mean tear meniscus height Meibomian glands grading	Non-invasive first break-up time (NIFBUT) OSDI questionnaire Osmolarity (optional data input)

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en-OUS_31_020_0031III Printed in Germany. CZ-IV/2022 International edition: Only for sale in selected countries.
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