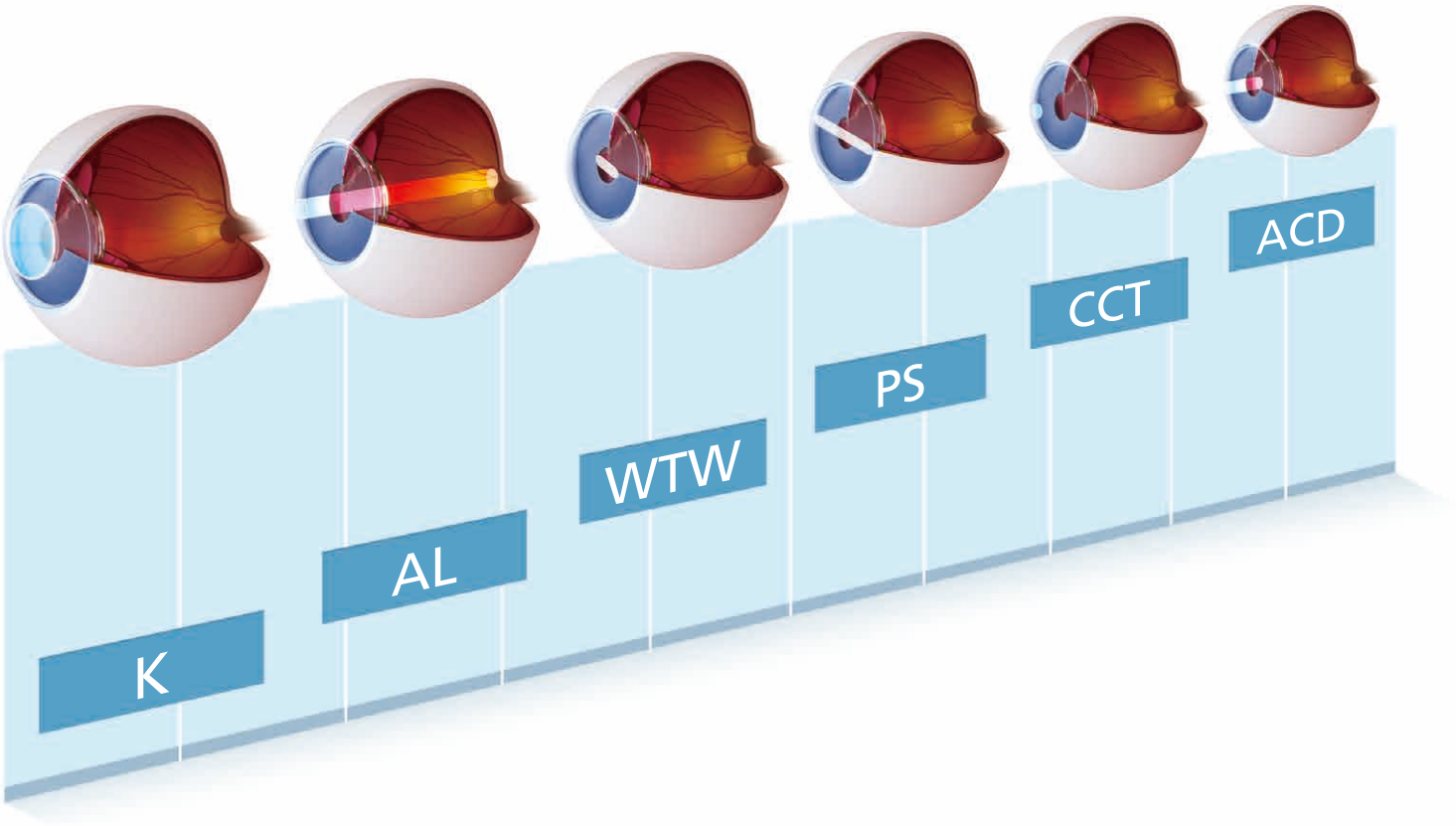
NIDEK

Optical Biometer

AL-Scan

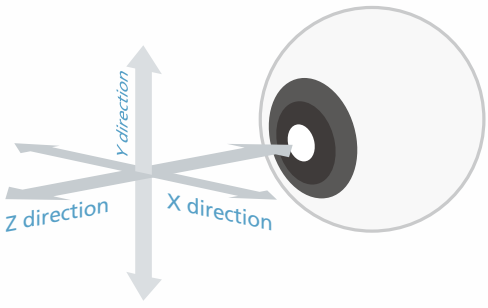
THE ART OF EYE CARE

Reliable data, effortlessly



3D auto tracking and auto shot

The AL-Scan incorporates NIDEK's much acclaimed 3D auto tracking and auto shot, enabling accurate measurement with ease and comfort. The 3D auto tracking follows eye movements along the X-Y-Z directions to ensure accurate alignment of the eye. Once correct alignment is completed, the auto shot immediately captures the image and data.



6 clinical parameters in 10 seconds

NIDEK's solution is the state of the art optical biometer - the AL-Scan. In 10 seconds, six values for cataract surgery are measured:

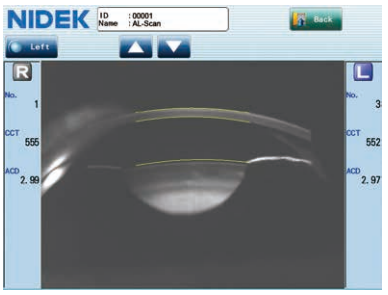
- Axial length
- Corneal curvature radius
- Anterior chamber depth
- Central corneal thickness
- White-to-white distance
- Pupil size

We have expanded the capabilities of the AL-Scan. In addition to cataract surgery planning, the addition of optional Myopia Viewer MV-1 software allows myopia management.

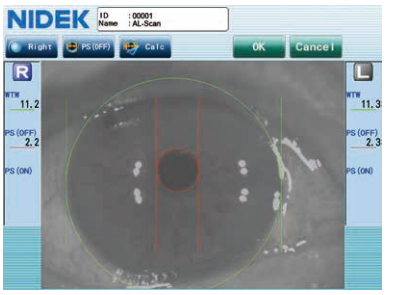
Anterior segment observation with Scheimpflug imaging and double mire ring keratometry

The AL-Scan provides sectional lens image, pupil image, and reflected image of double mire rings projected onto the cornea.

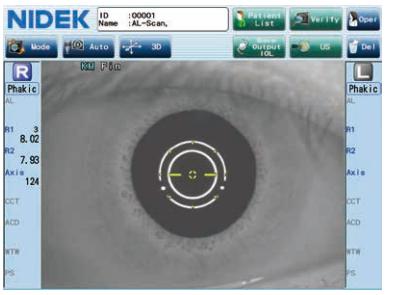
The sectional lens image assists in the evaluation of the severity of the cataract. The pupil image assists in the assessment for multifocal IOL. The reflected image of mire rings assists in detecting an irregular corneal surface.



Sectional lens image
(Scheimpflug image)



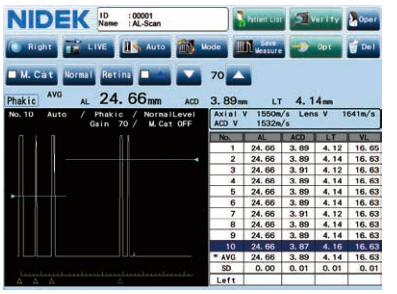
Pupil image



Reflected image of double mire rings

Optional built-in ultrasound biometer

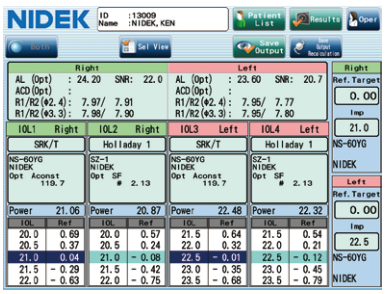
In cases where the optical biometer cannot measure an eye with an extremely dense cataract, the AL-Scan provides an optional built-in ultrasound biometer, allowing measurement of virtually any cataractous eye with a combined model.
The AL-Scan requires no connection with an external ultrasound unit.



Ultrasound biometry

IOL power calculation and IOL constants optimization

The IOL power is automatically calculated after measurement.
Calculation of a personalized IOL constant improves postoperative accuracy.



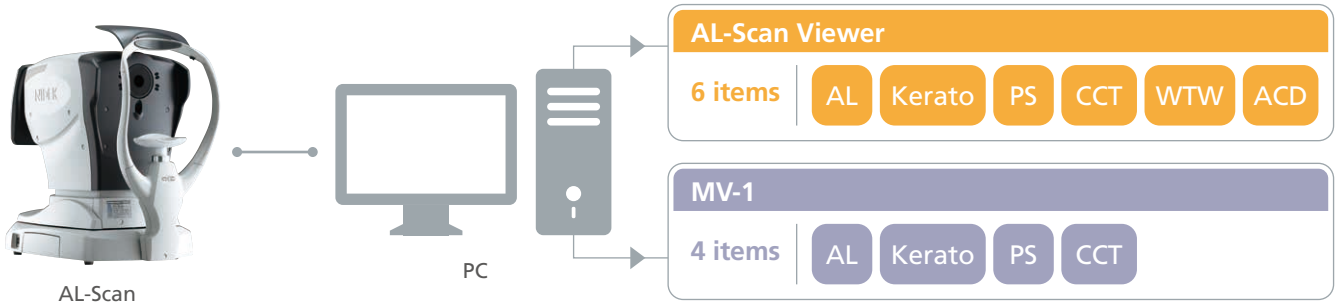
IOL power calculation formula on AL-Scan
SRK, SRK II, SRK/T, Binkhorst, Hoffer Q, Holladay 1, Formula/H, Camellin-Calossi, Shammas-PL

+

Additional Barrett formulas available for the NAVIS-EX AL-Scan Viewer
Barrett Universal II, Barrett True-K, Barrett Toric Calculator

Simple data transfer

Both software, AL-Scan Viewer and MV-1 work on the same PC. This enables simple data management.



AL-Scan Viewer
for NAVIS-EX

AL-Scan Viewer is software used for viewing and working with AL-Scan data via NAVIS-EX. This function enhances the capability of the AL-Scan with additional features and increases the efficiency of any clinic.

NAVIS-EX* is image filing software that enables data from the NIDEK diagnostic devices to be centralized in the NAVIS-EX database. It was initially developed for NIDEK's retinal products and has been expanded to network with the AL-Scan.

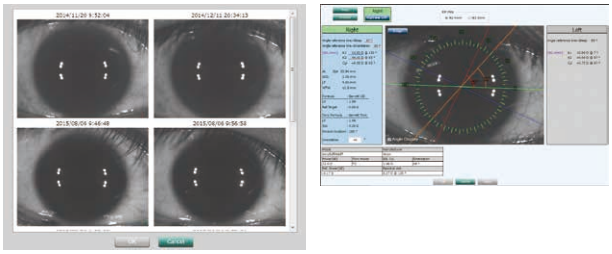
* NAVIS-EX is optional software and is required for use of the AL-Scan Viewer.

Data management and IOL power calculations

The large storage capacity of the NAVIS-EX database is available for review on the AL-Scan Viewer. The basic functions of the AL-Scan can also be performed with the AL-Scan Viewer including IOL power calculations and optimization of IOL constants.

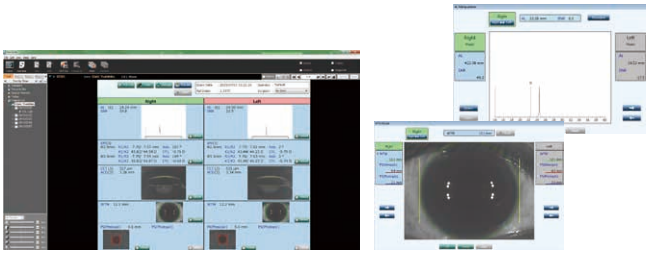
Toric lens assist function

Acquisition of multiple toric lens assist images allows selection of the optimal image for digitally marking the astigmatic axis. These images allow better surgical planning for accurate toric IOL alignment.



Recalculation of measured values

The AL-Scan Viewer allows recalculation of modified axial length, white-to-white, and pupil size data for accurate calculations.



Product/model name: Image Filing Software NAVIS-EX

Myopia Viewer MV-1

The increasing prevalence of myopia especially among young children is becoming a significant global health concern. Adding the optional Myopia Viewer MV-1* software will expand your clinical services for monitoring and managing myopic progression in young patients.

* Myopia Viewer MV-1 is optional software.

Data integration

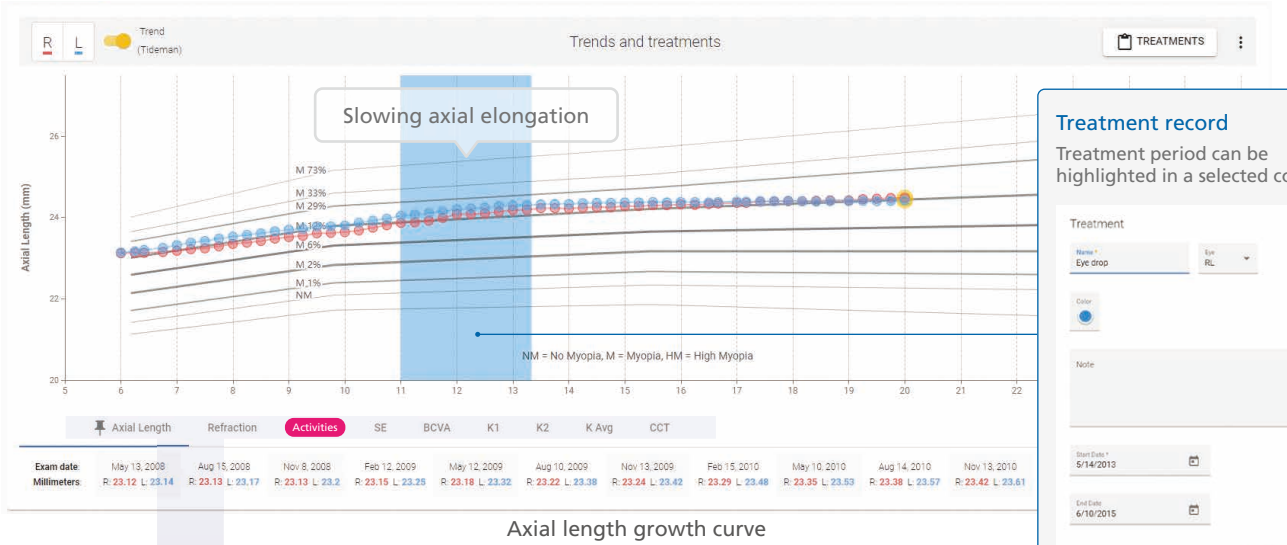
Data integration between the AL-Scan and the MV-1 is simple:
After measurement, the operator can integrate the result with the existing patient list on the MV-1. If a NIDEK autorefractor is connected, the MV-1 can receive the refraction data seamlessly. Alternatively, refraction data can be manually entered.

AL-Scan MV-1 Autorefractor

Visualizing progression and treatment effects

Measurements over time can be monitored and compared with the growth curve* (trend data). The MV-1 software allows clinicians to evaluate progression of myopia compared to an age-matched population and extrapolate progression based on growth curves. This information enables a discussion of the prognosis and treatment options for managing myopia. Axial length data can be displayed with clinical data, including refraction and the level of outdoor/near vision activities. A take-home Myopia Report can allow patients to follow their results over time. This report will facilitate a better understanding of why they need treatments and to make lifestyle changes as necessary.

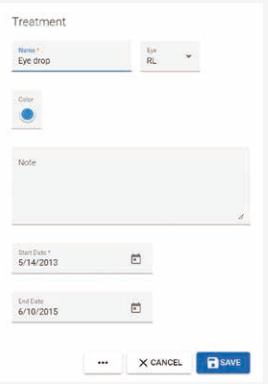
* Tideman JWL, Polling JR, Vingerling JR, et al. Axial length growth and the risk of developing myopia in European children. *Acta Ophthalmol*. 2018;96(3):301-309. doi:10.1111/aos.13603



Axial length growth curve

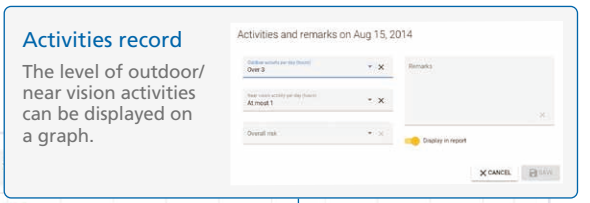
Treatment record

Treatment period can be highlighted in a selected color.

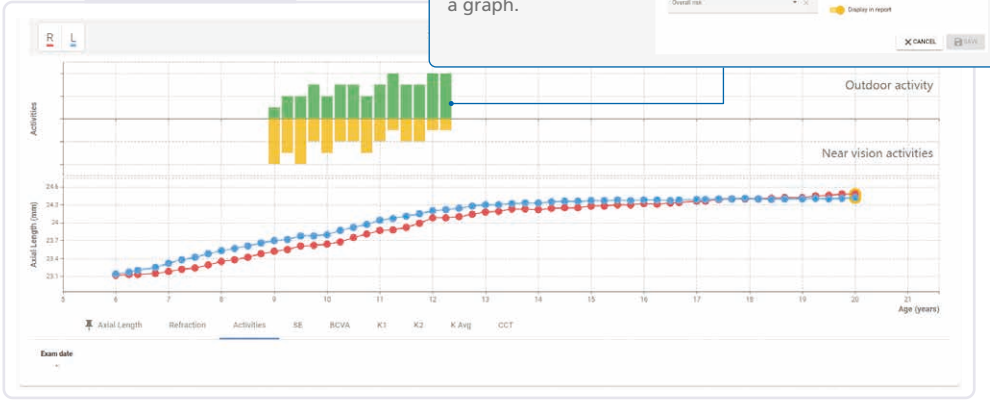


Activities record

The level of outdoor/ near vision activities can be displayed on a graph.



Activities



Myopia Report

AL-Scan Specifications

Optical measurement		
Axial length	Measurement range	14 to 40 mm
	Display increments	0.01 mm
	Measurement accuracy	±0.05 mm
	Measurement method	Low-coherence interferometry (LCI)
Corneal curvature radius	Measurement range	5.00 to 13.00 mm
	Display increments	0.01 mm
	Measurement accuracy	±0.05 mm
Anterior chamber depth	Measurement range	1.5 to 6.5 mm
	Display increments	0.01 mm
	Measurement accuracy	±0.1 mm
Central corneal thickness	Measurement range	250 to 1,300 µm
	Display increments	1 µm
	Measurement accuracy	±10 µm
White-to-white distance	Measurement range	7 to 14 mm
	Display increments	0.1 mm
	Measurement accuracy	±0.2 mm
Pupil size	Measurement range	1 to 10 mm
	Display increments	0.1 mm
	Measurement accuracy	±0.2 mm
Ultrasonic measurement (optional)		
Axial length	Measurement range	12 to 40 mm
	Display increments	0.01 mm
	Measurement accuracy	±0.1 mm
Corneal thickness	Measurement range	200 to 1,300 µm
	Display increments	1 µm
	Measurement accuracy	±10 µm
IOL power calculation formula		
Conventional	SRK, SRK II, SRK/T, Binkhorst, Hoffer Q, Holladay 1, Formula/H, Camellin-Calossi	
Post-LASIK	Camellin-Calossi, Shammas-PL	
Auto tracking	X-Y-Z directions	
Auto shot	Available	
Display	Tiltable 8.4-inch color LCD touch screen	
Printer	Thermal line printer with automatic paper cutter	
Interface	LAN, USB	
Power supply	100 to 240 V AC 50/60 Hz	
Power consumption	100 VA	
Dimensions/mass	283 (W) x 504 (D) x 457 (H) mm / 21 kg 11.1 (W) x 19.8 (D) x 18.0 (H)" / 46 lbs.	

AL-Scan Viewer for NAVIS-EX*1

IOL calculation formula	
Conventional	SRK, SRK II, SRK/T, Binkhorst, Hoffer Q, Holladay 1, Formula/H, Camellin-Calossi, Barrett Universal II
Post-LASIK	Camellin-Calossi, Shammas-PL, Barrett True-K
Toric calculator	Barrett Toric Calculator
Additional features	
IOL registration	Maximum data entry for 100 IOLs
Surgeon registration	Maximum of 50 Surgeons
Surgeon-specific constant optimization	Available
System requirements	
Operating system	English version: Windows 10 Pro (32 bit / 64 bit) Windows 10 Enterprise (32 bit / 64 bit) Windows 11 Pro Windows Server 2016 Standard*2 Windows Server 2019 Standard*2 Windows Server 2022 Standard*2
Display	SXGA (1,280 x 1,024 pixels) or higher

*1 NAVIS-EX is optional software and is required for use of the AL-Scan Viewer.
*2 For installation only.

Myopia Viewer MV-1*1

System requirements	
Operating system	Windows 10 Pro 1607 or later (64 bit) Windows 11 Pro Windows Server 2016 Standard (64 bit) Windows Server 2019 Standard (64 bit) Windows Server 2022 (64 bit)
Display	1,280 x 768 or higher
Connectable devices that transmit refraction data and BCVA*2	TONOREF III, TONOREF II ARK-1s, ARK-1a, ARK-1, ARK-F AR-1s, AR-1a, AR-1, AR-F ARK-560A, ARK-530A, ARK-510A AR-360A, AR-330A, AR-310A HandyRef-K, HandyRef

*1 Myopia Viewer MV-1 is optional software.
*2 Available for the ARK-1s, AR-1s, ARK-560A and AR-360A

Product/model name: OPTICAL BIOMETER AL-Scan
Brochure and listed features of the device are intended for non-US practitioners.
Specifications may vary depending on circumstances in each country.
Specifications and design are subject to change without notice.

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