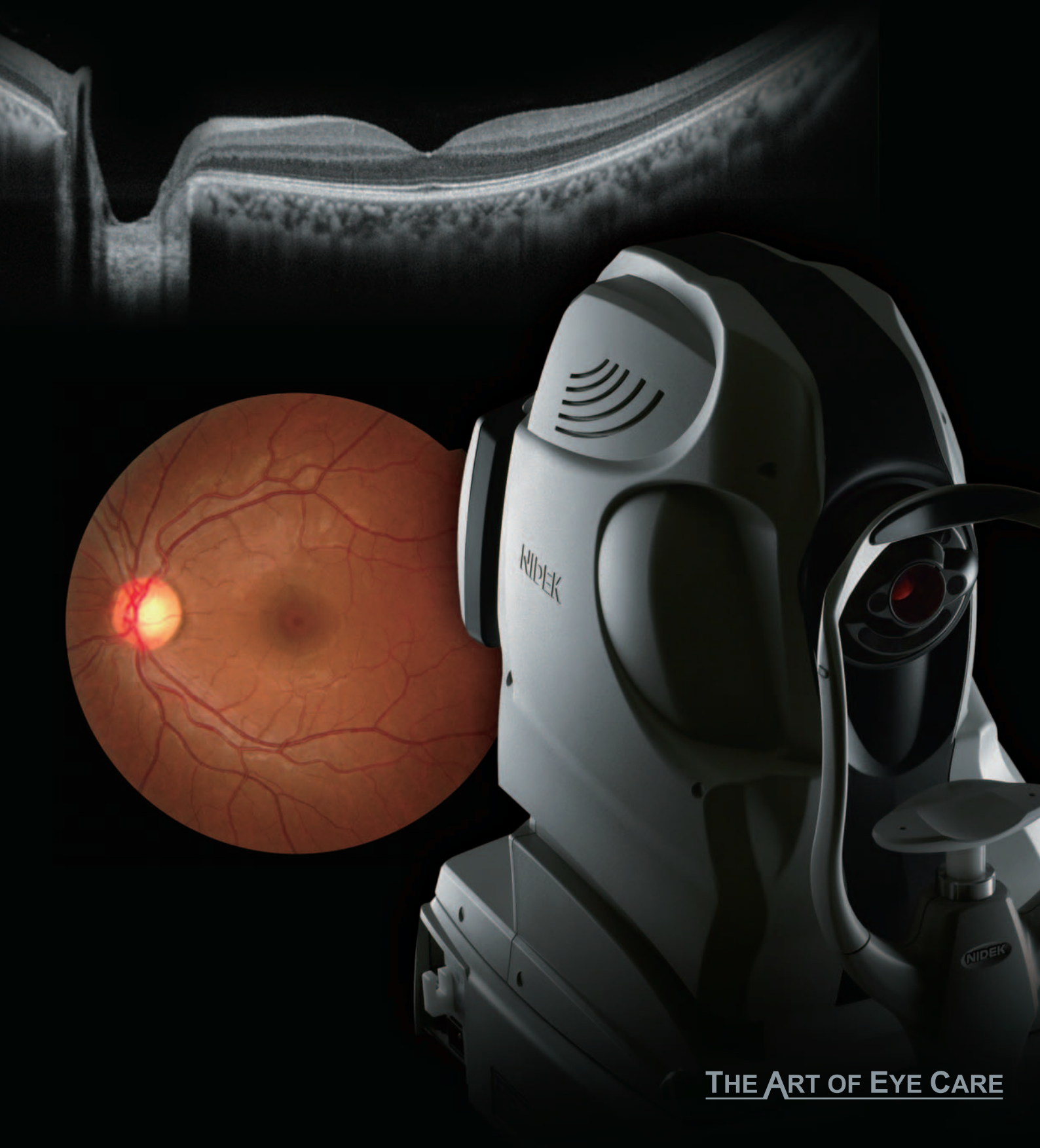


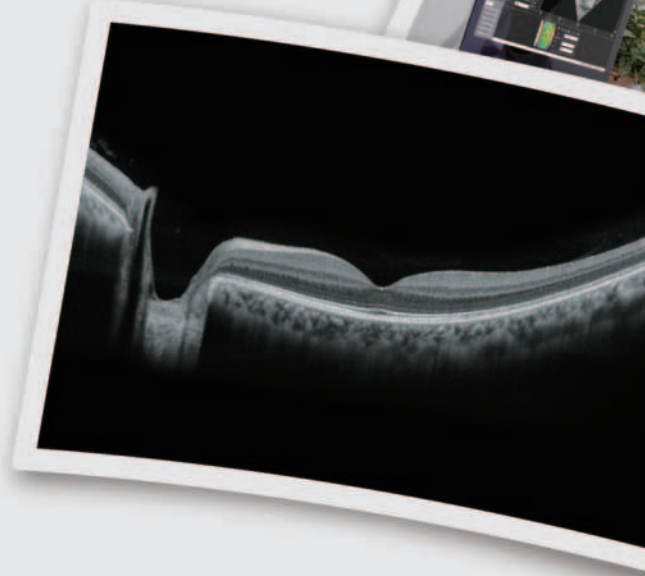


Optical Coherence Tomography

# Retina Scan Duo



THE ART OF EYE CARE



*High Definition OCT & Fundus Imaging  
in One Compact System*







# *Retina Scan* **Duo**

*The Retina Scan Duo* is a combined OCT and fundus camera system that is a user friendly, versatile unit that provides high definition images and value added features.

The intuitive software, the automated functions, the rapid measurements and high-quality images make the *Retina Scan Duo* a pleasure to operate, akin to photography that captures many of the vivid landscapes experienced over your lifetime. The combination of features results in a better overall experience for the patient and practitioner.

Additional value added features include fundus autofluorescence and En face OCT.



High Quality  
&  
Versatility



User Friendly



Value Added  
Features



# User Friendly

NIDEK 3-D auto tracking, auto shot, and a user friendly interface allow rapid and easy image capturing. Combining an OCT and fundus camera in one system saves time and space, and improves the diagnostic workflow and efficiency.

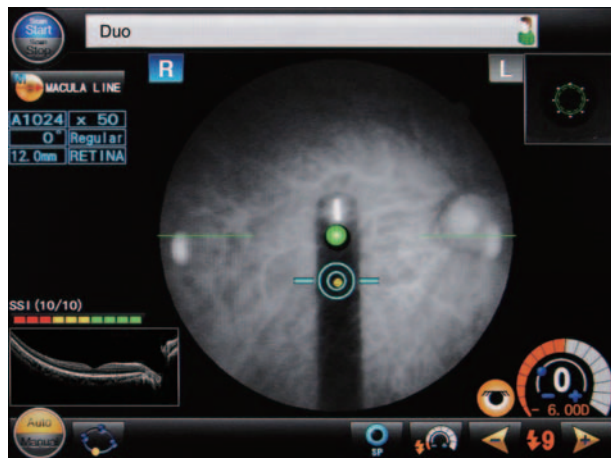
## ● User Friendly Interfaces for Two Capture Modes

Standard and professional modes are available.

Each mode has a different image capture interface which can be selected based on clinic preference.

### Standard Mode

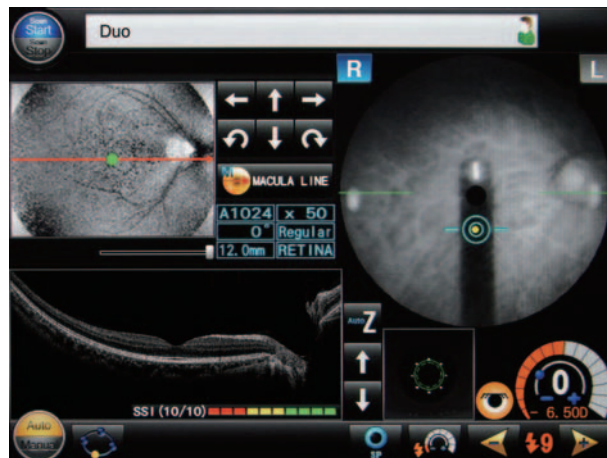
for general screening and analysis



In the standard mode, operation is as simple as a fundus camera, which is helpful for daily practice.

### Professional Mode

for advanced screening and analysis



The professional mode is favored for advanced, detailed screening and analysis. In this mode, the scanning position can be adjusted to the phase fundus image and it supports capturing precise OCT images.

User Friendly

Easy



### ● 3-D Auto Tracking and Auto Shot

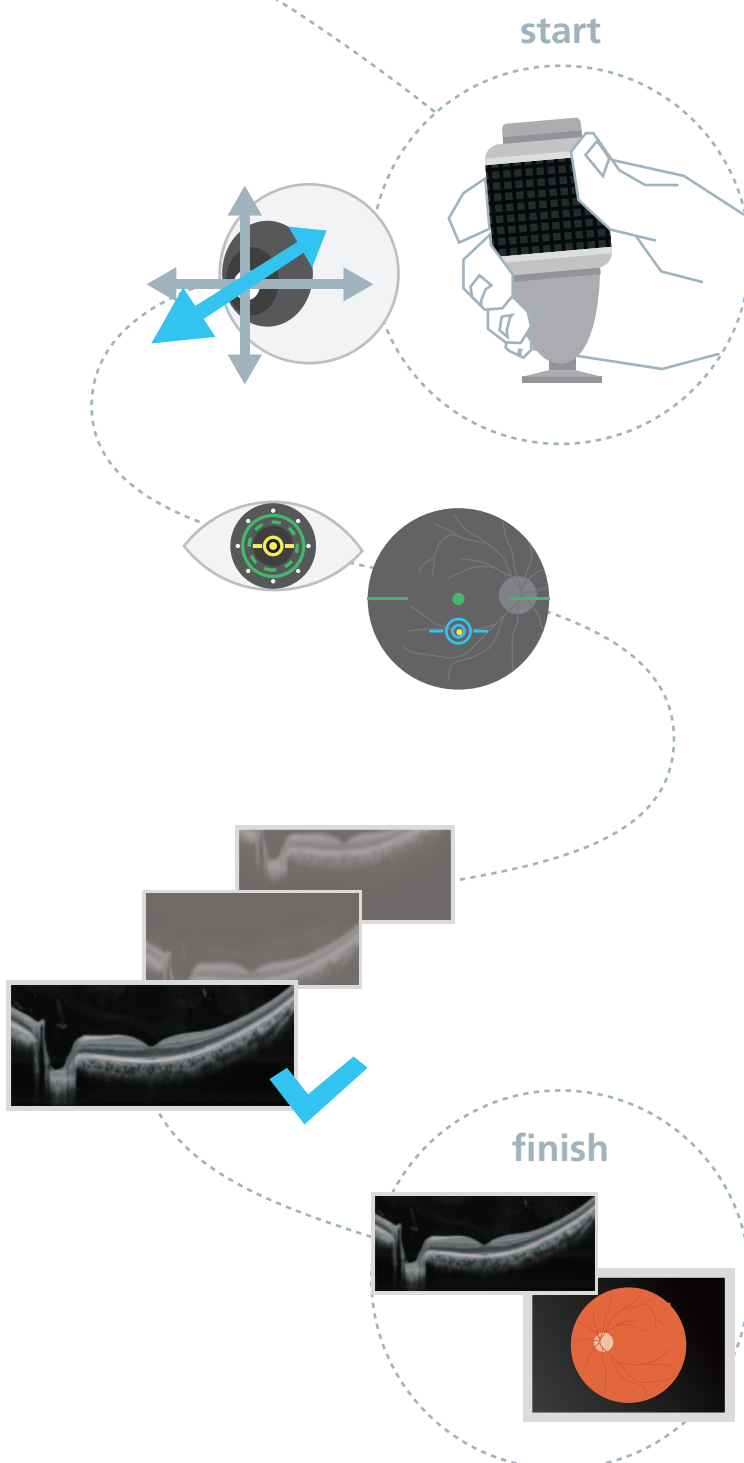
The acclaimed 3-D auto tracking and auto shot functions allow easy imaging of the fundus and all its features. Once alignment is completed, both the OCT and fundus images can be captured in a single shot.

### ● Operation with Joystick for Flexible Alignment

The joystick helps the operator make fine adjustments during alignment to improve the precision, even for eyes with poor fixation which cannot be tracked with automated tracking systems.

### ● Space-saving Unit

The small footprint replaces two units with one combined unit.



# ★★★ High Quality & Versatility

The OCT and fundus imaging are high definition images that are comparable in quality to the standard NIDEK OCT system and fundus camera. The Retina Scan Duo is versatile enough to be tailored to the individual diagnostic requirements for any practitioner.

## OCT

- **HD Image Averaging (max. 50 images)**
- **Selectable OCT Sensitivity – ultra fine, fine, regular**

Selecting the OCT sensitivity based on ocular pathology allows image capture with higher definition or at high speed. Ultra fine and fine sensitivities are used to capture high definition images and regular sensitivity is used to capture images at high speed.

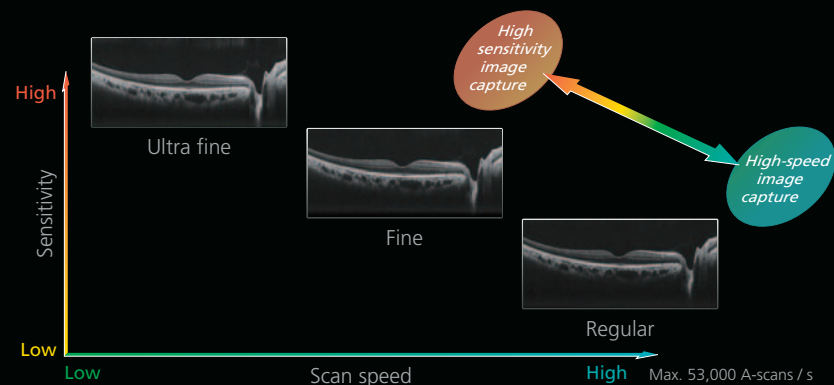
- **Wide Area Scan (12 x 9 mm) / Wide Area Normative Database**

A 12 x 9 mm wide area image centered on the macula can be captured with the Retina Scan Duo. The 9 x 9 mm normative database provides a color-coded map indicating distribution range of the patient's macular thickness in a population of normal eyes.

- **Multiple OCT Scan Patterns**

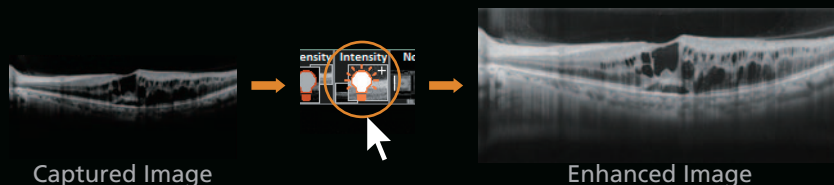
A wide range of scanning patterns is available to allow the practitioner to select a scan that suits the retinal region and ocular pathology.

\* The anterior segment adapter is optional.



- **Enhanced Image**

The image enhancement function allows adjustment to image brightness for advanced image quality and details.





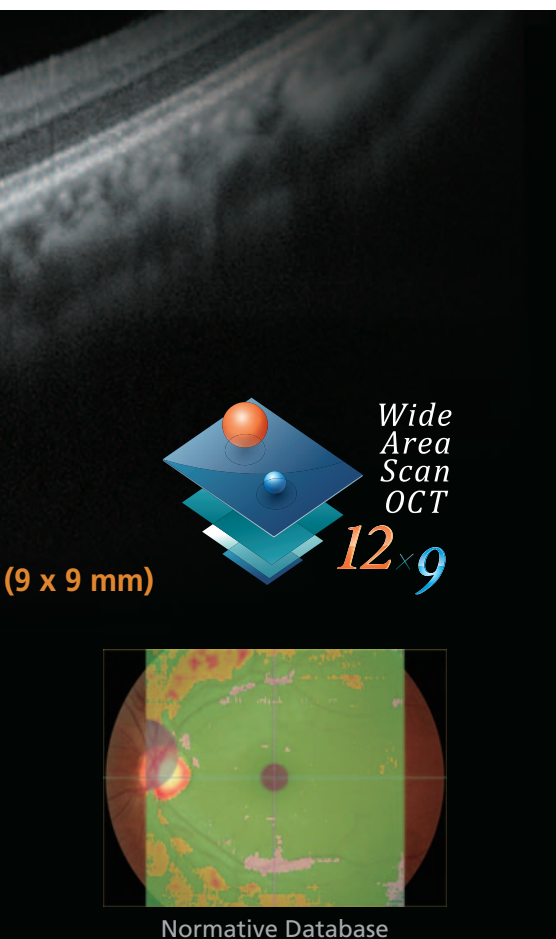
# Fundus Camera

## ● 12-megapixel CCD Camera

The Retina Scan Duo has a built-in 12-megapixel CCD camera, producing high quality fundus images.

## ● Stereo and Panorama Photography

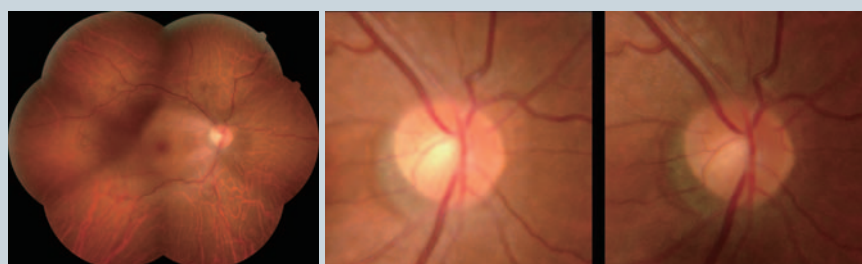
The Retina Scan Duo navigates stereo and panorama photography with target marks displayed on an observation screen, which enables an operator to easily capture stereo images and a panorama composition.



» Retina: 8 patterns



» Anterior\*: 2 patterns



Panorama

Stereo Images



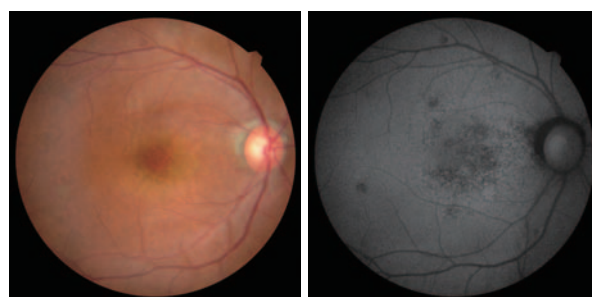


# Value Added Features

In addition to combining standard OCT and fundus camera features, the Retina Scan Duo offers additional diagnostic features allowing the practitioner to stay a step ahead of current standards.

## ● Fundus Autofluorescence (FAF)\*1

The fundus autofluorescence (FAF) function is an advanced screening feature. The FAF is a non-invasive method to evaluate the RPE without contrast dye. The function is helpful for detecting early stage retinal disorders.



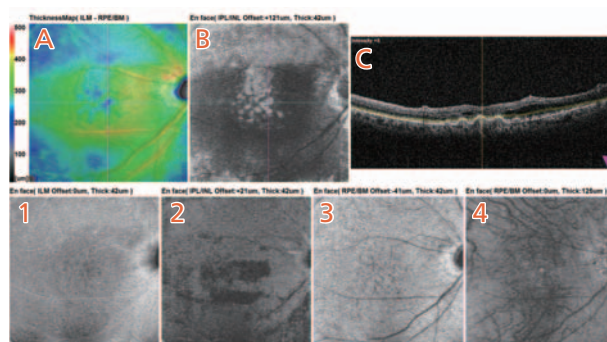
Color Fundus Image\*2

FAF Image\*2

## ● En face OCT

En face OCT imaging is for advanced studies of retinal pathology including factors that compromise photoreceptor function and retinal and choroidal vasculature.

- A. Thickness Map (ILM - RPE / BM)
- B. En face (IPL / INL Offset: +121  $\mu$ m, Thickness: 42  $\mu$ m)
- C. B-scan Image
- 1. En face (ILM Offset: 0  $\mu$ m, Thickness: 42  $\mu$ m)
- 2. En face (IPL / INL Offset: +21  $\mu$ m, Thickness: 42  $\mu$ m)
- 3. En face (RPE / BM Offset: -41  $\mu$ m, Thickness: 42  $\mu$ m)
- 4. En face (RPE / BM Offset: 0  $\mu$ m, Thickness: 125  $\mu$ m)

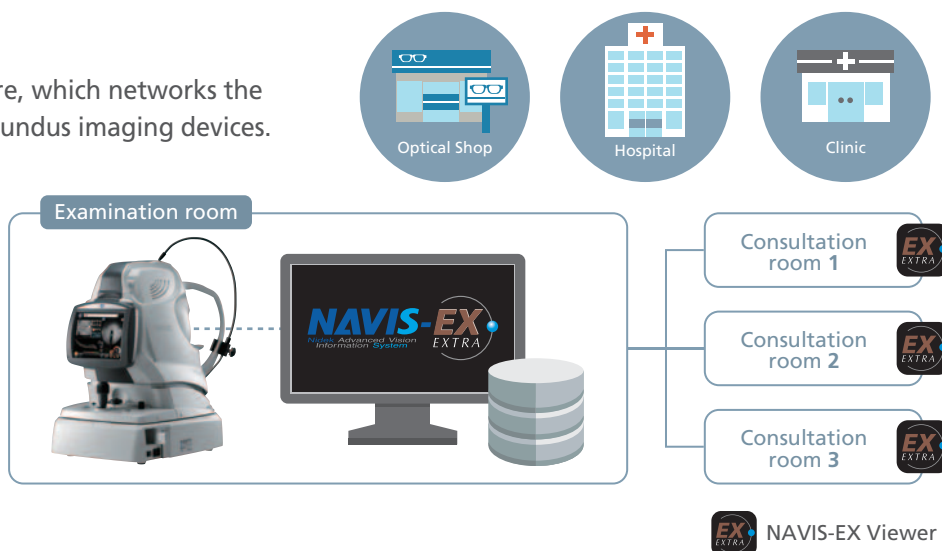


En face OCT Image

## ● NAVIS-EX

NAVIS-EX is an image filing software, which networks the Retina Scan Duo and other NIDEK fundus imaging devices.

- Analysis and report
- Normative database
- Long axial length normative database\*3
- Scalability of connecting with other NIDEK products
- DICOM connectivity







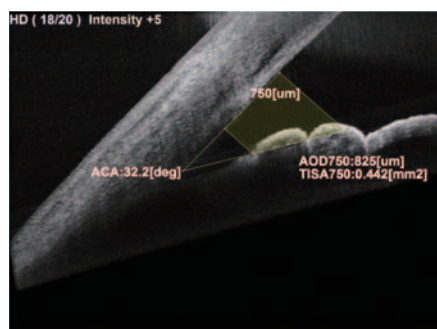
## ● Anterior Segment Adapter\*4

The anterior segment adapter\*4 enables observation and analyses of the anterior segment.



## Angle Measurement

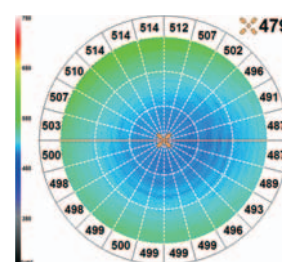
- ACA  
Angle between posterior corneal surface and iris surface
- AOD500 (AOD750)  
Distance between iris and a point 500  $\mu\text{m}$  (or 750  $\mu\text{m}$ ) from the scleral spur on posterior corneal surface
- TISA500 (TISA750)  
Area circumscribed with AOD500 (or AOD750) line, posterior corneal surface, line drawn from scleral spur in parallel with AOD line, and the iris surface



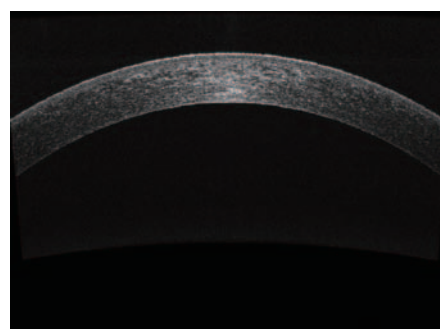
Angle Measurement

## Corneal Measurement

- Corneal thickness  
Corneal thickness of apex and user selected sites
- Corneal thickness map  
Map of corneal thickness plotted radially



Thickness Map

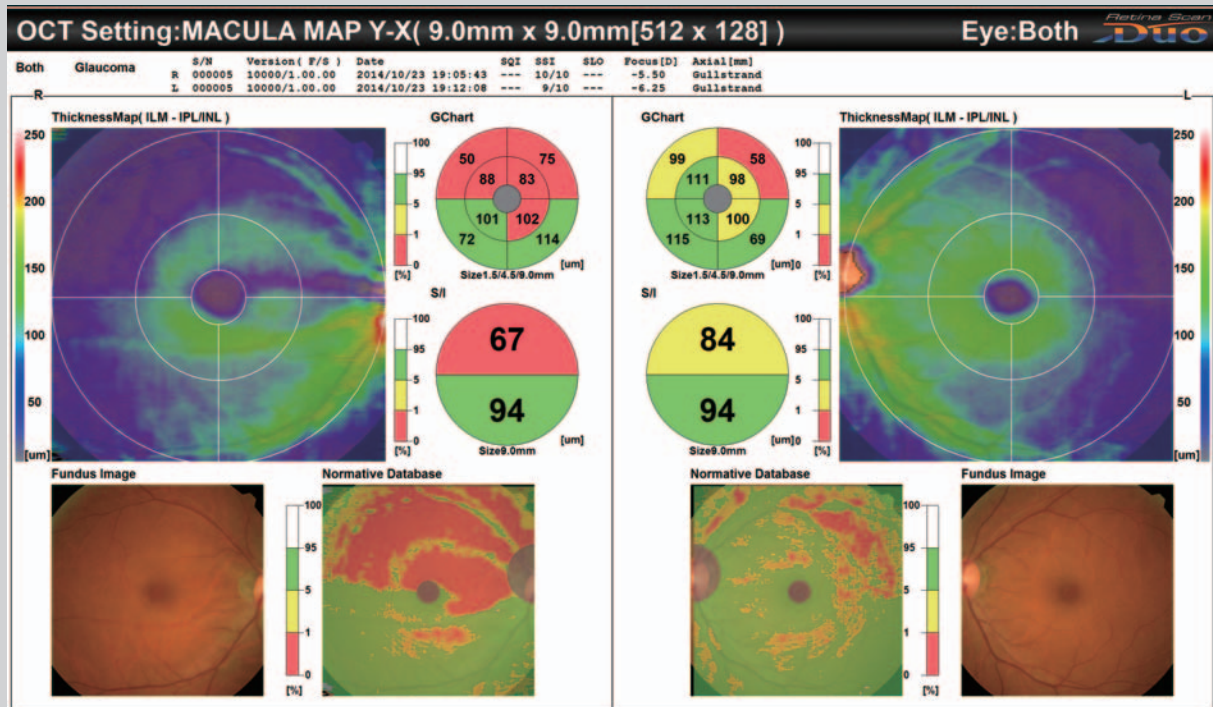


Corneal Measurement

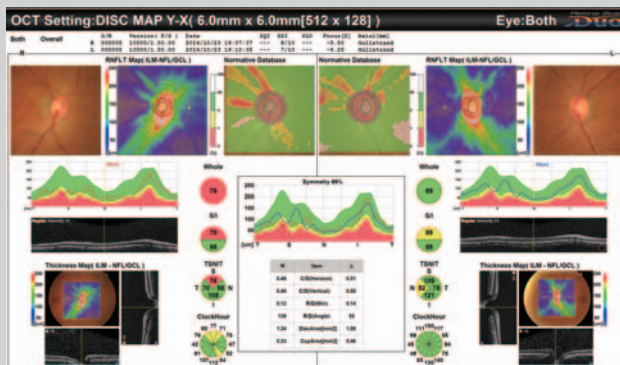
\*1 The fundus autofluorescence (FAF) function is available for the FAF model. \*2 Photos courtesy of Kariya Toyota General Hospital. \*3 The long axial length normative database is an optional software. \*4 The anterior segment adapter is optional.

# Glaucoma

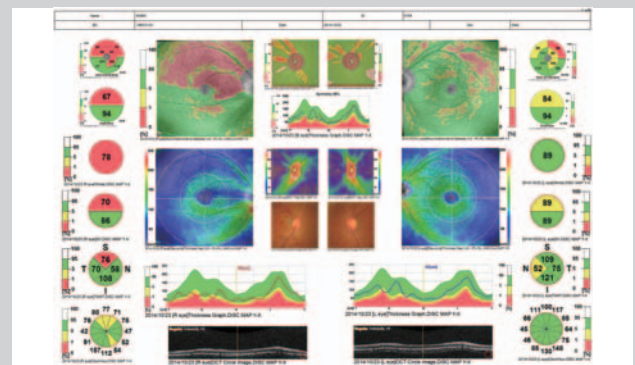
## Macula Map (both eyes)



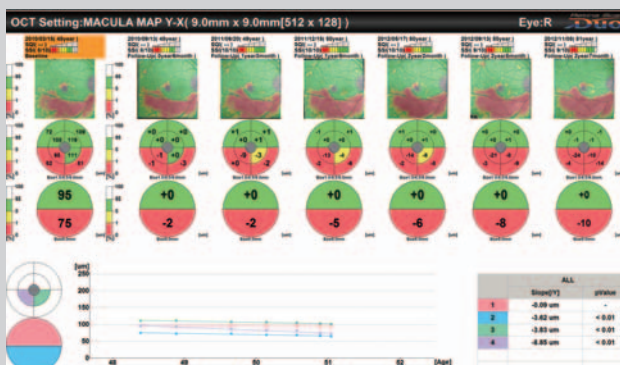
## Disc Map (both eyes)



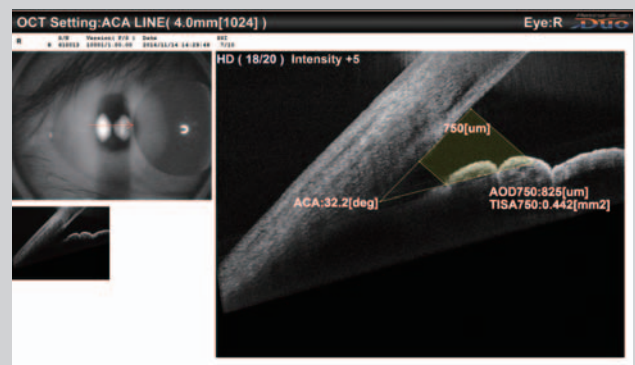
## Customized Report



## Glaucoma Follow-up



## Anterior Chamber Angle Line Scan\*

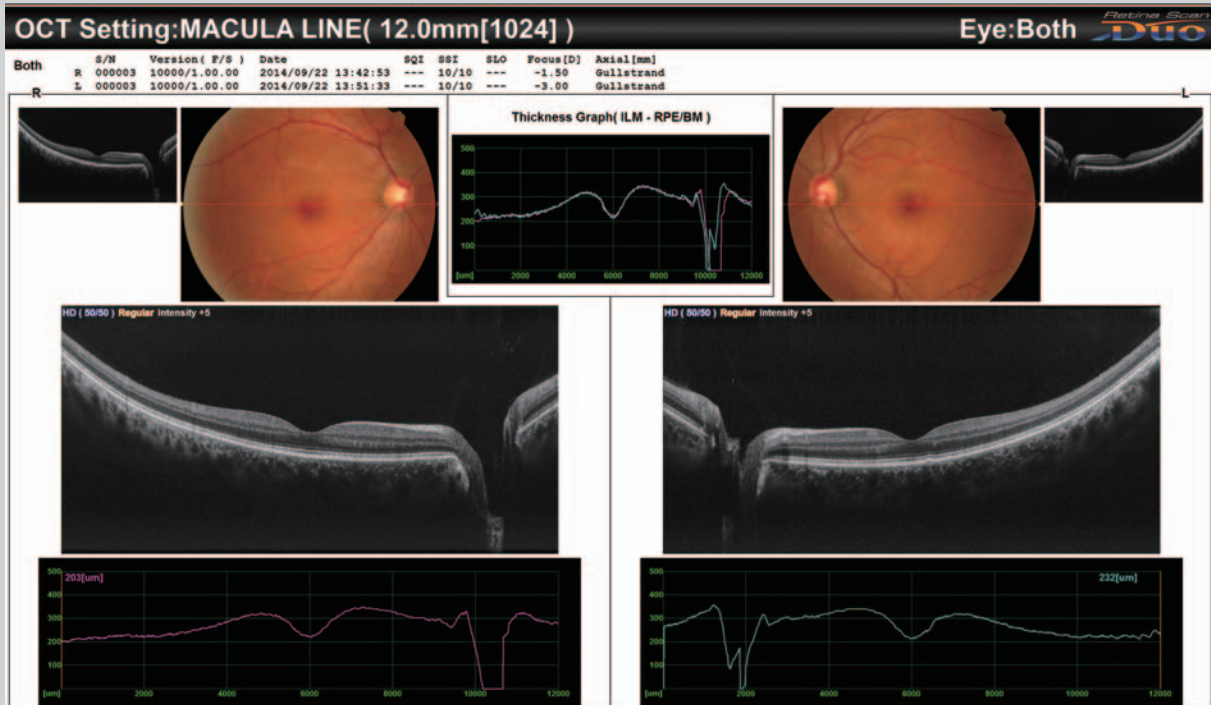


\* The anterior segment adapter is optional.

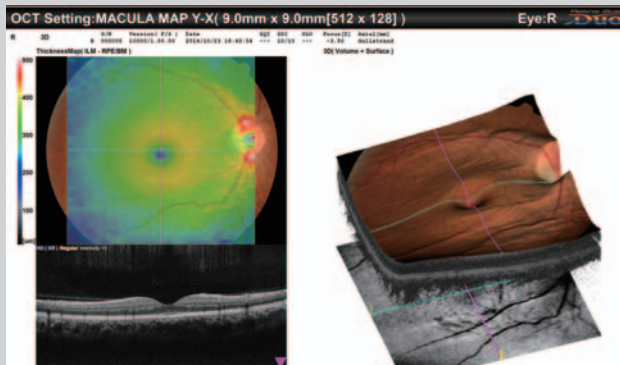


# Macula

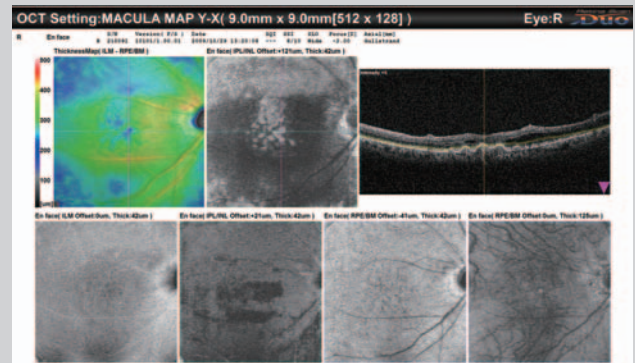
## Macula Line (both eyes)



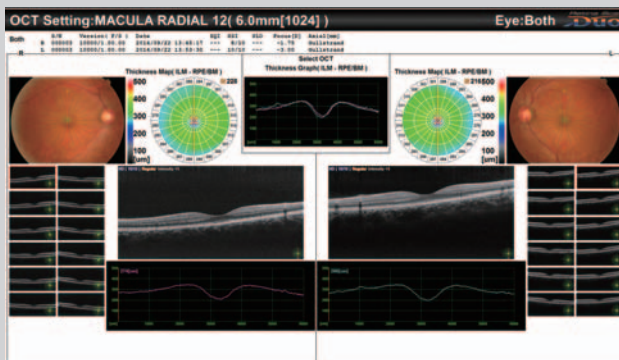
## 3-D Macula Map (one eye)



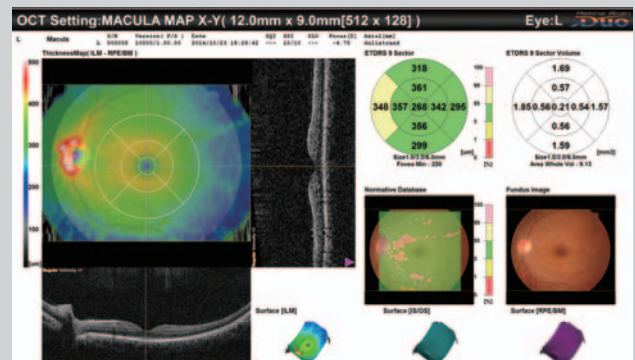
## En face



## Macula Radial (both eyes)



## Macula Map (one eye)





# Retina Scan Duo RS-330 Specifications

<b>OCT</b>	
OCT scanning	
Principle	Spectral domain OCT
OCT resolution	Z: 7 µm, X-Y: 20 µm
Scan range	X: 3 to 12 mm Y: 3 to 9 mm Z: 2.1 mm
OCT light source	880 nm
Scan speed	Max. 53,000 A-scan / s (regular mode)
Acquisition time of 3-D image	1.6 s (regular mode)
Auto alignment	Z direction
Minimum pupil diameter	ø2.5 mm
Scan patterns	Macula line, macula cross, macula map, macula multi, macula radial, disc circle, disc map, disc radial
<b>Fundus surface imaging</b>	
Principle	OCT phase fundus
Angle of view	40° x 30°
<b>Fundus camera</b>	
Type	Non-mydratic fundus camera, color, FAF*
Angle of view	45°
Minimum pupil diameter	ø4 mm
Light source	Xenon flash lamp 300 Ws
Flash intensity	17 levels from F1 (F4.0 +0.8 EV) to F17 (F16 +0.8 EV) 0.25 EV increments
Camera	Built-in 12-megapixel CCD camera
<b>Common specification</b>	
Working distance	45.7 mm
Display	Tilttable 8.4-inch color LCD
Dioptric compensation for patient's eyes	-33 to +35 D total -33 to -7 D with minus compensation lens -12 to +15 D with no compensation lens +11 to +35 D with plus compensation lens
Internal fixation lamp	LED
Horizontal movement	36 mm (back and forth) 85 mm (left and right)
Vertical movement	32 mm
Chinrest movement	62 mm (up and down, motorized)
Auto tracking	±16 mm (up and down) ±5 mm (left and right) ±5 mm (back and forth)
PC networking	Available
Power supply	AC 100 to 240 V ±10% 50 / 60 Hz
Power consumption	350 VA
Dimensions / Mass	370 (W) x 536 (D) x 602 (H) mm / 38 kg (standard model) 39 kg (FAF model) 14.6 (W) x 21.1 (D) x 23.7 (H) " / 84 lbs. (standard model) 86 lbs. (FAF model)
Optional accessories	Anterior segment adapter, external fixation lamp, isolation transformer, motorized optical table, PC rack, long axial length normative database

\* The fundus autofluorescence (FAF) function is available for the FAF model.

## Anterior segment module (optional)

Scan patterns	Cornea radial, ACA line
Software analysis	Corneal thickness measurement, corneal thickness map, angle measurement

## Motorized optical table (optional)

Dimensions / Mass	639 (W) x 472 (D) x 600 to 850 (H) mm / 28 kg 25.2 (W) x 18.6 (D) x 23.6 to 33.5 (H) " / 62 lbs.
Power supply	AC 100 V ±10% / 220 to 240 V ±10% 50 / 60 Hz
Power consumption	200 V type 160 W 100 V type 150 W

## PC rack (optional)

Dimensions / Mass	620 (W) x 460 (D) x 700 (H) mm / 29 kg 24.4 (W) x 18.1 (D) x 27.6 (H) " / 64 lbs.
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## Isolation transformer (optional)

Dimensions / Mass	130 (W) x 220 (D) x 130 (H) mm / 9 kg 5.1 (W) x 8.7 (D) x 5.1 (H) " / 20 lbs.
Power supply	200 V type Input 220 / 230 / 240 V Output 220 / 230 / 240 V 50 / 60 Hz 100 V type Input 100 / 110 / 120 V Output 100 / 110 / 120 V 50 / 60 Hz
Power consumption	500 VA



Product / Model name: Optical Coherence Tomography RS-330  
Specifications may vary depending on circumstances in each country.  
Specifications and design are subject to change without notice.



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