

One vision, Two sharp eyes with Our Innovation

**CASIA** Cornea/Anterior Segment OCT  
SS-1000

## SS-1000 MEASURING MODE

### Anterior segment (Standard)

Scan direction Radial Scan - 128 lines  
Scan resolution 256 A scans per line sampling  
Scan speed 1.2 sec  
Scan range Transverse 16mm Depth 6mm

### Cornea

Scan direction Radial Scan - 16 lines  
Scan resolution 512 A scans per line sampling  
Scan speed 0.3 sec  
Scan range Transverse 10mm Depth 4mm

### Bleb Segment

Scan direction Raster Scan- Horizontal  
Scan resolution 256(H) x 256(V)  
Scan speed 2.4 sec  
Scan range 16mm(H) x 16mm(V) Depth 6mm

### Anterior segment (High -Resolution scan)

Scan direction Radial Scan - 128 lines  
Scan resolution 512A scans per line sampling  
Scan speed 2.4 sec  
Scan range Transverse 16mm Depth 6mm

### Anterior chamber angle

Scan direction Radial Scan - 64 lines  
Scan resolution 512A scans per line sampling  
Scan speed 1.2 sec  
Scan range Transverse 16mm Depth 6mm

### Custom Scan

The scanning type can be customized.



## SS-1000 SPECIFICATIONS

### Measuring unit

**Resolution**  
**Axial (Depth)** 10 μm or less (in tissue)  
**Transverse** 30 μm or less (in tissue)

**Scan speed**  
30,000 A scans / second

**Scan range**  
**Depth** 6mm  
**Transverse** Raster Scan- 16mm x 16mm  
Radial Scan- 16mm

**Stroke of moving section**  
88mm(X axis); 40mm(Y axis); 45mm(Z axis)

**Stroke of chin rest**  
70mm

**Dimension and weight**  
360mm(W) x 493mm(D) x 519mm(H) Approx. 21.0kg

### Light-source unit

**Type of light source**  
Swept source Laser

**Wavelength**  
1310nm

**Output power**  
less than 5mW

**Dimension and weight**  
457mm(W) x 299mm(D) x 234mm(H) Approx. 21.0kg

### Power source

**Voltage**  
100V AC - 240V AC

**Frequency**  
50/60Hz

**Power consumption**  
250VA - 300VA

**Type of protection against electric shock**  
class I

**Degree of protection against electric shock**  
Type B

### Workstation computer

**OS**  
Windows XP

**CPU**  
Intel Core2 Duo processor

**Memory**  
4G Bytes

**HDD**  
750GB x 2 (RAID Level1)

**Data output**  
Printer (LAN/USB)

**Display**  
17 inch Color TFT Display

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Fourier Domain OCT

High resolution images of the arbitrary area at high speed

Less motion artifacts with fast acquisition

Fulfillment of the useful application and utility software

Measurement of corneal curvature  
Anterior chamber angle analysis  
Bleb segment analysis  
Measurement of corneal thickness and anterior chamber depth

Auto alignment/Auto Shot



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**TOMEY**

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# More quickly, easily, and precisely

The time for capturing an image has been reduced by introducing the Swept Source system for measurement which is one of the Fourier Domain systems. Since a three-dimensional data can be captured only within 0.3 ~ 2.4 seconds, the motion artifact due to eye movement and/or faulty fixing of the eye can be minimized.

Since the Cornea/Anterior Segment OCT does not make contact with the eye, images of the eye immediately after a surgery can also be captured. In addition, the Cornea/Anterior Segment OCT allows you to obtain the data of the anterior segment of the eye with corneal opacity which is difficult to be observed with the slit lamp, etc.

The light source is of the wavelength of 1310 nm which penetrates the tissue deeper to capture fine images of angle recess with the axial resolution of 10 μm or less, which cannot be displayed by the OCT that employs the wavelength of approximately 840 nm used for the retina. The wide scanning range of 16 mm allows you to observe the area from the angle on the ear side to that on the nose side at once.

The captured data can be analyzed with various applications to quantify the data.

Since the three-dimensional data can be captured by simple operations, even a new operator can capture images and perform necessary analysis as many times as needed.



CASIA provides high-resolution images for wide variety of clinical situations.



### Angle-closure glaucoma

This image shows that the angles are closed. Since three-dimensional image is captured, the gonioscopic data of 360° can be obtained.



### Bleb Segment (after trabeculectomy)

A water gap is shown in black. Since CASIA does not touch the eye, an image immediately after the surgery can be captured.



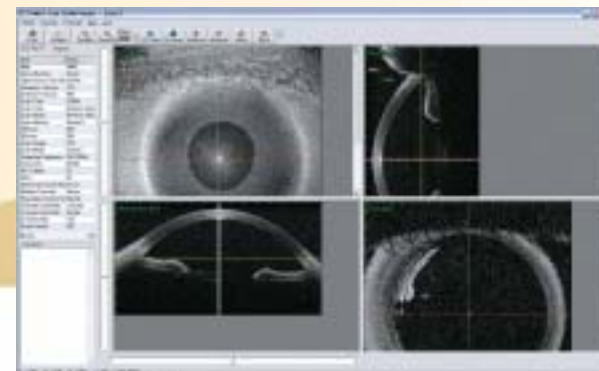
### LASIK eye

The flap of LASIK is shown. Since CASIA does not touch the eye, an image immediately after the surgery can be captured.



### Keratoconus

Protrusions which are the symptom of keratoconus can be recognized on the front and back surface of the cornea.



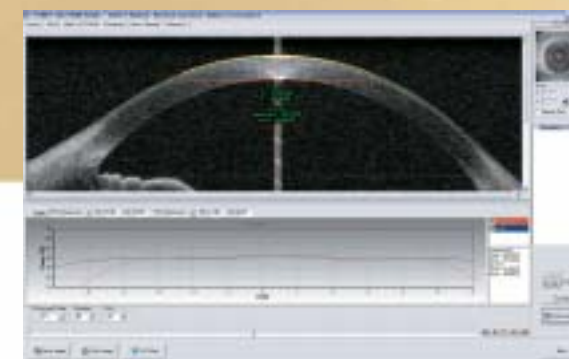
### Basic screen

Tomographic images of cornea at optional locations can be displayed by using the captured three-dimensional image of the anterior segment. In addition, two-dimensional or three-dimensional analysis can be performed using the displayed tomographic images. When using the rotation view, the captured tomographic images can be displayed successively.

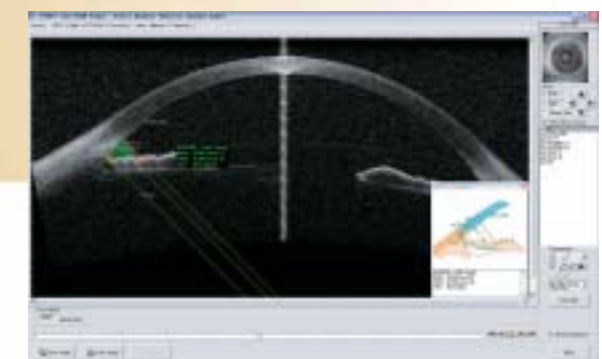
Upper left Front image	Upper right Vertical image
Lower left Horizontal image	Lower right C-scan image*

(\*C-scan: Cross-section perpendicular to the depth)

Variety of analytical functions quantifies various data.



### Measurement of corneal curvature



### Anterior chamber angle analysis

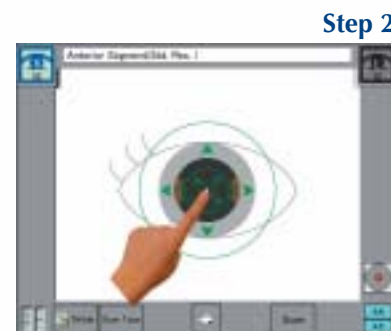
### Easy operation by the touch alignment function

The auto alignment function automatically moves the head unit to the measurement position by simply touching a point to be observed on the screen. Only press the measurement button to start image capturing.



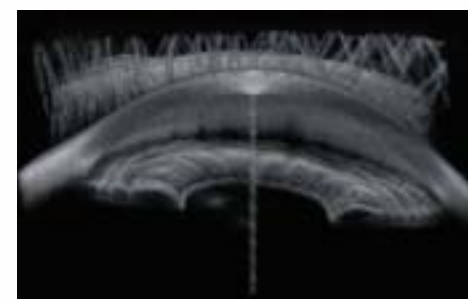
Step 1

Touch the center of the pupil displayed on the screen for centering.



Step 2

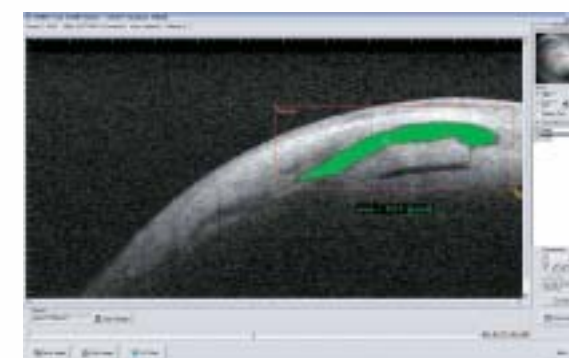
Lightly press the center of the screen. The head unit moves toward the patient's eye, and measurement is immediately complete by the auto alignment and auto shot functions.



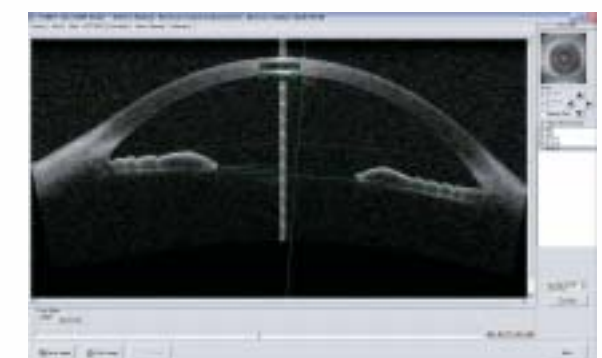
### Gonioscopic view (simulated gonioscope image)

A three-dimensional image of the gonioscope can be displayed as an animation that simulates an image observed by the gonioscopes. In addition, the display angle and size can be changed as desired.

This display method is only available with CASIA that can obtain three-dimensional data.



### Bleb segment analysis



### Measurement of corneal thickness and anterior chamber depth

\*Applications are to be added.