



# ES-HS300

Optical Coherence Tomography  
with OCTA (Angiography)



OPHTHALMOLOGY / ENT



# ES-HS300

## Optical Coherence Tomography with OCTA (Angiography)

ES-HS300 Optical Coherence Tomography (OCT) is specifically designed to examine the eye retina, macular disease and glaucoma. It is an indispensable instrument for diagnosing eye diseases. By analysing the delay of the reflected light and the background scattered light formed by different interface reflections, it can calculate the distance of the tissue and 3D structural information. The detection accuracy is up to  $10\ \mu\text{m}$ , which is 10 times higher than the traditional B-ultrasound. This prominent detection accuracy allows doctors to perform excellently when restoring a patient's vision.

### Super high speed:

250,000 A-scan/Second,  
all details at one glance.

### Angiography:

OCTA can quickly image with no contact or damage and can quickly find the focus of the disease.

### Full Function:

Multiple scan modes to satisfy requirements of different ophthalmic diseases.

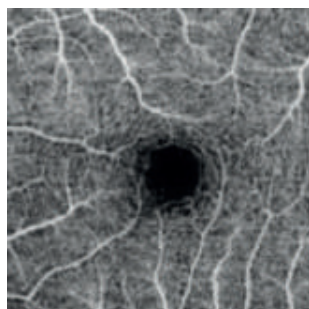


With advantages such as being low-cost, non-contact and non-destructive, having extremely high sensitivity and noise suppression capabilities, and zero-radiation to living tissues, OCT technology is the gospel for patients who are suffering eye diseases. Through targeted surgery, patients with glaucoma and macular disease can regain vision, thus greatly improving their quality of life.

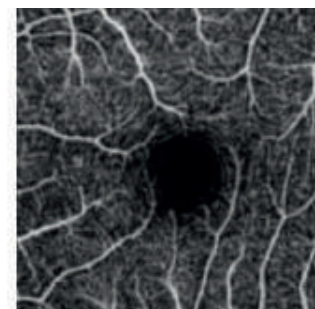
When the patient's eyes are examined, only a small amount of energy enters the patients' eyes by adopting low-coherence light waves (wavelength 840nm), which causes no harm to the eyes. The resolution of the OCT will not be affected by eye aberration or pupil size. Eye examination can be performed as usual for patients with differences in eyeballs and pupils.

### Super high speed:

With the scanning speed up to 250,000 A-scan per second, which is 7 time to the similar products, it can enhance the cooperation of patients, reduce the interference during the photoing process, and improve doctors' working efficiency.



Retinal layer with blood flow



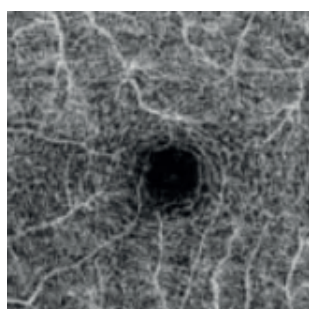
Retinal surface

### Angiography:

OCTA can quickly image with no contact or damage, clearly show the blood flow morphology and changes of different levels of retina and choroid, and can quickly find the focus of the disease. It is widely used in central serous retinopathy, choroidal neovascularization, polypoid choroid Vascular disease and diabetic retinopathy and other retinal and choroidal diseases.

It avoids the side effects of contrast agents, and at the same time provides a new choice for the elderly, patients with serious underlying diseases and other people who are not suitable for imaging examinations.

It has broad clinical application prospects.



Retinal deep layer



Retinal layer with no blood flow



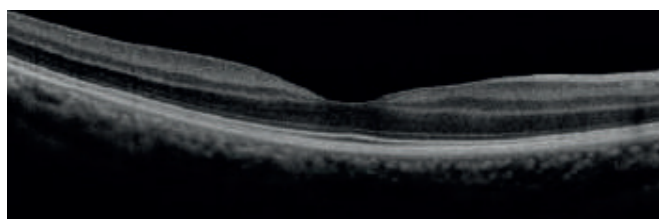
High-resolution pupillary tomography

### All functions:

Tai HS 300 has multiple functions of area-wide scan for anterior and posterior, providing wide range of clinical applications (refractive/cornea/glaucoma/cataract/retinal disease).

The clear cornea imaging helps to diagnose different diseases, measure automatically thickness of different zones to help refractive surgeries.

It shows clearly the chamber-angle, retinal layers, optical cup and nerve fiber thickness, helping the screening, diagnose and treatment of all retinal or choroidal diseases.



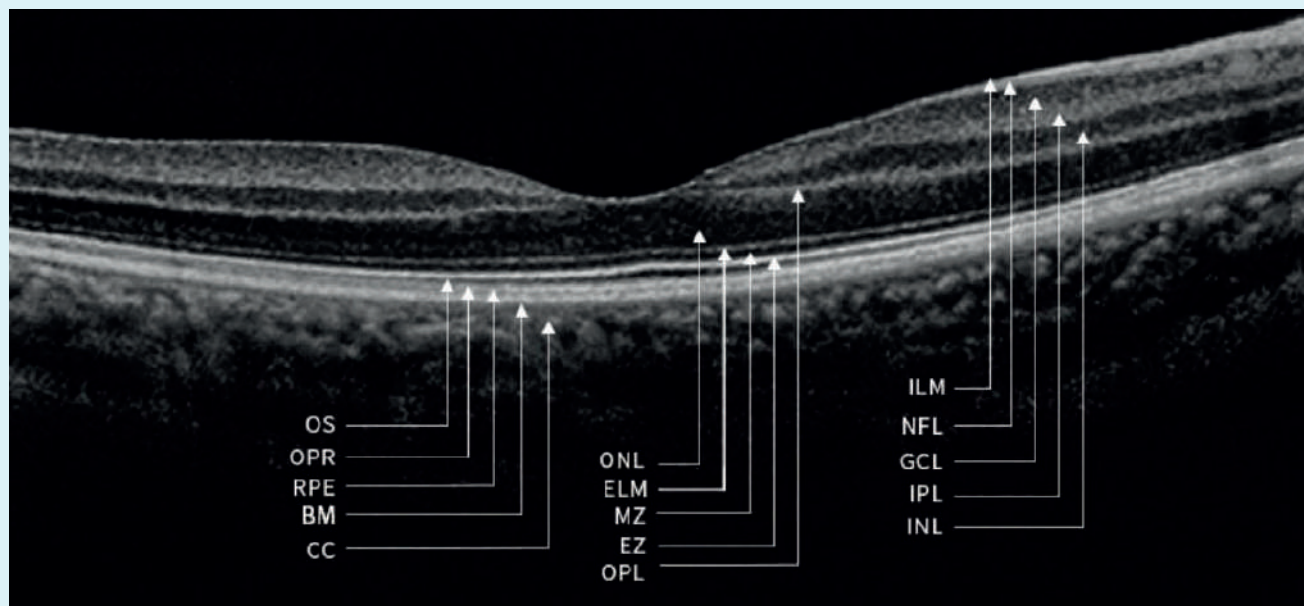
High-resolution tomography



High-resolution layered corneal image



### Normal Retina Hierarchical Structure Diagram:



OS: Outer Segment  
OPR: Outer Photoreceptor/complex with RPE  
RPE: Retinal Pigment Epithelium  
BM: Bruch's Membrane  
CC: Choroidal Capillary

OPL: Outer Plexiform Layer  
ONL: Outer Nuclear Layer  
ELM: External Limiting Membranes  
MZ: Myoid Zone  
EZ: Ellipsoid Zone

ILM: Inner Limiting Layer  
NFL: Nerve Fiber Layer  
GCL: Ganglion Cell Layer  
IPL: Inner Plexiform Layer  
INL: Inner Nuclear Layer

## TECHNICAL FEATURES

OCT Imaging	
<b>Theory</b>	RF Optical Coherence Tomography SD-OCT
<b>Light source</b>	Super Luminescent Diode (SLD), 840nm
<b>Power of the light</b>	≤1000uW, at the cornea
<b>Scan speed</b>	250,000 A-scan/second
<b>Vertical Resolution</b>	Posterior: ≤5 um / Anterior: ≤9um
<b>Horizontal Resolution</b>	Posterior: ≤20 um / Anterior: ≤25um
<b>Scanning Scope</b>	Posterior: ≥6.0mm(H) x6.0mm(V) Anterior: ≥9.0mm(H) x8.0mm(V)
Retinal Imaging	
<b>Theory</b>	Cofocal Laser Imaging (cSLO)
<b>Light source</b>	Super Luminescent Diode (SLD), 840 nm
<b>Power of the light</b>	≤1000uW, at the cornea
<b>Scan speed</b>	≥4 Frames/second
Inner Fixation Lamp	
<b>Light source</b>	Luminescent Diode (LED), 525 nm
<b>Power of the light</b>	≤20uW, at the cornea
<b>Range of Diopter</b>	-18D ~ +16D
Size & weight	
<b>Size</b>	100L x 54W x 66H (cm)
<b>Weight</b>	60kgs
<b>System</b>	
<b>PC</b>	Intel® Core™ i7 / WINDOWS 10