

## Comparison of Fourier-Domain Optical Coherence Tomography Retinal Scanners

- Originally compiled November 2008
- 2009 Update confirmed by OPKO, Optopol, Optovue, Topcon
- Other 2009 updates from available company literature (no reply from company representative)

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## FD-OCT Retinal Scanners: Basic Parameters

Manufacturer	Device	Axial Resolution	Scanning Speed	Accessory Imaging
Bioptigen	3D SD-OCT	3-5 $\mu\text{m}$	17,000 A-scan/sec	IR Fundus, handheld, mouse, pediatric
Carl Zeiss Meditec	Cirrus	5 $\mu\text{m}$	27,000	LSLO
Heidelberg Engineering	Spectralis HRA+OCT	7 $\mu\text{m}$	40,000	CSLO, FA + ICG Autofluorescence
OPKO (OTI)	Spectral OCT/SLO	5-6 $\mu\text{m}$	27,000	SLO Microperimetry
Optovue	RTVue-100	5 $\mu\text{m}$	26,000	
Optopol	Copernicus HR	3 $\mu\text{m}$	50,000	IR/Red Fundus
Topcon	3D-OCT-1000	6 $\mu\text{m}$	27,000	Color Fundus

\* High resolution option

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## Scan Acquisition & Registration

Manufacturer	Device	Frame Averaging	3D Raster	Eye Tracking	Grid Map	Transverse Registration
Bioptigen	3D SD-OCT	Yes	Yes	No	No	No
Carl Zeiss Meditec	Cirrus	Yes	Yes	No	No	Yes
Heidelberg Engineering	Spectralis HRA+OCT	Yes	Yes	Yes	No	Yes
OPKO	Spectral OCT/SLO	Yes	Yes	No	No	Yes
Optovue	RTVue-100	Yes	Yes	No	Yes	Yes
Optopol	Copernicus HR	Yes	Yes	No	No	Yes
Topcon	3D-OCT-1000	Yes	Yes	No	Yes	Yes

## 3-D & En Face Visualization

- Available on all listed systems!

## Macular Analysis

Manufacturer	Device	Retinal Thickness	RPE Elevation	Normative Reference	Change Analysis
Bioptigen	3D SD-OCT	Yes	No	No	No
Carl Zeiss Meditec	Cirrus	Yes	Yes	Yes	Yes
Heidelberg Engineering	Spectralis HRA+OCT	Yes	No	No	Yes
OPKO	Spectral OCT/SLO	Yes	Yes	Yes	Yes
Optovue	RTVue-100	Yes	Yes	Yes	Yes
Optopol	Copernicus HR	Yes	Yes	Yes	Yes
Topcon	3D-OCT-1000	Yes	Yes	Yes	Yes

## Glaucoma Analysis

Manufacturer	Device	ppNFL	mGCC	Disc/Cup	Normative Reference	Change Analysis
Bioptigen	3D SD-OCT	Yes	No	No	No	No
Carl Zeiss Meditec	Cirrus	Yes	No	No	Yes	Yes
Heidelberg Engineering	Spectralis HRA+OCT	Yes	No	No	Yes	Yes
OPKO	Spectral OCT/SLO	Yes	No	Yes	Yes	Yes
Optovue	RTVue-100	Yes	Yes	Yes	Yes	Yes
Optopol	Copernicus HR	Yes	No	Yes	Yes	Yes
Topcon	3D-OCT-1000	Yes	No	Yes	No	No

## Corneal & Angle Imaging

Manufacturer	Device	Cross Sectional Imaging	Flap Measurement Tool	Angle measurement Tool	Corneal Thickness Map
Bioptigen	3D SD-OCT	Yes	No	No	No
Carl Zeiss Meditec	Cirrus	Yes	No	No	No
Heidelberg Engineering	Spectralis HRA+OCT	No	No	No	No
OPKO	Spectral OCT/SLO	Yes	Yes	No	Yes
Optovue	RTVue-100	Yes	Yes	Yes	Yes
Optopol	Copernicus HR	Yes	No	Yes	Yes
Topcon	3D-OCT-1000	No	No	No	No