Avanti® Widefield OCT
with AngioVue® OCT Angiography

Simply the best OCT & OCTA image quality.
Avanti® Widefield OCT with AngioVue® OCT Angiography

The Avanti Widefield OCT offers state-of-the-art imaging from the cornea to the choroid with exclusive technology that will change your approach to disease diagnosis and management.

When you’re ready, add AngioVue OCT Angiography (OCTA) to the Avanti platform to bring non-invasive vascular imaging with measurement tools to your practice. Ease into OCTA with AngioVue Essential or choose AngioVue Comprehensive to access all available OCTA features. For the retina specialist, there’s AngioVue Retina, retinally OCT and OCTA.

Optovue’s flexible product configurations are easily upgradeable, so your OCT system meets the needs of your practice today and into the future.
Enhanced HD Imaging of the Vitreous and Choroid
12mm widefield scan with enhanced depth imaging mode provides high resolution views (5μm axial resolution and 15μm transverse) of the vitreous, retina and choroid with quantitative analysis tools.

3D Widefield En Face Imaging
See the retina in three dimensions and study individual layers of the retina with en face imaging. Quickly identify structural abnormalities with the Widefield En Face Quad Image report.

Comprehensive Retinal Analysis
Avanti reports provide a comprehensive assessment of the retina in an easy-to-read format.

Visualization of the vitreous and choroid with the Enhanced HD Line scan and quantify choroidal thickness with the caliper tool.
AngioVue OCT Angiography
Add AngioVue OCTA to the Avanti platform to enable non-invasive vascular imaging of retinal and optic disc vessels.

AngioVueHD™
High density OCTA (400x400 vs. traditional 304x304 density) provides unprecedented views of the fine vessels extending beyond the central 3x3mm region of the macula. AngioVueHD affords the highest resolution for large format images.

AngioVueHD Automatic Montage
10x6mm field-of-view with outstanding resolution of retinal vasculature in the macula and optic disc.

AngioVue Projection Artifact Removal
3D Projection Artifact Removal (PAR) reduces projection artifact in all posterior layers by performing vessel-by-vessel analysis to remove artefactual vessels while keeping authentic vasculature, which is essential for accurate image interpretation and quantification.

AngioVue Projection Artifact Removal
3D PAR Reduces Over-Correction
Unlike traditional projection artifact removal algorithms, 3D PAR maintains the signal strength to better display real vasculature.
AngioAnalytics

Measure Flow Area by outlining a region for vessel detection. The extracted Flow Area measurement is based on the Outer Retina slab (OPL – BRM).

Select area (mm²): 3.405
Flow area (mm²): 1.865

Measurements include Foveal Avascular Zone (FAZ) area, perimeter, and foveal vessel density.*

*Based on methods described by Richard Rosen, MD and Toco Chui, MD, ARVO 2016.

Retina and Disc QuickVue Reports

AngioAnalytics reports enable quick and comprehensive analysis of the retina and optic disc.

Images courtesy of Prof. Rufino Silva, MD, PhD

Retina Trend Report - Superficial and Deep Plexus

Images courtesy of Prof. Rufino Silva, MD, PhD

FAZ Trend Report

Image courtesy of Gregory S. Hageman, Ph.D., John A. Moran Eye Center, University of Utah

Image courtesy of Bernard C. Szirth, OD, Rutgers New Jersey Medical School Department of Ophthalmology and Visual Science

Vessel Density Mapping

Vessel density mapping measures the vessel density of the superficial and deep plexi of the retina as well as the radial peripapillary capillary layer of the optic disc.
**AngioVue Comprehensive**
OCTA with extensive analytical functionality and segmentation editing capabilities.

Quickly assess four layers of vasculature with the Overview Report.

Images courtesy of Dan Esmaili, MD, Los Angeles, California

**AngioVue Essential**
Streamlined OCTA image interpretation with a single-page report.

Assess four layers of vasculature to identify abnormalities that may require referral. Scrolling is enabled in the Choriocapillaris layer.

**AngioVue Retina**
The first OCTA system designed for retina specialists.

Keep your existing OCT/FA/ICG system and patient data while reducing workflow bottlenecks with AngioVue Retina: OCTA + Retina-Only OCT Imaging.

Use the OCTA Working Page to scroll through the 3D cube to isolate vascular abnormalities.

**Scan Patterns & Reports**

<table>
<thead>
<tr>
<th>Scan Patterns &amp; Reports</th>
<th>AngioVue Comprehensive</th>
<th>AngioVue Retina</th>
<th>AngioVue Essential</th>
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<tbody>
<tr>
<td><strong>AngioVue Scans</strong></td>
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<td>AngioVue Retina 3.0mm, 8.0mm</td>
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<td>HD Angio Retina 6.0mm</td>
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<td>HD Angio Disc 4.5mm, 6.0mm</td>
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<td>HD Montage</td>
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<td><strong>Retina Scans</strong></td>
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<td>Line, Raster, Radial and Grid Scans</td>
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<td>Retina Map</td>
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<td>3D Widefield</td>
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<td><strong>Nerve Fiber</strong></td>
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<td><strong>Cornea</strong></td>
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<td>Pachymetry, ETM</td>
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<td>Line</td>
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<td>3D Cornea</td>
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<td><strong>AngioVue Reports</strong></td>
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<td>AngioRetina OverVue Report</td>
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<td>AngioRetina with AngioAnalytics</td>
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<td>AngioRetina QuickVue Report</td>
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<td>AngioRetina MultiScan and Trend Report</td>
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<td>AngioDisc OverVue Report</td>
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<td>AngioDisc with AngioAnalytics</td>
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<td>AngioDisc QuickVue Report</td>
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<td>AngioDisc MultiScan and Trend Report</td>
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Retina
Glaucoma

**Focal Loss Volume Analysis**

Focal loss volume (FLV) is a global parameter that sums up all focal loss within the measurement area. This metric has been scientifically validated as the single best predictor of conversion to glaucoma.\(^1\)


**Trend Analysis**

Trend analysis evaluates change in both GCC and RNFL and estimates rate of change. Optovue-exclusive focal loss volume (FLV) analysis allows detection of focal defects in the ganglion cell complex, which is the most predictive factor for glaucoma progression\(^1\) based on a multi-center longitudinal study.

**Optovue Exclusive: Focal Loss Volume Analysis**

Focal loss volume (FLV) is a global parameter that sums up all focal loss within the measurement area. This metric has been scientifically validated as the single best predictor of conversion to glaucoma\(^1\).}

**Trend plots approximate rate of change in GCC and RNFL thickness based on all available OCT data.**

**GCC Thickness Map**

**RNFL Thickness Map**

**Angle Analysis**

Acquire high-resolution images of the irido-corneal angle to visualize angle structure, the trabecular meshwork and Schlemm’s canal. Quantitative measurement tools enable careful assessment of the angle in glaucoma patients.

**OCT Angiography of the Optic Disc**

Enhance glaucoma diagnosis and management with a single scan protocol showing OCT intensity, radial peripapillary capillary (RPC) vasculature, RPC density and RNFL thickness.

**Automatic detection of Bruch’s Membrane Opening (BMO) with rim and cup area measured within BMO plane.**

**Disc QuickVue Report**

OCT and OCTA analysis in a single scan protocol. Vessel density analysis based on the RPC (ILM–NFL).
PRK and Post-Myopic PRK
Quickly map corneal thickness with the Pachymetry scan.

Small Incision Lenticule Extraction (SMILE) Surgery
Visualize and quantify laser incisions with the Cornea Line scan.

Implantable Collamer Lens
Measure collamer lens vault with the Cornea Line scan.

Photorefractive Keratectomy (PRK)
Assess epithelial thickness following PRK with the Cornea Line scan
and map corneal thickness with the Pachymetry scan.

Cataract Surgery

Total Cornea Power (TCP)* measures the front and back surface of the cornea to enable precise calculation of corneal power in post-laser vision correction patients.

TCP DATA POINTS
Enter the data points into the ASCRS calculator to generate recommended lens power. http://iolcalc.ascrs.org/

<table>
<thead>
<tr>
<th>CORNEAL POWER</th>
<th>Anterior</th>
<th>Posterior</th>
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<tbody>
<tr>
<td>Power</td>
<td>41.08</td>
<td>47.20</td>
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<table>
<thead>
<tr>
<th>CURVATURE RADIUS</th>
<th>Anterior R:</th>
<th>Posterior R:</th>
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<tr>
<td></td>
<td>7.966</td>
<td>6.434</td>
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<table>
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<tr>
<th>PACHYMETRY</th>
<th>Layer</th>
<th>Offset</th>
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<tr>
<td>SN-IT (2-5mm)</td>
<td>9</td>
<td></td>
<td>8</td>
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<tr>
<td>Min:</td>
<td>463</td>
<td></td>
<td>59</td>
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<tr>
<td>Min-Median:</td>
<td>-33</td>
<td></td>
<td>-71</td>
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<tr>
<td>Min thickness at (-0.129mm, 0.059mm) indicated as*</td>
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<tr>
<th>EPITHELIUM</th>
<th>Epithelium statistics within central 5mm</th>
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<tr>
<td>S (2-5mm):</td>
<td>55</td>
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<tr>
<td>Min:</td>
<td>51</td>
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<tr>
<td>Std Dev:</td>
<td>2.3</td>
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<tr>
<td>Min/Max:</td>
<td>-10</td>
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</table>

Visualize posterior capsule opacification following IOL surgery.
**Keratoconus & Other Ectasias**
Quantify epithelial, stromal and total corneal thickness to aid in disease diagnosis. Pachymetric measurements may be compared to the Coollabs Keratoconus Risk Scoring System to further enhance diagnostic accuracy.

(http://www.coollab.net/resources)

**Dry Eye**
Add new information to the diagnosis and management of dry eye patients with Epithelial Thickness Mapping.

**Pellucid Marginal Degeneration**
Cornea Line scan shows epithelial thinning superiorly and thickening inferiorly. The Epithelial Thickness Map confirms visual assessment (orange circle correlates to orange arrow and white circle correlates to white arrow).
**Optovue Wellness Solutions**

The Wellness Exam is an Optovue exclusive available on all Optovue OCT systems that delivers a quick, easy OCT scan to promote better overall patient eye health.

Its usefulness stems from a single, comprehensive report that depicts:

- Retinal thickness and GCC® thickness with normative comparison
- Symmetry analysis
- FLV% and GLV%, proprietary Optovue GCC metrics that provide important information to aid in ocular disease diagnosis and management
- High-resolution B-scans

**Wellness Exams benefit patients**

Ultimately Wellness Exams benefit patients by helping them become more involved in their own eye health. The scanning process is simple and quick, and each patient receives comprehensive, personalized eye health information in an easy-to-understand report.

**Wellness Exams benefit eye care providers**

Wellness Exams benefit ECPs by providing a valuable assessment tool that can reveal the need for more extensive imaging. It also streamlines the exam process by quickly confirming normal—or helping you more efficiently diagnose pathology. Optovue’s current Wellness Exam users have affirmed that the Wellness Exam improves patient involvement, loyalty and retention. This helps you grow and differentiate your eye care practice, while also providing a new revenue stream.

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**TECHNICAL SPECIFICATIONS**

- **OCT Scanning Speed**: 70,000 A-scans per second
- **Optical Axial Resolution**: ~5 microns (digital pixel sampling = 3 μm)
- **Optical Transverse Resolution**: ~15 microns
- **OCT Axial Imaging Depth**: 2 to 3 mm (dependent on scan protocol)
- **AngioVue Imaging Volume**: 304 x 304 A-scans (for non-HD scans), 400 x 400 A-scans (for HD scans)
- **Acquisition Time Per OCTA Imaging Volume**: ~3 seconds
- **AngioVue Imaging Size (Retina)**: 3x3mm, 6x6mm HD, 8x8mm (AngioVue Essential includes 6x6mm scan only)
- **AngioVue Imaging Size (Optic Disc)**: 4.5x4.5mm HD, 6x6mm HD
- **Field of View**: 12x9mm

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**NETWORKING SPECIFICATIONS**

- **Operating System**: Windows 7; 64-bit OS compatible
- **Hard Drive Availability**: Minimum 50GB
- **Processor Speed**: Minimum Intel i5 Recommended Intel i7 3 GHz or higher
- **Computer RAM**: Minimum 8GB RAM Recommended 16GB RAM
- **Dedicated Graphics Card**: Not required Recommended NVIDIA GTX 970
- **Monitor Resolution**: 1920x1080, 1680x1050, 1600x1024, 1600x900
- **Network Bandwidth**: 1 Gbps or higher

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**TABLE SPECIFICATIONS**

- **Width**: 37.4 inches (950mm)
- **Depth**: 23.6 inches (600mm)
- **Height (Adjustable)**: 27.4-35.2 inches (695-995mm)
Innovating Technologies that Transform the Lives of Patients and Clinicians Around the World

First and Foremost in the Advancement of OCT Technology

From the first SD-OCT image generated to our transformative OCTA technology, Optovue technologies provide clinicians with information so new, they demand a different approach to treatment decision algorithms. Optovue’s long history of “firsts” demonstrates that innovation is the backbone of our scientific heritage. We committed to furthering OCT image quality, efficiency and clinical applications.

Our Bold Vision

Over the past decade, and in collaboration with industry-leading ophthalmic specialists, we have pursued a bold and single-minded vision to offer advanced eye care technology to patients around the world by expanding the frontiers of OCT innovation, and significantly improving accessibility to OCT technology to make it a standard part of every eye exam.

Over 10,000 Systems in 10 Years

Since our founding, 10 years ago, we have installed over 10,000 products in many different countries. Headquartered in Fremont, Calif., we employ a passionate and talented team dedicated to the development, manufacture and sale of OCT and OCTA systems.

Find your local Optovue distributor:

optovue.com/contact
OPTOVUE EXCLUSIVES:

• Focal loss volume (FLV) analysis for glaucoma
• Total Cornea Power (TCP) for anterior segment surgery
• Split-spectrum technology (SSADA) on OCTA scans
• 3D Projection Artifact Removal
• DualTrac Motion Correction Technology
• Vessel Density with trend analysis for the macula (including deep plexus) and disc

Optovue extends sincere appreciation to Adil El Maftouhi OD (Centre Rabelais, Lyon, France) for the use of his images throughout this brochure. Unless noted, all images are courtesy of Adil El Maftouhi.