The new FlexTrack technology improves imaging quality.

Ultra Wide Field x Ultra HD image

A stellar combination of 163° ultra wide field x ultra 4K HD incorporated in the Mirante achieves a wider, enhanced view of the retinal structure and vasculature with unparalleled clarity. (Ultra wide field image is available with the optional wide-field adapter.)

The new FlexTrack technology improves imaging quality.

The Ultimate Multimodal Imaging Platform

State-of-the-art SLO/OCT Combo
163° ultra wide field color image
The clear image of the entire 163° field of view enables detailed evaluation of pathologies from the fovea to the extreme periphery.
(Ultra wide field imaging is available with the optional wide-field adapter.)

Refine mode
As required, capturing two images with slightly different fixation reduces reflection, producing a clear ultra wide field image.

Panorama image composition
Panorama imaging with preset fixation points captures details of pathology even in the extreme periphery.
RGB detectors

Three separate RGB detectors simultaneously scan different depths of retina with red, green, and blue wavelengths. A color histogram is available for fine adjustment based on pathology or practitioner preference.

RGB triple detectors

Single color images in red, green, and blue wavelengths can be displayed after color image acquisition. Each wavelength is available with just a single shot, and the image layers can be selected based on user preference or a specific pathology.

The viewer software allows image processing options including noise removal and adjustments for brightness, contrast, and sharpness.

New FlexTrack algorithm corrects image distortion due to unstable fixation and enhances averaging quality.
**Blue-FAF / Green-FAF (fundus autofluorescence)**

FAF imaging is a non-invasive method to evaluate the retinal pigment epithelium (RPE) without contrast dye. Green-FAF reduces the effects of xanthophyll from the macula on imaging and is useful for monitoring deeper layers under the macula.

Blue-FAF imaging captures high definition images for diagnosing early AMD. Gain level and contrast can be adjusted manually or automatically depending on the eye disease.

**Retro mode / FAF**

Value added, non-invasive modalities expanding your practice

Retro mode

Retro mode is a unique non-invasive technique for detecting pathologic changes in the choroid. This imaging modality uses scattered IR light to detect abnormal reflection in the choroid caused by drusen, edema and other subtle choriretinal pathologies.

**Drusen**

**Stargardt disease**

**CNV**

**Geographic atrophy**

**Macular dystrophy**
Simple interface and easy operation

The Mirante has multiple modalities and functions with interface software that presents these choices in a simple, easy-to-use manner. This functionality allows smooth clinical workflow while capturing images with the required settings.

Image acquisition with the Mirante is simple. The SLO image is focused automatically by pressing the optimize button. After optimization is completed, image can be captured by pressing the release button.

Presenting multimodal images in a summary screen allows faster, more comprehensive evaluation of disease.

Easy-to-use functions
Intuitive functionality for efficient workflow

Tilt and swing features

The tilt and swing functions for the optical head enable imaging of the fundus periphery and acquiring panorama images. They also help for patients with unstable fixation.
HD dynamic and static angiogram

Auto gain control (AGC) optimizes gain level and contrast for early, peak, and late phases on angiography. Image definition is selectable up to 16 megapixels depending on ocular pathology. Averaging function for static imaging maintains high contrast even during the late phase of angiography. Videos can be recorded at a maximum of 1,024 x 1,024 pixels for up to 120 seconds. Multiple short videos can be recorded during the same measurement.
Using live IR monitoring, physicians can start alignment before fluorescence emission. The Mirante allows simple, simultaneous acquisition of FA and ICG images. The live IR monitoring enables alignment prior to fluorescence emission and reduces the risk of missing the very early phase of angiography. The AGC simultaneously adjusts contrast of each FA and ICG image, making the imaging of dynamic blood flow a very simple procedure.

Simultaneous FA and ICG imaging display (standard)

Simultaneous FA and ICG imaging display (ultra wide-field)

Easy comparison of FA and ICG

The viewer software can present FA and ICG images side-by-side. Easy comparison is helpful for comprehensive evaluation.
HD wide area OCT
The maximum 16.5 x 12 mm area scan available with the Mirante allows wide area diagnosis including the macula and optic disc in a single shot. The ultra fine mode and tracing HD plus functions provide high quality images for detailed observation from vitreous to choroid.
Glaucoma analysis

The Mirante incorporates 16.5 x 12 mm thickness map which visually presents pathological changes from the central retina to the periphery.

9 x 9 mm normative database allows [NFL+GCL+IPL] analysis from optic disc to macula in a single report.
Segmentation into multiple slabs
The simple interface provides seven slabs for the macula map / four slabs for the disc map with intuitive functionality and removal of projection artifacts.

Vessel density map and perfusion density map
Quantification of vessels in each layer provides metrics to assess disease progression and the effects of treatment. Quantitative analysis can be performed with the vessel density map and perfusion density map. Both maps can be displayed in all slabs.

Autodetection of FAZ and shape analysis
Foveal Avascular Zone (FAZ) is automatically detected and shape metrics are provided for rapid assessment.

Wide area scan
Scan size can range from 3 mm to maximum of 12 mm in 0.3 mm increments.

Tracing HD plus
The tracing HD plus function tracks eye movements to maintain the same scan location on the SLO image for accurate image capture.

Selectable definition
Two, four, or eight scans per line (2 HD, 4 HD, or 8 HD) can be selected.
Structure and function evaluation

Evaluate retinal structure and function simultaneously using combined OCT and Microperimetry images

Various OCT modalities can be registered with Microperimetry.

Clinical case

Age-related macular degeneration (AMD)  Diabetic macular edema (DME)
**Optional accessories**

**Wide-field adapter**
163° ultra wide field imaging is available with using the optional wide-field adapter.

**Anterior segment OCT adapter**
The optional anterior segment module enables observation and analyses of the anterior segment.

**Long axial length normative database**
The long axial length normative database is optional software for assisting clinicians in diagnosing macular diseases and glaucoma in patients with long axial lengths. Data was collected from a sample of Asian patients.

Sample analysis of a patient with long axial length (27.0 mm)
### Function overview - Mirante and RS Series

<table>
<thead>
<tr>
<th>SLD</th>
<th></th>
<th>Mirante</th>
<th>RS-3000 Advance-2</th>
<th>Retina Scan Duo**2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angle of view</td>
<td>Ultra wide field**1</td>
<td>163°*2</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Standard</td>
<td>89°*2</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Imaging area</td>
<td>40° x 30°</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Still image definition (pixel x pixel)</td>
<td>4,096 x 4,096</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>2,048 x 2,048</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>1,024 x 1,024</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>768 x 768</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>512 x 512</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Color fundus</td>
<td>Color</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Fundus fluorescence</td>
<td>FA</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>ICG</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Fundus autofluorescence</td>
<td>Blue-AF</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Green-FAF</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Retina mode</td>
<td>DRIIL BA</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Red-free</td>
<td>RGB</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>OCT</td>
<td></td>
<td>Mirante</td>
<td>RS-3000 Advance-2</td>
<td>Retina Scan Duo**2</td>
</tr>
<tr>
<td>Scan speed</td>
<td>Up to 85,000 A-scans/s</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Up to 53,000 A-scans/s</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>OCT sensitivity</td>
<td>Regular</td>
<td>85,000 A-scans/s</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>53,000 A-scans/s</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Fine</td>
<td>53,000 A-scans/s</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>25,600 A-scans/s</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Ultra fine</td>
<td>13,250 A-scans/s</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>A-scan</td>
<td>2,048 points</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>1,024 points</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>512 points</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>256 points</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>B-scan**3</td>
<td>256 scans</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>128 scans</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>64 scans</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>32 scans</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>16 scans</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

---

*1 Ultra wide field imaging is available with the optional wide-field adapter

*2 Measured from the center of the eye

*3 Only for macula map and disc map
Mirante Specifications

**BOX**

- Principal Optical resolution
- Angle of view
- Light source
- Still image size
- Video size
- Minimum pupil diameter
- Working distance
- OCT
- Principal Optical resolution
- Scan range
- Retina
- OCT light source
- Scan speed
- Image averaging
- Normative database
- Minimum pupil diameter
- Focus adjustment range
- Working distance
- OCT
- Optical resolution
- Standard: Diagonal angle of view 89°
- Ultra wide field*: ø163°
- 488, 532, 670, 790 nm
- 4,096 x 4,096, 2,048 x 2,048, 1,536 x 1,536, 1,024 x 1,024, 768 x 768, 512 x 512 (pixel x pixel)
- ø3.3 mm
- ø3.3 mm
- Standard: 19 mm / Anterior*: 215.4 mm
- -15 to +15 D
- Red (670 nm) / blue (488 nm)
- ±10°
- ±20°
- Available

**Ultra wide field imaging is available with the optional wide-field adapter.**

**Anterior**

- Diopter correction range
- Internal fixation lamp
- External fixation lamp
- Tilt
- Swing
- PC networking
- Power supply
- Dimensions
- Weight

- AC 100 to 240 V
- DC 100 to 240 V
- ±5 V
- ±2.5 V
- ±10°
- ±20°
- Available
- ±10°
- ±20°
- Available
- 19 mm
- 9 mm
- 9 mm
- 19 mm
- 15.4 mm
- 19 mm / Ultra wide field*: 9 mm
- 19 mm
- 9 mm
- 19 mm
- ±10°
- ±20°

**Common specification**

- Power consumption
- Dimensions Max**2
- Weight
- Optional accessories

- Device main body: 195 VA
- 349 (W) x 548 (D) x 527 to 557 (H) mm / 23 kg
- Wide-field adapter, anterior segment OCT adapter, motorized optical table, PC rack, isolation transformer, AngioScan (OCT-Angiography), long axial length normative database

**Internal Fixation Lamp**

- Standard: 19 mm / Ultra wide field*: 9 mm

**External Fixation Lamp**

- Standard: 9 mm

**Tilt**

- Standard: ±20°

**Swing**

- ±20°

**PC Networking**

- Available

**Power Supply**

- AC 100 to 240 V

**Dimensions Max**

- 349 (W) x 548 (D) x 527 to 557 (H) mm / 23 kg

**Weight**

- 19 mm
- 15.4 mm
- 9 mm

**Optional accessories**

- Wide-field adapter, anterior segment OCT adapter, motorized optical table, PC rack, isolation transformer, AngioScan (OCT-Angiography), long axial length normative database

- 19 mm
- 9 mm
- 9 mm
- ±10°
- ±20°
- Available
- ±10°
- ±20°
- Available
- ±10°
- ±20°

**Product/Model name:** Scanning Laser Ophthalmoscope Mirante

**Brochure and listed features of the device are intended for non-US practitioners.**

**Specifications may vary depending on circumstances in each country.**

**Specifications and design are subject to change without notice.**

---

**Images courtesy of:**

- Luigi Sacco Hospital, University of Milan, Italy
- Doheny Eye Center, UCI, USA
- Careggi University Hospital, University of Florence, Italy
- Retina Foundation & Eye Research Center, India
- Kagoshima University Hospital, Japan
- Chiba University Hospital, Japan
- Tohoku University, Japan

---

**Images courtesy of:**

- Luigi Sacco Hospital, University of Milan, Italy
- Doheny Eye Center, UCI, USA
- Careggi University Hospital, University of Florence, Italy
- Retina Foundation & Eye Research Center, India
- Kagoshima University Hospital, Japan
- Chiba University Hospital, Japan
- Tohoku University, Japan

---

**Images courtesy of:**

- Luigi Sacco Hospital, University of Milan, Italy
- Doheny Eye Center, UCI, USA
- Careggi University Hospital, University of Florence, Italy
- Retina Foundation & Eye Research Center, India
- Kagoshima University Hospital, Japan
- Chiba University Hospital, Japan
- Tohoku University, Japan