Stratus OCT™ Software Version 4.0
Real Answers in Real Time.
Stratus OCT provides a higher level of diagnostic insight - a significant contribution to therapeutic confidence across a broad spectrum of ophthalmic diseases. Using near-infrared frequency light, Stratus OCT reveals an in vivo cross-sectional view with an axial resolution of 10 μm, and quantitative analysis of the retinal layers.

In the Stratus OCT image display, retinal layers with the highest reflectivity appear red. In a healthy retina, these include the nerve fiber layer, retinal pigment epithelium and choriocapillaris. The layers that exhibit minimal reflectivity appear blue or black, such as the photoreceptor layer, choroid, vitreous fluid or blood.
Obtain real-time non-invasive histology of live tissue.

Stratus OCT reveals the retinal layers in high-resolution, cross-sectional views, offering insight for diagnosis, therapy and ongoing management of retinal disorders.
Visualize and analyze retinal disorders.

**Diabetic Retinopathy**

- Stratus OCT reveals and measures diffuse macular thickening and loss of foveal contour
- Intraretinal cysts and fluid accumulation are identifiable as areas of low reflectivity in the cross-sectional scan
- Post-treatment resolution of retinal thickening can be quantified and monitored

**Epiretinal Membrane**

- Stratus OCT scan shows the epiretinal membrane as a highly reflective band on the inner retinal surface
- Separation of the membrane from the retina is visible in areas
- Underlying retina is thickened, with loss of normal foveal contour

**Age-related Macular Degeneration**

- Disruption of RPE, caused by neovascularization and drusen, can be visualized
- Pockets of interretinal fluid are visible as areas of reduced reflectivity
- Structural changes resulting from therapy can be quantified and monitored
Detect glaucoma damage at an early stage.

Retinal Nerve Fiber Layer Analysis

- Analysis of RNFL aids in identification of early glaucomatous loss
- Circular scans of 3.4 mm diameter around optic nerve head provide measurement of RNFL in the peripapillary region
- RNFL thickness measurement is graphed in a TSNIT orientation and compared to age-matched normative data

Optic Nerve Head Analysis

- Radial line scans through optic disc provide cross-sectional information on cupping and neuroretinal rim area
- Disc margins are objectively identified using signal from end of RPE
- Key parameters include cup-to-disc ratio and horizontal integrated rim volume

Macular Thickness Analysis

- Thinning of the macula may reflect glaucomatous loss
- Structural analysis of retinal sublayers reveals macular complications
- Cross-sectional view provides visualization and measurement of retinal layers
**Retinal Thickness Report**

**Scan Protocol:** Fast Macular Thickness, Macular Thickness, Line, Cross Hair

**Used for:** Assessment of overall macular region or specific areas of interest

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**Patient Information**

**Scan Image**
The image with the lowest signal strength or with a data message will be shown to facilitate operator review.

**Signal Strength**
Numbers range from 0 (weak) to 10 (strong). Analysis algorithm may fail on scans with low signal strength; therefore, images with a signal strength below 5 should not be used for analysis.

**Data Message**
“Scan Too High,” “Scan Too Low” or “Missing Data” message will be shown, if applicable, regarding placement and completeness of scan.

**Retinal Thickness**
Displayed for A scan indicated. This corresponds to A scan (shown here) selected on thickness chart.

**Caliper Length**
Measurement indicates distance between calipers if they are placed on scan image during analysis.
**Retinal Thickness Tabular Output**

**Scan Protocol:** Radial Lines, Fast Macular Thickness, Macular Thickness

**Used for:** Imaging and measurement of macular pathology

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**Patient Information**

**Scan Image**
The image with the lowest signal strength or with a data message will be shown to facilitate operator review.

**Fundus Image**
Scan should be centered on the fovea.

**Signal Strength**
Numbers range from 0 (weak) to 10 (strong). Analysis algorithm may fail for scans with low signal strength; therefore, images with a signal strength below 5 should not be used for analysis.

**Data Message**
“Scan Too High,” “Scan Too Low” or “Missing Data” message will be shown, if applicable, regarding placement and completeness of scan.

**Map**
Thickness is displayed using a color scale. A normal eye will be displayed as blue centrally. Orange and red indicate greater thickness. Legend for color scale appears near bottom right of page.

**Sector Averages**
Numerical values indicate average thickness of each sector. Colors within each sector indicate comparison to normative data.

**Scans Used**
If any of the 6 radial line scans has been deselected, analysis might be incomplete.

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**Scan Information**

**Map Diameters**
Diameters at which sector averages are calculated. Can be 1.0, 2.22 and 3.45 mm diameters or 1.0, 3.0 and 6.0 mm diameters as shown here.

**Legend**
Normative data is displayed in stoplight color code, described in detail inside back page.

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**Color Scale**
For thickness maps.
**Optic Nerve Head Analysis Report**

**Scan Protocol:** Optic Disc, Fast Optic Disc

**Used for:** Evaluation of the optic disc

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**Patient Information**

**Cup Markers**

The edge of the cup is indicated with a green dot on the scan image and a green x on the composite diagram.

**RPE Markers**

The end of the RPE is indicated. Shown blue on the scan image, red on the composite diagram.

**Signal Strength**

Numbers range from 0 (weak) to 10 (strong). Analysis algorithm may fail on scans with low signal strength; therefore, images with a signal strength below 5 should not be used for analysis.

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**Optic Nerve Head Results**

Data are derived from the 6 radial line scans.

**Vertical Integrated Rim Area**

Total volume of RNFL tissue in the rim is obtained by multiplying the average of the 6 individual rim areas by the circumference of the disc. Normal values are 0.36 ± 0.08 cubic mm².

**Horizontal Integrated Rim Width**

Total rim area is obtained by multiplying the average of the 6 individual nerve widths by the circumference of the disc.

**Disc Area**

The area within the red outline on the composite diagram.

**Cup Area**

The area within the green outline on the composite diagram.

**Rim Area**

Disc area minus cup area.

**Cup/Disc Area Ratio**

Ratio of cup area to disc area.

**Composite Diagram**

Yellow line indicates individual scan selected and displayed above.

**Fundus Image**

Can be used to verify scan placement.

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**Scan List**

For each of the 6 radial line scans, this indicates the date when the scan was last adjusted and saved.

**Cup Area**

The area within the green outline on the composite diagram.

**Cup Volume**

Volume of cup area on the topographic display.

**Composite Diagram**

Yellow line indicates individual scan selected and displayed above.

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**Scan Information**

**Individual Radial Scan Analysis**

Data relates only to the individual scan image displayed.

**Rim Area**

Indicated with red shading on scan image, this area is bounded by the cup diameter line and a line from the RPE marker to the anterior surface of the disc, at a 90-degree angle to the cup diameter line.

**Average Nerve Width @ Disc**

The average of the nerve bundle widths at the disc on each side. Nerve bundle width indicated by yellow line from RPE marker to anterior surface.

**Disc Diameter**

Illustrated and measured on a straight line between the 2 RPE markers. Blue line on scan image.

**Cup Diameter**

Illustrated and measured on a straight line parallel to, and 150 μm anterior to, the disc diameter line. Red on image, green on diagram, this line is adjustable.

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**Legend**

Arrow indicates direction and angle of individual scan displayed in scan image.

**Horizontal Rim Length**

Disc diameter minus the cup diameter.

**Plot Background**

There are 3 optional backgrounds; two are similar to a topographic map. Aligned and Shaded (default) provides a shaded relief topographic map and corrects for patient motion. Absolute provides a non-shaded topographic map with no correction for movement. None shows a solid gray background with no appearance of depth.

**Cup Offset for Topo**

Default is 150 μm anterior to disc. Represents edge of blue shading on topographic display - the surface of the cup as if it were filled with water.

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**Stratus OCT Printout Software Version 4.0**
**RNFL Thickness Average Analysis**

**Scan Protocol:** RNFL 3.4 mm, Fast RNFL 3.4 mm

**Used for:** Retinal nerve fiber layer thickness assessment and comparison to normative database

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**Patient Information**

**RNFL Thickness Chart**
Peripapillary RNFL thickness is displayed in TSNIT format. Colored bands demonstrate range of normative data.

**Sector Averages**
Comparison to normative data in each sector is indicated with stoplight color scheme. Values are displayed numerically.

**Quadrant Averages**
Comparison to normative data in each quadrant is indicated with stoplight color scheme. Values are displayed numerically.

**OD/OS Graph**
TSNIT line graph displays RNFL thickness in both eyes. Asymmetry may be indicative of glaucomatous loss.

**Scans Used**
If any of the 3 circular scans has been deselected, analysis might be incomplete and for the fast RNFL scan, normative data will not be displayed.

**Legend**
Normative data is displayed in stoplight color code, described in detail on inside back cover.

**Tabular Data**
For each eye, values are compared to normative data and displayed in stoplight color code, described in detail on inside back cover.
**RNFL Thickness Serial Analysis**

**Scan Protocol:** Fast RNFL Thickness (3.4), RNFL Thickness (2.27 x disc)

**Used for:** Comparative analysis of RNFL thickness over time. Can be applied to up to 4 OD and/or 4 OS scan groups

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**Patient Information**
DOB: 7/12/1968, ID: NA, Male

**TSNIT Graph**
Peripapillary RNFL thickness is displayed in TSNIT format. Colors distinguish lines by scan date.

**Color Legend and Exam Dates**
Shows dates of selected scans and corresponding line colors.

<table>
<thead>
<tr>
<th>Scan Type</th>
<th>Fast RNFL Thickness (3.4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scan Date</td>
<td>Multiple, See Table</td>
</tr>
<tr>
<td>Scan Length</td>
<td>10.87 mm</td>
</tr>
</tbody>
</table>

**Fundus Image**
Shows most recent scan. Can be used to verify scan placement.

**Scan Image**
For most recent scan data, the image with the lowest signal strength or with a data message will be shown to facilitate operator review.

**Signal Strength**
Numbers range from 0 (weak) to 10 (strong). Analysis algorithm may fail on scans with low signal strength; therefore, images with a signal strength below 5 should not be used for analysis.

**Data Message**
“Scan Too High,” “Scan Too Low” or “Missing Data” message will be shown, if applicable, regarding placement and completeness of scan.
**Stratus OCT Normative Data.**

**Stoplight Color Scheme**

**RNFL Normative Data Display**

- Of the normal population:
  - 5% fall within the white band
  - 95% fall within or below the green band
  - 90% fall within the green band
  - 5% fall within or below the yellow band
  - 1% fall within the red band; considered outside the normal limit

**Macula Normative Display**

- Of the normal population:
  - 1% fall within the light red band; considered outside the normal limit
  - 5% fall within or above the light yellow band
  - 95% fall within or below the green band
  - 90% fall within the green band
  - 5% fall within or below the yellow band
  - 1% fall within the red band; considered outside the normal limit

**RNFL Normative Distribution**

- Of the normal population:
  - 5% fall within the white band
  - 95% fall within or below the green band
  - 90% fall within the green band
  - 5% fall within or below the yellow band
  - 1% fall within the red band; considered outside the normal limit

**Macula Normative Distribution**

- Of the normal population:
  - 1% fall within the light red band; considered outside the normal limit
  - 5% fall within or above the light yellow band
  - 95% fall within or below the green band
  - 90% fall within the green band
  - 5% fall within or below the yellow band
  - 1% fall within the red band; considered outside the normal limit
When your patients entrust you with their eyesight, their vision and your expertise converge. For the world’s most advanced surgical and diagnostic solutions in ophthalmology, you can turn to Carl Zeiss Meditec. We’re committed to earning your trust anew, every day.

**Technical Specifications**

<table>
<thead>
<tr>
<th>Tomographic Imaging</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
</tr>
<tr>
<td><strong>Signal type</strong></td>
</tr>
<tr>
<td><strong>Signal source</strong></td>
</tr>
<tr>
<td><strong>Optical power</strong></td>
</tr>
<tr>
<td><strong>Longitudinal/Axial resolution</strong></td>
</tr>
<tr>
<td><strong>Transverse sample size</strong></td>
</tr>
<tr>
<td><strong>Scanners</strong></td>
</tr>
<tr>
<td><strong>Scan patterns</strong></td>
</tr>
<tr>
<td><strong>Scan pixels</strong></td>
</tr>
<tr>
<td><strong>Longitudinal (depth) range</strong></td>
</tr>
<tr>
<td><strong>Scan rate</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fundus Imaging</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
</tr>
<tr>
<td><strong>Signal type</strong></td>
</tr>
<tr>
<td><strong>Field of view</strong></td>
</tr>
<tr>
<td><strong>Viewing method</strong></td>
</tr>
<tr>
<td><strong>Illumination</strong></td>
</tr>
<tr>
<td><strong>Internal fixation</strong></td>
</tr>
<tr>
<td><strong>External fixation</strong></td>
</tr>
<tr>
<td><strong>Minimum pupil diameter</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electrical</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power consumption</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Footprint</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient module</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>User Features</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor</strong></td>
</tr>
<tr>
<td><strong>Operating system</strong></td>
</tr>
<tr>
<td><strong>Memory</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standards and Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UL 2601-1</strong></td>
</tr>
<tr>
<td><strong>CSA 22.2 No. 601.1</strong></td>
</tr>
<tr>
<td><strong>MDD</strong></td>
</tr>
</tbody>
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**Note:** All technical specifications are subject to change without notice.

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