LUMEDICA

Company Overview

Great OCT Performance. Even better price.

Company History

- Founded 2014
- Technology developed internally and in Dr. Wax's lab at Duke University.
- 2 patents owned by Lumedica.
- 5 patents licensed from Duke University.
- Shipping OCT systems since 2017.
- Over 50 systems in the field.

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Location

- Reside in Biolabs NC
- Located in the Chesterfield Building
- Durham, NC USA

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Markets

- Research
- Industrial measurement
- QA
- OEM
- Clinical
  - Ophthalmology
  - Dental
  - Dermatology
  - Others

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TEAM

Dr. Adam Wax | President, Chief Scientist

- Professor of Biomedical Engineering in the Pratt School of Duke University
- Inventor of several technologies licensed to Lumedica.
- Co-founder and board chairman at Oncoscope. Raised $11M+ in capital

Dr. William Brown | Chief Technology Officer

- Co-founder of Bioptigen and Oncoscope
- Completed two successful startup exits
- Grew OCT revenue from 0 to $1.5M for Wasatch Photonics

Scott Whitney | Chief of Marketing

- Twenty years of marketing, advertising and branding experience
- Worked with HIMSS, Johnson & Johnson, IBM, Spreemo and DataFirst
- Experience in product development, sales strategy, web development, and UI design

Michael Crose | Director of Hardware Engineering

- Experienced in mechanical design of optomechanical systems
- Worked at Wasatch Photonics, BrightView, Centice, and GretagMacbeth
- Proven track record of developing products from concept to manufacturing

Brian Cox | Director of Software Engineering

- Expert in device software development and architecture
- Deep experience in device and web-based coding languages
- Fluent in healthcare-based IT challenges, parameters and restrictions

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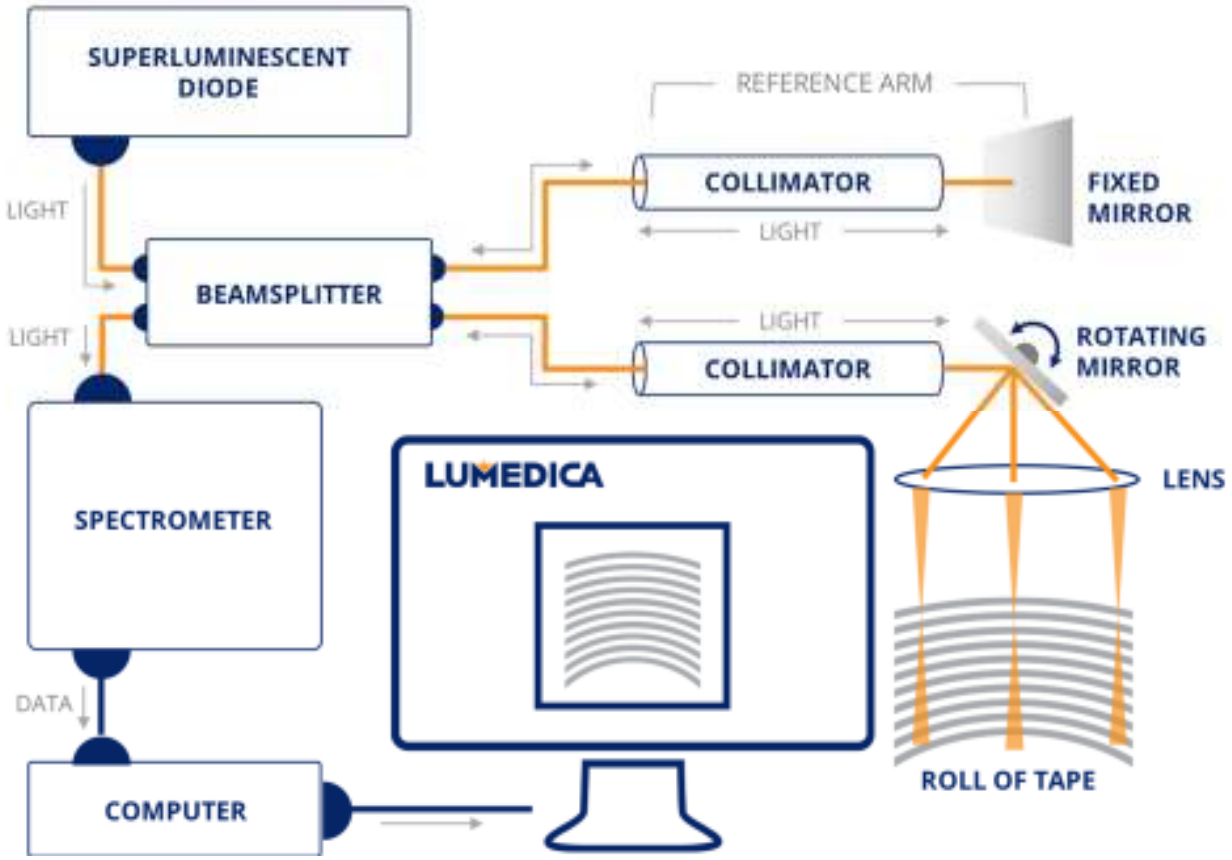
OCT Capabilities



- Engineered from component to software interface
- Able to customize most system features
- Spectrometer-based OCT

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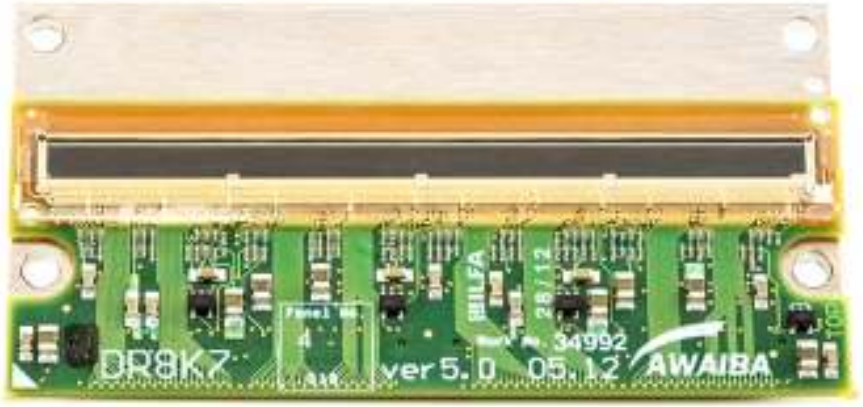
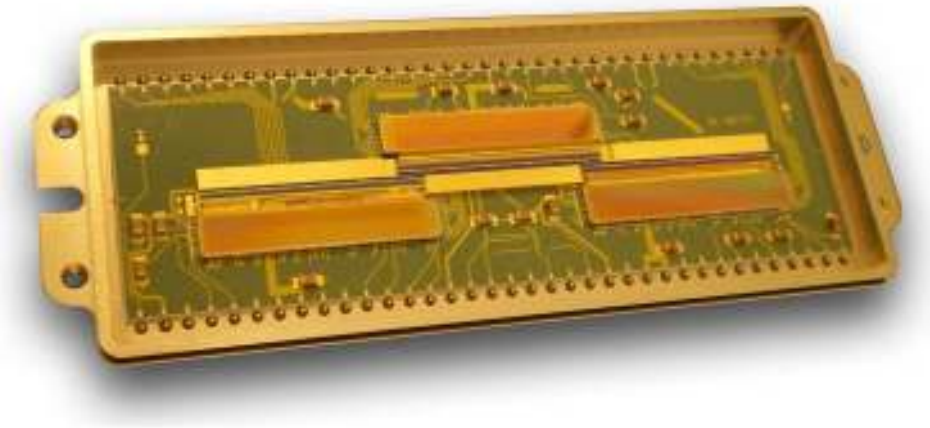
Light Wavelengths

- Silicon and InGaAs detector arrays
- Current Systems: 800 nm — 1310 nm
- Accessible Range: 400 nm — 1600 nm





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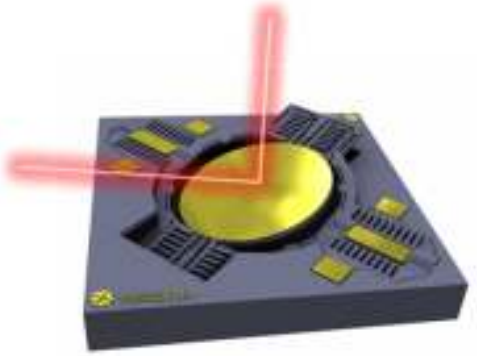
Software / Firmware

- Windows-based
- Low level control via PCBs
- Software by Lumedica
- Firmware by Lumedica
- PCBs by Lumedica

Scanners

- Scanners based on MEMS mirrors
- Sourced from multiple suppliers



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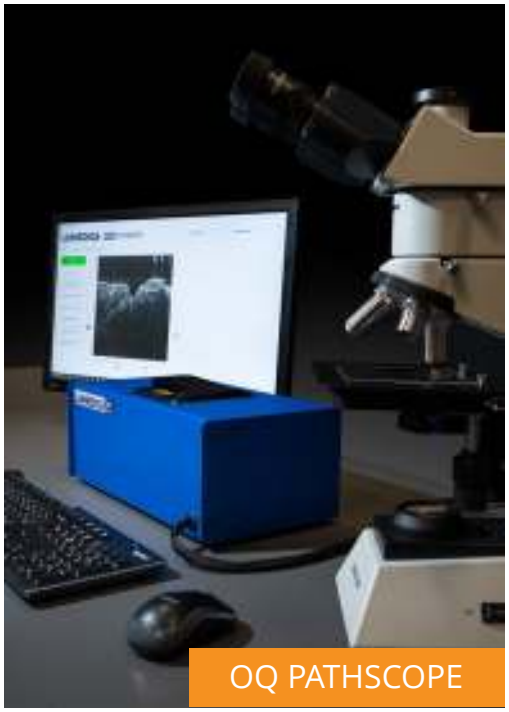
Current Product Line

OQ VETSCOPE



OQ PATHSCOPE

OQ LABSCOPE

OQ STRATASCOPE

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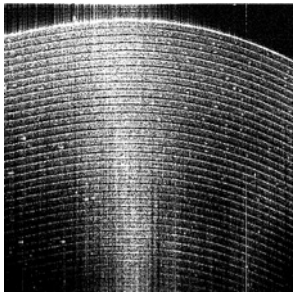
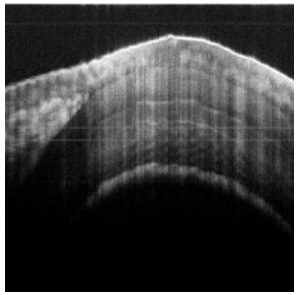
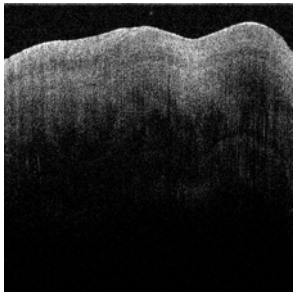
OQ LabScope 1.1



1. Layers of Scotch Tape



2. Finger Nail & Cuticle



3. Layers of a Tooth

LABORATORY-GRADE PERFORMANCE

Image Size	*512px x 512px*
Depth Resolution	*7 µm in air,* *5 µm in tissue*
Transverse Resolution	*15 µm*
Scan Range	*7mm x 7 mm*
A-Scan Line Rate	*8,800/sec*
B-Scan Image Rate	*12/sec*
Center Wavelength	*840 nm*
Sensitivity (OSNR)	*100 dB*
Output Power	*750 µW*
System Size (w/d/h)	*19 cm x 33 cm x 15 cm*
Scanner Size (w/d/h)	*4.1cm x 17.2 cm x 6.7 cm*
System Weight	*2.7 kg*

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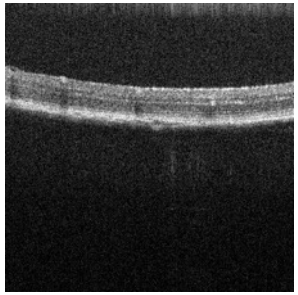
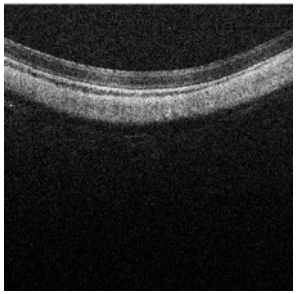
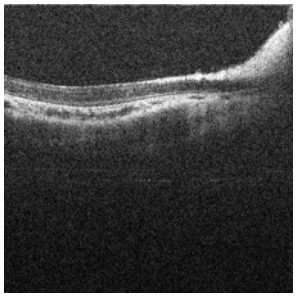
OQ VetScope 1.0



1. Mouse Retina



2. Rabbit Retina



Rabbit Retina + Optic Nerve

LABORATORY-GRADE PERFORMANCE

Image Size	*512px x 512px*
Depth Resolution	*5 µm in tissue*
Transverse Resolution	*20 µm*
Scan Range	*6mm x 6mm*
A-Scan Line Rate	*8,800/sec*
B-Scan Image Rate	*12/sec*
Center Wavelength	*840 nm*
Sensitivity (OSNR)	*100 dB*
Output Power	*750 µW*
System Size (w/d/h)	*19 cm x 33 cm x 15 cm*
Scanner Size (w/d/h)	*4.1 cm x 17.2 cm x 6.7 cm*
System Weight	*2.72 kg*

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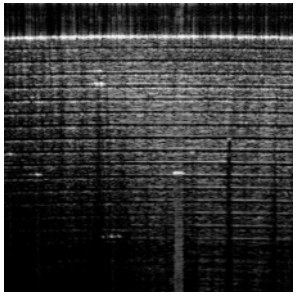
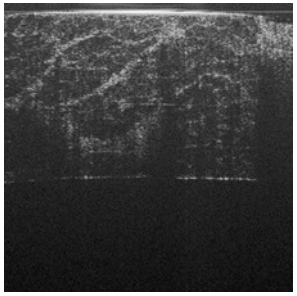
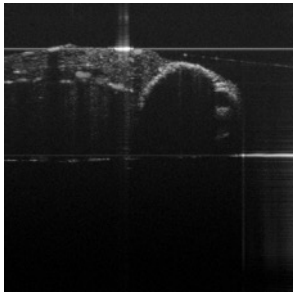
OQ PathScope 2.0



1. Layers of Scotch Tape



2. Bacon



3. Zebra Fish

LABORATORY-GRADE PERFORMANCE

Image Size	*512px x 512px*
Depth Resolution	*4.5 µm in air,* *3 µm in tissue*
Transverse Resolution	*4x: 10 µm* *10x: 5 µm* *40x: 2 µm*
Scan Range	*4x: 5 mm* *10x: 2.5 mm* *40x: 1 mm*
A-Scan Line Rate	*8,800/sec*
B-Scan Image Rate	*12/sec*
Center Wavelength	*860 nm*
Sensitivity (OSNR)	*100 dB*
Output Power	*750 µW*
System Size (w/d/h)	*19 cm x 33 cm x 15 cm*
Scanner Size (w/d/h)	*4.1cm x 17.2 cm x 6.7 cm*
System Weight	*2.7 kg*

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OQ StrataScope 1.0

LABORATORY-GRADE PERFORMANCE

Center Wavelength	*1310 nm*
Imaging Depth	*4.5 mm in tissue (maximum theoretical)*
Depth Resolution	*14 µm in air, 10 µm in tissue*
Transverse Resolution	*20 µm*
Scan Range	*7 mm linear, 5 mm x 5 mm volume*
A-Scan Line Rate	*18,000/sec*
B-Scan Image Rate	*30/sec*
Sensitivity (OSNR)	*100 dB*
Image Size (pixels)	*512 x 512*
Output Power	*~2 µW*
System Size (w/d/h)	*19 cm x 33 cm x 15 cm*
Scanner Size (w/d/h)	*41mm x 172 mm x 67mm*
System Weight	*2.72 kg.*

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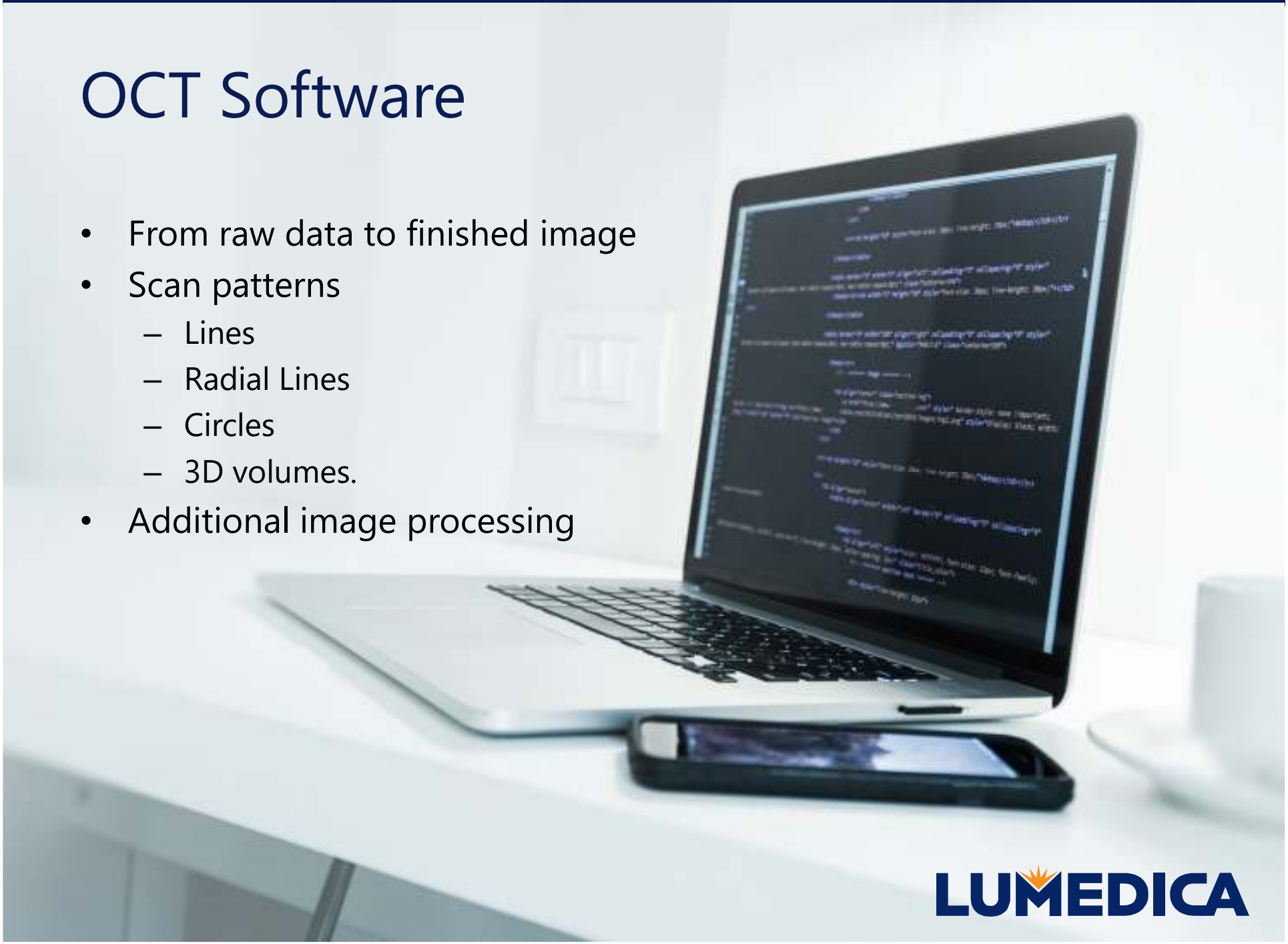
OCT Software

- From raw data to finished image
- Scan patterns
  - Lines
  - Radial Lines
  - Circles
  - 3D volumes.
- Additional image processing



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For more information

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