Optical Coherence Tomography (OCT) for Healthcare and Life Science: Technology and Market Trends

As OCT is now widely adopted in Ophthalmology, what is the next big market for this technology? What are the key requirements for next OCT systems?

The OCT market keep growing

The development of Optical Coherence Tomography (OCT) systems started in the 1990s. The technology early found its application in Ophthalmology. At the beginning of the 2000s, the agreement for the reimbursement of OCT exams was obtained in Europe and in the USA. The OCT market started to grow quickly with a CAGR between 15 and 20%.

Around ten years later, the growth of the OCT ophthalmology market slowed down because of saturation in the Western countries. However, the OCT market for healthcare and life science is still expected to grow from around € 500M in 2013 to around € 1b in 2019. Strong demand from new biomedical applications, continuous development of innovative technologies, strong demand from developing countries will drive the OCT market growth.

The present report provides market forecasts from 2014 to 2019 for the healthcare applications of OCT.

OCT systems are reaching new biomedical applications!

In parallel of ophthalmology, OCT was developed and tested in new biomedical fields like: cardiovascular, dermatology, gastroenterology, small animal imaging... Indeed, as label-free, non-invasive, high-resolution technologies, OCT systems are very efficient tools for the diagnosis and monitoring of pathologies that are at the heart of public health concerns like Age-related Macular Disease, skin cancer, cardiovascular diseases, baretts esophagus, breast cancer, etc.

The question now is: which one these applications will give a second wind to the OCT market?
The present report provides market and technical data on the use of OCT for ophthalmology and other Healthcare and Life Science applications. It gives a complete description of the most promising ones i.e. cardiology and dermatology. Market forecasts from 2014 to 2019 per application are also provided.

**NEW TECHNOLOGIES INCREASE OCT PERFORMANCE**

This shift towards new applications comes along with the emergence of new components and systems. In order to allow a wider acceptance of OCT in new biomedical applications, R&D efforts seek to improve the performance and the compactness of OCT components and sub-systems. The trends is towards miniaturization with the development of technologies like on-chip spectrometers. Moreover, developments of functional OCT systems are undertaken to have access to more precise diagnostics. The aim is to provide quantitative information on biological processes or chemical composition.

This report details current and future trends in OCT components and systems.
OBJECTIVES OF THE REPORT

- Detail and estimate today's OCT market, led by ophthalmology, its main application
- Segment biomedical OCT applications
- Provide market forecast until 2019 for each application segment
- Explain medical issues and challenges addressed by OCT
- Estimate the potential of each incoming application for becoming the new growth driver of the OCT market
- Describe future trends and development challenges of OCT components and systems
- Identify the main providers of OCT components and systems

COMPANIES MENTIONED IN THE REPORT

Abbott (OptiMedica), Agfa Healthcare, Alcon, Avinger, Axsun, Bayspec, Biotpigen, Canon, Carl Zeiss Meditec, Danne Medical, Diagnostic Photonics, Exalos, General Photonics, Heidelberg Engineering, Imalux, InPhenix, Insight Photonic Solutions, LL tech, Medulumics, Michelson Diagnostics, Moptim Imaging Technical, Nidek, Nine Point Medical, Novacam, OptoMedical Technologies, Optopol (Canon), Optos, Optovue, P&P Optica, Perimeter Medical Imaging, Phoenix Research Labs, Santec, Schwind Eye tech Solutions, Sensors Unlimited, Shenzen Moptim Imaging, St Jude Medical, Terumo, Thorlabs, Tomey, Tomophase, Topcon medical Systems, Tornado Spectral Systems, Vivolight, Wasatch Photonics, Xenics, ...

TABLE OF CONTENT

EXECUTIVE SUMMARY

1. INTRODUCTION
   • Context of the study
   • Study goals and objectives
   • Information sources and methodology
   • Glossary
   • Definitions
   • List of companies

2. OCT HISTORY, MARKET ANALYSIS AND FORECAST
   • History of OCT
   • General presentation of OCT
   • OCT market segmentation, forecast and analysis
   • OCT players
   • Research in OCT

3. OCT FOR OPHTHALMOLOGY
   • Presentation
   • Competing technologies
   • Healthcare issues
   • Drivers of growth

4. NEW APPLICATIONS OF OCT
   • Cardiology
     • Presentation
     • Competing technologies
     • Healthcare issues
   • Dermatology
     • Presentation
     • Competing technologies
     • Healthcare issues
   • Other applications
   • Technical trends

5. OCT COMPONENTS AND SYSTEMS TRENDS AND CHALLENGES
   • General information - Evolution of key parameters
   • Systems
     • Typology of today's systems
     • Incoming OCT techniques
     • Other incoming techniques
   • Components and Sub-Systems
     • Presentation / Critical components and sub-systems
     • State of the art
     • Currently emerging components and sub-systems
     • Manufacturers

6. REGULATION ASPECTS
   • European regulations
   • Regulations in the USA

7. CONCLUSION

8. APPENDICES
   • Methodology
   • Presentation of TEMATYS

CONTACT

Benoit d'humieres
TEMATYS
6 cite de Trevise
75009 PARIS
Tel: +33 6 74 64 52 21
Fax: +33 9 72 39 44 39
www.tematys.com

Buy the report and find all our publications
http://tematys.fr/Publications
Optical Coherence Tomography (OCT) for Healthcare and Life Science: Technology and Market Trends

BILL TO

Name (Mr/Ms/Dr/Pr):

Job title:

Company:

Address:

City: ______________________________ State: ______________________________

Postcode/Zip: ______________________________

Country(1):

(1)VAT Number (EU members):

Tel: ______________________________

Email: ______________________________

PAYMENT

BY CREDIT CARD

□ VISA □ Mastercard □ AMEX

Name of the Card Holder:

Card Number:

Card Verification Value: ______________________________

Expiration date: ______________________________

BY BANK TRANSFER

BANK INFO: CREDITCOOP GARE DE L’EST

102, boulevard Magenta, FR-75010 PARIS

Bank code : 42559, Branch code : 00003

Account No : 4100001859-92

SWIFT or BIC code : CCOPFRPPXXX

IBAN : FR76 4255 9000 0341 0000 0185 992

RETURN ORDER BY

SARL TEMATYS

By Post mail:

6 Cité Trévise 75009 PARIS / France

Tel: +33 9 72 39 44 39

By Email: info@tematys.com

CONTACT

Benoit d’Humières

info@tematys.com Tel: +33 (6) 74 64 52 21

NAF 7490B - Siret 528 943 616 00011

TVA Intracommunautaire : FR03528943616

www.tematys.com

MARKET RESEARCH - CUSTOM STUDIES - STRATEGY OPTICS - PHOTONICS - SENSORS - MATERIAL ENGINEERING

ORDER BEFORE 30TH SEPT. 2014 AND SAVE € 500!

- Corporate multi user license: 3 990.00 €HT(2) □

- Corporate multi user pre-order license: 3 490.00 €HT(2) □

(2) For price in dollars please use the day’s exchange rate

For French customer, add 20% for VAT

All reports are delivered electronically in PDF format

I hereby accept TEMATYS’ Terms and Conditions of Sale (3)

Date: ______ / ______ / ______

Signature:

SHIPPING CONTACT

Name (Mr/Ms/Dr/Pr):

Tel: ______________________________

Email: ______________________________

(3) Our Terms and Conditions of Sale are available on the following pages of this form and on our web site http://tematys.fr/Publications/c. Our prices are subject to change. Please check on http://tematys.fr/Publications/

The present document is valid 6 months after its publishing date: 21st June 2011.
90 days from the date of the original download or receipt of the material, as the case may be.

2.5. The person receiving the Products on behalf of the Buyer shall immediately verify the quality of the Products and their conformity to the order. Any claim for apparent defects or for non-conformity shall be made within 8 days of receipt of the Products. For this purpose, the Buyer agrees to produce sufficient evidence of such defects.

2.6. No return of Products shall be accepted without prior information to the Seller. Any Product returned to the Seller without providing prior information to the Seller as required under article 2.5 shall remain at the Buyer’s risk.

3. Price, invoicing and payment

3.1. Prices are given in the orders corresponding to each Product sold on a unit basis or corresponding to annual subscriptions. They are expressed to be inclusive of all taxes. The prices may be reevaluated from time to time at the Seller’s discretion, without any notice being given.

3.2. TEMATYS may offer a pre-reduction price for the companies willing to acquire the future specific report and agreeing on the fact that the report may be release later than the anticipated release date. In exchange to this uncertainty, the company will get a discount that can vary from 15% to 10%.

3.3. Payments due by the Buyer shall be sent by cheque payable to TEMATYS, credit card or by electronic transfer to the following account:

CREDITCOOP GARE DE L'EST
102, boulevard Magenta, 75010 PARIS FRANCE
Bank code : 425095, Branch code : 000003
Account No : 410000077

SWIFT or BIC code : COCCFRPPXXX
IBAN : FR76 4255 9001 0341 0010 0185 992
To ensure the payments, the Seller reserves the right to request down payment from the Buyer. In this case, the need of down payments will be mentioned on the order.

3.4. Payment is due by the Buyer to the Seller within 30 days from invoice date, except in the case of a particular written agreement. If the Buyer fails to pay within this time and fails to contact the Seller, the replacement is guaranteed for a period of 7 days, in accordance with article L. 441-6 of the French Commercial Code. Our publications (report, database, etc.) are paid for in advance.

3.5. In the event of termination of the contract, or of misconduct, during the contract, the Seller will have the right to invoice at the stage in progress, and to take legal action for damages.

4. Liabilities

4.1. The Buyer or any other individual or legal person acting on its behalf, being a business user buying the Products for its business activities, shall be solely responsible for choosing the Products and for the use and interpretation of the information it purchases, of the results he obtains, and of the advice and acts it deduces thereof.

4.2. The Seller shall only be liable for (i) direct and (ii) foreseeable pecuniary loss, caused by the Products or arising from a material breach of this agreement.

4.3. In no event shall the Seller be liable for:

- damages of any kind, including without limitation, incidental or consequential damages (including, but not limited to, damages for loss of profits, business interruption and loss of programme or information) arising out of the use or inability to use the Seller’s website or the Products, or any information provided on the website, or in the Products;
- any claim attributable to errors, omissions or other inaccuracies in the Product or interpretations thereof.

4.4. All the information contained in the Products has been obtained from sources believed to be reliable. The Seller does not warrant the accuracy, completeness adequacy or reliability of such information, which cannot be guaranteed to be free from errors.

4.5. All the Products that the Seller sells may, upon prior notice to the Buyer from time to time be modified or by substituted with similar Products meeting the needs of the Buyer. This modification or substitution shall not lead to the liability of the Seller, provided that the Seller ensures the substituted Product is similar to the Product initially ordered.

4.6. In the case where, after inspection, it is acknowledged that the Products contain defects, the Seller undertakes to replace the defective products as far as the supplies allow and without indemnities or compensation of any kind for labor costs, delays, loss caused directly or indirectly by third-party use or need to repair or replace for a maximum of two months starting from the delivery date. Any replacement is excluded for any event as set out in article 5 below.

4.7. The deadlines for the preliminary stages and the state for the mailing of the Products are given for information only and are not guaranteed. If such deadlines are not met, it shall not lead to any damages or cancellation of the order, except for non-acceptable delays exceeding 30 days and leading to cancellation, and payment of an indemnification from the Seller. In such case only, the Buyer shall be entitled to ask for a reimbursement of its first down payment to the exclusion of any further damages.

4.8. The Seller does not make any warranties, express or implied, with respect to the limitation of the Product, or any particular purpose, with respect to the Products. Although the Seller shall take reasonable steps to screen Products for infection of viruses, shall accept, under no circumstances, any responsibility for damage, or any loss, or expense, or symptoms of any nature, in relation to the Products or to the Buyer’s computer system. In the event of a dispute, the Buyer will be responsible for ensuring that the Products are not infected with any virus.

5. Force majeure

5.1. The Seller shall not be liable for any delay in performance directly or indirectly caused by war, riot, act of God, accident, food, fire, road, accident, war, government intervention, embargoes, strikes, labor difficulties, equipment failure, late deliveries by suppliers or other causes which are beyond the control, and not the fault of the Seller.

6. Protection of the Seller’s IP

6.1. All the IP attached to the Products are and remain the property of the Publisher or of its affiliates, and are protected as a reseller and are protected under French and international copyright law and conventions.

6.2. The Buyer agreed not to disclose copy, reproduce, redistribute, resell or publish the Product, or any part of it to any other party other than employees of its company. The Buyer shall have the right to use the Products solely for its own internal information purposes. In particular, the Buyer shall therefore not use the Product for purposes such as:

- Information storage and retrieval systems;
- Recordings and re-transmissions over any network (including any local area network);
- Use in any timesharing, service bureau, bulletin board or similar arrangement or public display;
- Posting any Product to any other online service (including bulletin boards or the Internet);
- Licensing, leasing, selling, offering for sale or assigning the Product.

6.3. In the context of annual subscriptions, the person of contact shall decide who within the Buyer, shall be entitled to access on line the reports on T.imicews.com. In this respect, the Seller will give the Buyer a maximum of 10 passwords, unless the multiple sites organisation of the Buyer requires more passwords. The Seller reserves the right to check from time to time the correct use of this service.

6.4. In the case of a multisite, multiuser, only the employee of the Buyer can access the report or the employee of the companies in which the Buyer have 100% shares. As a matter of fact the investor of a company to which the agreement relates has the same rights as the Buyer.

6.5. In the context of annual subscriptions, the person of contact shall decide who within the Buyer, shall be entitled to access on line the reports on T.imicews.com. In this respect, the Seller will give the Buyer a maximum of 10 passwords, unless the multiple sites organisation of the Buyer requires more passwords. The Seller reserves the right to check from time to time the correct use of this service.

6.6. In the case of a multisite, multiuser, only the employee of the Buyer can access the report or the employee of the companies in which the Buyer have 100% shares. As a matter of fact the investor of a company to which the agreement relates has the same rights as the Buyer.

7. Termination

7.1. If the Buyer cancels the order in whole or in part or postpones the delivery of the Products, the Seller shall indemnify the Seller for all the costs that have been incurred as at the date of notification by the Buyer of such delay or cancellation. This may also apply for any other direct or indirect consequential loss that may be borne by the Seller, following this decision.

7.2. In the event of breach by one Party under these conditions or the order, the non-breaching Party may send a notification to the other by recorded delivery letter upon which, after a period of thirty (30) days without solving the problem, the non-breaching Party shall be entitled to terminate all the pending orders, without being liable for any compensation.

8. Miscellaneous

8.1. All the provisions of these Terms and Conditions are for the benefit of the Seller itself, but also for its licensors, employees and agents. Each of them is entitled to assert and enforce those provisions against any of the Buyers and in the Buyer’s name.

8.2. Any notices under these terms and Conditions shall be given in writing. They shall be effective upon receipt by the other Party.

8.3. The Seller may, from time to time, update these Terms and Conditions for the purpose of: (a) complying with any new laws, regulations, court decisions, and/or (b) making fair and reasonable changes to reflect the changes in circumstances or conditions, or in the terms, conditions, or provisions that have been communicated to him in due time.

8.4. Governing law and Jurisdiction

8.1. Any dispute arising out of or linked to these Terms and Conditions or to any contract (orders) entered into in application of these terms and Conditions shall be settled by the French Commercial Courts of Paris, which shall have exclusive jurisdiction upon such issues.