WINTERGREEN RESEARCH, INC.

Optical Component Worldwide Strategies, Market Shares and Forecasts, 2009 to 2015

Optical Components Implement Broadband and Next Generation Networks

Picture by Susie Eustis

MOUNTAINS OF OPPORTUNITY

WinterGreen Research, Inc.
Lexington, Massachusetts **www.wintergreenresearch.com**

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CHECK OUT THESE KEY TOPICS

Optical Components

GPON - GIGABIT PASSIVE OPTICAL NETWORK
EPON ETHERNET OPTICAL NETWORK
10-GBIT/S OPTICAL COMPONENTS
40-GBIT/S OPTICAL COMPONENTS
100-GBIT/S OPTICAL COMPONENTS
Nanoscale Structures for Optical Components
CMOS OPTICAL COMPONENTS
SILICON OPTICAL COMPONENTS
POLYMER OPTICAL COMPONENTS
TRANSCEIVERS
TRANSMITTERS
RECEIVERS
OPTICAL AMPLIFIERS

Broadband
Internet Broadband
Ethernet
Web Broadband

CWDM OPTICAL COMPONENTS
DWDM OPTICAL COMPONENTS
SAN High-Speed Sub-networks
Parallel Optics Technologies
High-Capacity Interconnects
CFP Standard
CXP Standard

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OPPORTUNITY ABOUNDS

WinterGreen Research, Inc.
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Optical Components Market Shares, Market Strategies, and Market Forecasts, Worldwide, 2009-2015

LEXINGTON, Massachusetts (September 24, 2009) – WinterGreen Research announces that it has a new study on optical component markets worldwide. The 2009 study has 669 pages, 231 Tables and Figures. Markets are poised to achieve significant growth as broadband is implemented from optical component capabilities. Use of the Internet as a vehicle of social networks to share pictures and videos, as a channel, as an enabler of the supply chain, and as accessible from the iPhone and other 4 G handheld mobile devices is creating demand for high speed optical network build-out.

The cost of the study is $3,400 for a single copy, $6,800 for a web site posting. Optical component based network systems are poised for significant growth as Web based applications are used to implement automated process and share videos.

At speeds of more than 1 Gbps, the ability of copper wire to transmit more than 300 meters is limited due to the loss of signal over distance as well as interference from external signal generating equipment. The proliferation of electronic commerce, communications and broadband entertainment has resulted in the digitization and accumulation of enormous amounts of data. Copper continues to be the primary medium used for delivering signals to the home and desktop because it is in place.

The need to quickly transmit, store and retrieve large blocks of data across networks in a cost-effective manner has increasingly required enterprises and service providers to use fiber optic technology to replace copper for the transmission of data at higher speeds over greater distances and to expand the capacity, or bandwidth, of their networks.

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The data, audio, video, and VoIP applications and services using a network became actual, achieving real arrival of the broadband society. The Internet has brought change to retail buying and business life. The role of network has become increasingly important. Larger capacity and more efficient network is required.

The optical network is spreading rapidly to core networks, to an enterprise network, to the access network, and to a telecom network. Datacom networks include storage and server networks, and the high-performance, high-efficiency and high-reliable optical components technology supports all these different types of networks.

Optical components are leading-edge optical modules and optical devices that support the broadband, ubiquitous network. They contribute to consumer activities, social networking, and business by providing solutions for optical network construction.

A PON is a point-to-multipoint, fiber to the premises network architecture in which unpowered optical splitters are used to enable a single optical fiber to serve multiple premises, typically 32-128. A PON consists of an Optical Line Terminal, or OLT, at the service provider's central office and a number of Optical Network Units, or ONUs, near end users. A PON configuration reduces the amount of fiber and central office equipment required.

The optical component markets are anticipated to expand to provide network capability that supports broader reach of information and productivity improvements for the enterprise. According to Susan Eustis, lead author of the study, "innovation drives changes in optical component technology, stimulating growth in every industry. Innovation depends on implementation of automated business process in every instance. Optical transceiver components and modules are used to build out broadband networks. In short order, the network speeds have increased from one gigahertz and below to 10 gigahertz, moving rapidly to 40 gigahertz for most broadband, and almost simultaneously to 100 gigahertz for highly utilized backbone transmission situations."

This has caused enormous disruption in the optical component markets as the technologies that work at one speed generally are not suitable for the next step up in speed. Market consolidation of the optical component business is proceeding apace. Acquisitions and partnerships form the base for market consolidation. As the Finisar/Optium merger leverages market advantage, many mergers have occurred and more mergers are likely to occur. Pressure for consolidation is likely to continue.

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The merger of Finisar (FNSR) and Optium (OPTM) puts these companies in a strong position because it implements consolidation of the market that increases unit volumes, decreases prices per component, and stimulates overall market growth because components are more affordable and can be used in more situations.

Optical components markets at $3.8 billion in 2008 are expected to reach $11.3 billion by 2015. Demand for broadband Internet connectivity drives optical components markets. The markets are comprised of transceivers, optical amplifiers, passive, and active optical component technology.

Companies Profiled

Market Leaders

Finisar
JDSU
Oclaro
Sumitomo
Fujitsu
Furukawa Electric
GigOptix
Oplink
Opnext
Triquint
ZTE
Avago Technologies
Emcore

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Optical Component Market Participants

Selected Optical Components Company Profiles

3S Photonics
Accelink
ACON
Advanced Photonix
Aegis Lightwave
Agilent Technologies
Alcatel Lucent
API Nanotronics
ASE Group - Korea
Broadcom
Electrum Laboratory
Finisar / Optimum
Foxconn Technology Group / Ambit Microsystems
Merger of Helix and GigOptix,
Merger of Lumera and GigOptix
Huawei
Ignis
Ikanos Communications
JDSU Acquires Network Tools Business from Finisar
Luxtera
Luxtera CMOS Project with Sun Microsystems and DARPA
MRV Communications / Source Photonics
MRV Communications / Source Photonics Brand for Luminent and Fiberxon
NeoPhotonics
Newport Corporation & Spectra-Physics
Occam
Oclaro: Bookham and Avanex Merge Into a New Market Leader
Oclaro New Focus Business Transferred to Newport Corporation
Opnext / StrataLight
Photon-X, LLC
Princeton Optronics
Rohm Semiconductor / Oki
Rusnano

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Santec
Sigma Blu-Ray & HDTV Opportunities
Sigma Revenue
Sumitomo Electric Industries / SEI
Syntune
Tessera
Triquint
Tyco Electronics
Unisem
Vitesse
Yoshikawa Kogyo
Zhone Technologies
ZTE

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Optical Component Market Shares, Strategies, and Forecasts, Worldwide, 2009-2015

REPORT METHODOLOGY

THIS IS THE 417 TH REPORT IN A SERIES OF MARKET RESEARCH REPORTS THAT PROVIDE FORECASTS IN COMMUNICATIONS, TELECOMMUNICATIONS, THE INTERNET, COMPUTER, SOFTWARE, TELEPHONE EQUIPMENT, HEALTH EQUIPMENT, AND ENERGY. THE PROJECT LEADERS TAKE DIRECT RESPONSIBILITY FOR WRITING AND PREPARING EACH REPORT. THEY HAVE SIGNIFICANT EXPERIENCE PREPARING INDUSTRY STUDIES. FORECASTS ARE BASED ON PRIMARY RESEARCH AND PROPRIETARY DATA BASES. FORECASTS REFLECT ANALYSIS OF THE MARKET TRENDS IN THE SEGMENT AND RELATED SEGMENTS. UNIT AND DOLLAR SHIPMENTS ARE ANALYZED THROUGH CONSIDERATION OF DOLLAR VOLUME OF EACH MARKET PARTICIPANT IN THE SEGMENT. INSTALLED BASE ANALYSIS AND UNIT ANALYSIS IS BASED ON INTERVIEWS AND AN INFORMATION SEARCH. MARKET SHARE ANALYSIS INCLUDES CONVERSATIONS WITH KEY CUSTOMERS OF PRODUCTS, INDUSTRY SEGMENT LEADERS, MARKETING DIRECTORS, DISTRIBUTORS, LEADING MARKET PARTICIPANTS, OPINION LEADERS, AND COMPANIES SEEKING TO DEVELOP MEASURABLE MARKET SHARE. OVER 200 IN DEPTH INTERVIEWS ARE CONDUCTED FOR EACH REPORT WITH A BROAD RANGE OF KEY PARTICIPANTS AND INDUSTRY LEADERS IN THE MARKET SEGMENT. WE ESTABLISH ACCURATE MARKET FORECASTS BASED ON ECONOMIC AND MARKET CONDITIONS AS A BASE. USE INPUT/OUTPUT RATIOS, FLOW CHARTS, AND OTHER ECONOMIC METHODS TO QUANTIFY DATA. USE IN-HOUSE ANALYSTS WHO MEET STRINGENT QUALITY STANDARDS. INTERVIEWING KEY INDUSTRY PARTICIPANTS, EXPERTS AND END-USERS IS A CENTRAL PART OF THE STUDY. OUR RESEARCH INCLUDES ACCESS TO LARGE PROPRIETARY DATABASES. LITERATURE SEARCH INCLUDES ANALYSIS OF TRADE PUBLICATIONS, GOVERNMENT REPORTS, AND CORPORATE LITERATURE.

FINDINGS AND CONCLUSIONS OF THIS REPORT ARE BASED ON INFORMATION GATHERED FROM INDUSTRY SOURCES, INCLUDING MANUFACTURERS, DISTRIBUTORS, PARTNERS, OPINION LEADERS, AND USERS. INTERVIEW DATA WAS COMBINED WITH INFORMATION GATHERED THROUGH AN EXTENSIVE REVIEW OF INTERNET AND PRINTED SOURCES SUCH AS TRADE PUBLICATIONS, TRADE ASSOCIATIONS, COMPANY LITERATURE, AND ONLINE DATABASES. THE PROJECTIONS CONTAINED IN THIS REPORT ARE CHECKED FROM TOP DOWN AND BOTTOM UP ANALYSIS TO BE SURE THERE IS CONGRUENCE FROM THAT PERSPECTIVE.

THE BASE YEAR FOR ANALYSIS AND PROJECTION IS 2008. WITH 2008 AND SEVERAL YEARS PRIOR TO THAT AS A BASELINE, MARKET PROJECTIONS WERE DEVELOPED FOR 2009 THROUGH 2015. THESE PROJECTIONS ARE BASED ON A COMBINATION OF A CONSENSUS AMONG THE PRIMARY CONTACTS COMBINED WITH UNDERSTANDING OF THE KEY MARKET DRIVERS AND THEIR IMPACT FROM A HISTORICAL AND ANALYTICAL PERSPECTIVE. THE ANALYTICAL METHODOLOGIES USED TO GENERATE THE MARKET ESTIMATES ARE BASED ON PENETRATION ANALYSES, SIMILAR MARKET ANALYSES, AND DELTA CALCULATIONS TO SUPPLEMENT INDEPENDENT AND DEPENDENT VARIABLE ANALYSIS.

YOU MUST HAVE THIS STUDY

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ABOUT THE COMPANY

WINTERGREEN RESEARCH, HAS A UNIQUE RESEARCH STRATEGY THAT RELATES TO IDENTIFYING MARKET TRENDS THROUGH READING AND INTERVIEWING OPINION LEADERS. BY READING THE ELECTRONIC EQUIVALENT OF 40 FEET OF PAPER, WINTERGREEN RESEARCH SENIOR ANALYSTS CAN LEARN A LOT MORE ABOUT MARKETS, A LOT FASTER THAN CAN BE LEARNED THROUGH EXPENSIVE SURVEYS AND FOCUS GROUPS. THINKING ABOUT MARKET TRENDS IS A HIGH PRIORITY AT WINTERGREEN RESEARCH. AS WITH ALL RESEARCH, THE VALUE PROPOSITION FOR COMPETITIVE ANALYSIS COMES FROM INTELLECTUAL INPUT.

IT IS A LUXURY REALLY, AVAILABLE TO ONLY A VERY FEW PEOPLE, TO BE ABLE TO GATHER INFORMATION, LOTS OF INFORMATION FROM READING MASSIVE AMOUNTS OF CONTENT, AND THEN TRYING TO MAKE SENSE OF THAT CONTENT. THE ABILITY TO THINK ABOUT MARKET TRENDS IS ENHANCED BY DOING IT OVER AND OVER FOR MANY DIFFERENT MARKETS. THAT IS WHAT WINTERGREEN RESEARCH IS ALL ABOUT: READING AND THINKING IS AN ESSENTIAL ASPECT OF COMPETITIVE ANALYSIS. TALKING TO OPINION LEADERS IS THE THIRD ESSENTIAL ASPECT OF PRODUCING GOOD, RELIABLE DATA.

WINTERGREEN RESEARCH, FOUNDED IN 1985, PROVIDES STRATEGIC MARKET ASSESSMENTS IN TELECOMMUNICATIONS, COMMUNICATIONS EQUIPMENT, HEALTH CARE, INTERNET AND ADVANCED COMPUTER TECHNOLOGY. INDUSTRY REPORTS FOCUS ON OPPORTUNITIES THAT EXPAND EXISTING MARKETS OR DEVELOP MAJOR NEW MARKETS. THE REPORTS ASSESS NEW PRODUCT AND SERVICE POSITIONING STRATEGIES, NEW AND EVOLVING TECHNOLOGIES, AND TECHNOLOGICAL IMPACT ON PRODUCTS, SERVICES, AND MARKETS. MARKET SHARES ARE PROVIDED. LEADING MARKET PARTICIPANTS ARE PROFILED, AND THEIR MARKETING STRATEGIES, ACQUISITIONS, AND STRATEGIC ALLIANCES ARE DISCUSSED. THE PRINCIPALS OF WINTERGREEN RESEARCH HAVE BEEN INVOLVED IN ANALYSIS AND FORECASTING OF INTERNATIONAL BUSINESS OPPORTUNITIES IN TELECOMMUNICATIONS AND ADVANCED COMPUTER TECHNOLOGY MARKETS FOR OVER 30 YEARS.

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ABOUT THE PRINCIPAL AUTHORS

ELLEN T. CURTISS, TECHNICAL DIRECTOR, CO-FOUNDER OF WINTERGREEN RESEARCH, CONDUCTS STRATEGIC AND MARKET ASSESSMENTS IN TECHNOLOGY-BASED INDUSTRIES. PREVIOUSLY SHE WAS A MEMBER OF THE STAFF OF ARTHUR D. LITTLE, INC., FOR 23 YEARS, MOST RECENTLY AS VICE PRESIDENT OF ARTHUR D. LITTLE DECISION RESOURCES, SPECIALIZING IN STRATEGIC PLANNING AND MARKET DEVELOPMENT SERVICES. SHE IS A GRADUATE OF BOSTON UNIVERSITY AND THE PROGRAM FOR MANAGEMENT DEVELOPMENT AT HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION. SHE IS THE AUTHOR OF RECENT STUDIES ON WORLDWIDE TELECOMMUNICATIONS MARKETS, THE TOP TEN INTERNET EQUIPMENT COMPANIES, THE TOP TEN CONTRACT MANUFACTURING COMPANIES, AND THE TOP TEN TELECOMMUNICATIONS MARKET ANALYSIS AND FORECASTS.

SUSAN EUSTIS, PRESIDENT, CO-FOUNDER OF WINTERGREEN RESEARCH, HAS DONE RESEARCH IN COMMUNICATIONS AND COMPUTER MARKETS AND APPLICATIONS. SHE HOLDS SEVERAL PATENTS IN MICROCOMPUTING AND PARALLEL PROCESSING. SHE HAS THE ORIGINAL PATENTS IN ELECTRONIC VOTING MACHINES. SHE HAS NEW PATENT APPLICATIONS IN FORMAT VARYING, MULITPROCESSING, AND ELECTRONIC VOTING. SHE IS THE AUTHOR OF RECENT STUDIES OF THE SERVICES ORIENTED ARCHITECTURE SOA, MID IR SENSORS, CONTENT MANAGEMENT, MID SIZE BUSINESS MIDDLEWARE, WORLDWIDE ENERGY MARKETS, SOLAR UTILITY MARKETS, SOLAR TECHNOLOGY MARKETS, THIN FILM BATTERY MARKETS, WEBCAM MARKETS, REGIONAL BELL OPERATING COMPANIES' MARKETING STRATEGIES, INTERNET EQUIPMENT, BIOMETRICS, A STUDY OF INTERNET EQUIPMENT, WORLDWIDE TELECOMMUNICATIONS EQUIPMENT, TOP TEN TELECOMMUNICATIONS, DIGITAL LOOP CARRIER, WEB HOSTING, WEB SERVICES, NANOTECHNOLOGY, AND APPLICATION INTEGRATION MARKETS. MS. EUSTIS IS A GRADUATE OF BARNARD COLLEGE.

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