

WINTERGREEN RESEARCH, INC.

**Programmable Logic ICs Market Shares and Forecasts,
Worldwide, 2010 to 2016**

**Broadband Improves Network Functionality, Spurs
Programmable Logic Integrated Circuit Growth**



Picture by Susie Eustis

MOUNTAINS OF OPPORTUNITY

**WinterGreen Research, Inc.
Lexington, Massachusetts**

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CHECK OUT THESE KEY TOPICS

Programmable Logic ICs
High End Programmable Logic ICs
Ultra Low Power Programmable Logic ICs
Mixed Signal Programmable Logic ICs
Programmable Logic Device (PLD) Market Growth
Volume Point PLDs
Cost Effective PLDs
ASICs
Cellphones
Internet
IP TV
Networking
Strategy
Broadband Opportunity
Ethernet Strategy
Net neutrality
Broadband Market Shares
Broadband Growth Strategy

Broadband Programmable Logic IC Applications

OPPORTUNITY ABOUNDS

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Programmable Logic ICs Market Shares and Forecasts, Worldwide, 2010-2016

LEXINGTON, Massachusetts (September 22, 2010) – WinterGreen Research announces that it has a new study on Programmable Logic ICs Market Shares and Forecasts, Worldwide, 2010-2016. The 2010 study has 287 pages, 148 tables and figures.

Programmable logic vendors are able to address an increasing number of ASIC and ASSP opportunities. As ASICs and ASSPs are displaced by FPGAs a significant market opportunity opens.

Competitive factors in the logic IC industry include product pricing, time-to-market, product performance, reliability, quality, power consumption and density, and field upgradability. Portable electronics are experiencing rapid growth. Segments include consumer, medical, industrial, and military.

Programmable logic IC markets are driven by the benefits of added convenience and increased productivity. Portable electronic design is becoming more challenging as product revisions require more advanced feature function packages. Improved performance is needed to achieve competitive advantage.

Programmable logic ICs decrease power consumption. Demand for longer battery life is increasing. Demands for improvements in the portable electronics markets include need for low active and static power consumption, small footprint packages, design security, higher integration, and live at power-up. The principal competitive factors in the PLD market include demand for broadband applications and broadband enabled devices. :

Altera Stratix IV family has been the fastest ramping FPGA product in the history of the PLD industry. Customer familiarity with existing vendors and entrenched products are compelling market forces. Vendors position to compete favorably with respect to these factors. Proprietary device architecture and installed base of software development systems provides competitive advantage. Due to unique architectural innovation and advanced technologies, product families provide varying degrees of competitive advantage.

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Market leaders provide greater functionality and lower power consumption at a lower price for any given density compared to the predecessor products. Newer product features such as multi-gigabit transceivers and programmable power technology have enhanced our design win rate relative to other PLD vendors.

New product families are positioned to compete favorably against ASICs and ASSPs. Programmable logic ICs are positioned to compete against other types of chips such as microcontrollers, microprocessors, and digital signal processors.

Designers can add functionality of chips. Features can be added to PLDs using pre-built and pre-verified IP cores. An IP core is typically offered in either a hard or soft form. A hard IP core is embedded into the actual circuitry of chips. A soft IP core is a licensed design file that customers incorporate into their design and program onto the PLD.

By incorporating more functionality and logic capacity on a programmable chip while providing the necessary design tools and IP cores to design a reliable system, programmable logic vendors can enhance the advantages of PLDs over competing solutions.

As is true of the semiconductor industry as a whole, the digital logic segment and the PLD sub-segment are intensely competitive, and each successive product generation is characterized by rapid technological change and price decline.

Programmable logic devices (PLDs) are semiconductor logic blocks that can be programmed after they are manufactured. The most common PLDs are Field-Programmable Gate Array (FPGAs).

Programmable logic integrated circuit markets are poised to achieve significant growth because the programmable units have an opportunity to achieve ASIC and ASSC market segment penetration. With increasingly shortened product cycles and higher costs to develop a component, the programmable logic components become an attractive alternative to the more rigid semiconductor devices.

The “process technology gap” between PLDs and ASIC and ASSP alternatives will increase over time and, when combined with the traditional PLD advantages of greater flexibility, lower development cost, and faster time-to-market, should drive the accelerated adoption of PLDs.

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A decline in programmable logic semiconductor product selling prices has increased the opportunity for growth in the market with programmable units becoming more competitive with the ASIC devices as the total costs of development is considered. As the selling prices of products have decreased over time, vendors have been able to offset the selling price decreases by reducing manufacturing costs, improving yields, and increasing unit sales.

Ongoing efforts to keep pace with the decline in prices is a significant market factor. Revenues and gross margins are a matter of constant concern in the industry. International sales account for a majority of total sales

Markets for programmable logic integrated circuit ICs at \$3.5 billion in 2009 are anticipated to reach \$9.6 billion by 2016, due in part to the demand for flexible devices to meet Internet and broadband opportunities.

Broadband market driving forces are articulated in part through the Internet on Ethernet networks. There are 2.5 billion Internet users. Wireless handsets are connecting to the broadband networks. There are 157 million broadband wireless handset users, out of a total 4.7 billion total wireless handset users. Cell phones have changed the world forever, they are inexpensive, affordable to almost every person on earth. Broadband is bringing the Internet to cell phones. Programmable logic ICs support broadband roll out.

According to Susan Eustis, President of WinterGreen Research, "Worldwide broadband markets are poised to achieve significant growth as broadband finds new uses and leverages existing ones. Costs of broadband devices are expected to decrease rapidly in response to the continuing economies of scale. Markets for Programmable logic ICs are compelling due to their innovation and flexibility"

Keywords: Xilinx, Altera, Programmable Logic ICs, High End Programmable Logic ICs, Ultra Low Power Programmable Logic ICs, Mixed Signal Programmable Logic ICs, Programmable Logic Device (PLD) Market Growth, Volume Point PLDs ,Cost Effective PLDs, ASICs, Cellphones, Internet, IP TV, Networking, Strategy, Broadband Opportunity, Ethernet Strategy, Net neutrality, Broadband Market Shares, Broadband Growth Strategy, Broadband Programmable Logic IC Applications, Cisco,Qualcomm,Broadcom, broadband, CDMA routers switches, telepresence, 3G phones,cellphones, Internet, IP TV, networking, strategy, CDMA opportunity,Ethernet strategy, http://wintergreenresearch.com/reports/Programable_Logic_ICs.htm

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Companies Profiled

Market Leaders

5. PROGRAMMABLE LOGIC IC COMPANY PROFILES

5-1

Xilinx

Altera

Market Participants

Lattice Semiconductor

QuickLogic

Actel

Programmable Logic IC Market Shares and Forecasts, Worldwide, 2010 to 2016

Report Methodology

This is the 455th report in a series of primary market research reports that provide forecasts in communications, telecommunications, the Internet, computer, software, telephone equipment, health equipment, and energy. Automated process and significant growth potential are a priorities in topic selection. 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.

The primary research is conducted by talking to customers, distributors and companies. The survey data is not enough to make accurate assessment of market size, so WinterGreen Research looks at the value of shipments and the average price to achieve market assessments. Our track record in achieving accuracy is unsurpassed in the industry. We are known for being able to develop accurate market shares and projections. This is our specialty.

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The analyst process is concentrated on getting good market numbers. This process involves looking at the markets from several different perspectives, including vendor shipments. The interview process is an essential aspect as well. We do have a lot of granular analysis of the different shipments by vendor in the study and addenda prepared after the study was published if that is appropriate.

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 2009. With 2009 and several years prior to that as a baseline, market projections were developed for 2010 through 2016. These projections are based on a combination of a consensus among the opinion leader contacts interviewed 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. All analyses are displaying selected descriptions of products and services.

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This research includes referencde to an ROI model that is part of a series that provides IT systems financial planners access to information that supports analysis of all the numbers that impact management of a product launch or large and complex data center. The methodology used in the models relates to having a sophisticated analytical technique for understanding the impact of workload on processor consumption and cost.

WinterGreen Research has looked at the metrics and independent research to develop assumptions that reflect the actual anticipated usage and cost of systems. Comparative analyses reflect the input of these values into models.

The variables and assumptions provided in the market research study and the ROI models are based on extensive experience in providing research to large enterprise organizations and data centers. The ROI models have lists of servers from different manufacturers, Systems z models from IBM, and labor costs by category around the world. This information has been developed from WinterGreen research proprietary data bases constructed as a result of preparing market research studies that address the software, energy, healthcare, telecommunicatons, and hardware businesses.

YOU MUST HAVE THIS STUDY

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Programmable Logic IC Market Shares, Strategies, and Forecasts, Worldwide, 2010-2016

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Programmable Logic IC Technology

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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

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