



## RTL Market Trends 2015 Opportunities in RTL

[www.garysmithEDA.com](http://www.garysmithEDA.com)

## RTL Market Trends 2015 Opportunities in RTL

### EXECUTIVE SUMMARY

2014 marked the first year of really solid growth for electronic system level (**ESL**) tools, after years of promise as the next big thing in EDA. It seems the tide is finally turning and ESL technologies may now be experiencing their long-awaited user adoption in earnest. For the first time, ESL growth was higher than that of either the downstream CAE market or the EDA market as a whole.

The register transfer level (**RTL**) tools market also had a very good 2014. Much of the strong growth in RTL can be attributed to the addition of semiconductor design intellectual property (IP) as a sub-application within our RTL market segmentation. Continual, steady growth has been evident even for the traditional RTL and gate-level tools over the past five years, confirming that this part of the market is a mainstay for EDA user investment.

**ICCAD** was another well-performing market in 2014. New silicon technologies, coupled with migrations to ever-smaller semiconductor manufacturing process nodes, necessitate high-performing CAD/CAM tools. In fact, rapid advancement on the manufacturing technology front may force EDA vendors to step up their game and accelerate innovation for IC CAD/CAM design tools.

While **PCB** design tools are not as high-growth a market segment as the others, they do tie directly into the future of system design automation (SDA). PCB is the linkage point between electronics design and mechanical design of end products. Especially factoring in the design challenges of new semiconductor device packages, cable and wire harness design, and new materials introductions, the role of PCB design tools will be significant in the emergence of an SDA methodology. This should afford EDA vendors new opportunities beyond the standard PCB layout and analysis areas.

### Moving Toward a System Level Design Future

Now that we are entering the world of System Level Design, we need to look at the market, and therefore the numbers, from other perspectives. System design methodologies and business requirements are often developed within vertical industry markets. There is no single, overarching systems market for all types of end products; fighter jets and cell phone have vastly different design challenges, after all. Therefore, it makes sense to present Market Trends data in an alternate way also, to correspond to this vertical industry approach.

These types of second-cut data reports are usually created on an on-demand basis. With frequent demand, though, a second-cut report may become a standard report. The Analog Market Trends report is a prime example of this. As the system level design methodology begins to take shape, we may extend our reporting into multiple industry reports, depending on demand.

## INTRODUCTION

The “RTL and Below” market turned in decent growth in 2014, growing slightly under 8 percent to reach \$3,976 million in 2014. Readers should note that this figure is much greater than what we have reported in previous years. We have now added a new sub-application in RTL – intellectual property (IP). Over the past five years, the RTL and Below market has been continually growing, though always in the single digits. It is clear from our numbers that users have continued to put steady investment into RTL and gate-level tools for the past five years.

## OVERVIEW

This report comprises the “RTL and Below” section of the EDA Market Trends. “RTL and Below” includes RTL (register transfer level), gate level and transistor level design tools. These tools, along with ESL (electronic system level) tools, make up the CAE market for EDA tools. In this report, we will discuss market share, trends, and forecasts for the “RTL and Below” sub-applications that have the most impact on the overall EDA landscape.

**CLICK HERE TO PURCHASE**

**RTL Market Trends 2015:  
Opportunities in RTL**



**TABLE OF CONTENTS**

Page	Title
1	Introduction 2014 RTL and Below Market Overview
2	Sub-application Changes in RTL and Below for 2014 Opportunities in RTL
4	RTL Design
5	RTL Simulation Mixed-language Simulation
6	Mixed-signal Simulation
7	Formal Verification
8	Formal Analysis
9	Hardware/Software Co-Verification RTL Synthesis
10	DFT
11	ATPG
12	Scan Chain Insertion BIST
14	Fault Simulation Rapid Prototyping
15	Design Analysis Power Analysis
16	Signal-Integrity and Timing Analysis
17	Intellectual Property
20	The Gate Level Methodology Analog Simulation
21	RF Design & Simulation
23	Miscellaneous Enterprise Tools
24	Interoperability Tools
25	Design Libraries

**TABLE OF FIGURES**

Page	Title
3	Figure R-1: RTL Revenue by Sub-application 2014
4	Figure R-2: RTL Design Market Share 2014 Figure R-3: RTL Design Forecast 2015
5	Figure R-4: Mixed-language Simulation Market Share 2014
6	Figure R-5: Mixed-language Simulation Forecast 2015 Figure R-6: Mixed-signal Simulation Market Share 2014
7	Figure R-7: Mixed-signal Simulation Forecast 2015 Figure R-8: Formal Verification Market Share 2014
8	Figure R-9: Formal Verification Forecast 2015 Figure R-10: Formal Analysis Market Share 2014
9	Figure R-11: Formal Analysis Forecast 2015
10	Figure R-12: RTL Synthesis Market Share 2014 Figure R-13: RTL Synthesis Forecast 2015
11	Figure R-14: ATPG Market Share 2014 Figure R-15: ATPG Forecast 2015
12	Figure R-16: SCAN Chain Insertion Market Share 2014 Figure R-17: SCAN Chain Insertion Forecast 2015
13	Figure R-18: BIST Market Share 2014 Figure R-19: BIST Forecast 2015
14	Figure R-20: RTL Rapid Prototyping Market Share 2014 Figure R-21: RTL Rapid Rapid Prototyping Forecast 2015
16	Figure R-22: RTL Power Analysis Market Share 2014 Figure R-23: RTL Power Analysis Forecast 2015

**TABLE OF FIGURES (CONTINUED)**

<b>Page</b>	<b>Title</b>
17 .....	<b>Figure R-24:</b> Timing and Signal-Integrity Market Share 2014 <b>Figure R-25:</b> Timing and Signal-Integrity Forecast 2015
18 .....	<b>Figure R-26:</b> Silicon IP Market Share 2014 <b>Figure R-27:</b> Software IP Market Share 2014
19 .....	<b>Figure R-28:</b> Verification IP Market Share 2014 <b>Figure R-29:</b> Silicon IP Market Forecast 2015 <b>Figure R-30:</b> Software IP Market Forecast 2015
20 .....	<b>Figure R-31:</b> Verification IP Market Forecast 2015
21 .....	<b>Figure R-32:</b> Analog Simulation Market Share 2014 <b>Figure R-33:</b> Analog Simulation Forecast 2015
22 .....	<b>Figure R-34:</b> RF Design & Simulation Market Share 2014 <b>Figure R-35:</b> RF Design & Simulation Forecast 2015
24 .....	<b>Figure R-36:</b> Enterprise Tools Market Share 2014 <b>Figure R-37:</b> Enterprise Tools Forecast 2015
25 .....	<b>Figure R-38:</b> Interoperability Tools Market Share 2014 <b>Figure R-39:</b> Interoperability Tools Forecast 2015
26 .....	<b>Figure R-40:</b> Design Libraries Market Share 2014 <b>Figure R-41:</b> Design Libraries Forecast 2015
27 .....	<b>Appendix A:</b> RTL Sub-application Forecast 2015

**CLICK HERE TO PURCHASE**

RTL Market Trends 2015:  
Opportunities in RTL

