

# **North America Photonic Design Automation Market Forecast to 2030 - Regional Analysis - by Component (Solution and Service), Deployment (On-Premise and Cloud), Organization Size (SMEs and Large Enterprises), and Application (Academic Research and Industrial Research & Manufacturing)**

<https://marketpublishers.com/r/NAF92A06F905EN.html>

Date: July 2024

Pages: 85

Price: US\$ 2,485.00 (Single User License)

ID: NAF92A06F905EN

## **Abstracts**

The North America photonic design automation market was valued at US\$ 572.79 million in 2022 and is expected to reach US\$ 1,504.05 million by 2030; it is estimated to register at a CAGR of 12.8% from 2022 to 2030.

### **Integration of Photonics in Electronic Design Automation (EDA) Tools Fuels North America Photonic Design Automation Market**

The integration of photonics into electronic design automation (EDA) tools is a significant trend in the North America photonic design automation market. Established EDA vendors recognize the potential of the emerging photonics market and incorporate photonics-specific features and capabilities into their existing tools. This integration enables designers to seamlessly incorporate photonics components into their designs, streamlining the design process and optimizing the performance and functionality of photonic devices. By integrating photonics into EDA tools, designers can leverage familiar design environments and workflows, reducing the learning curve associated with specialized photonic design tools. The integration of photonics into EDA tools also facilitates the convergence of electronics and photonics, enabling the development of integrated electronic-photonic circuits. This convergence is crucial for the advancement of technologies such as silicon photonics, where the sharing of tools, processes, and simulation models between photonics and IC design accelerates the development of

photonic design automation. Overall, the integration of photonics into EDA tools reflects the industry's recognition of the growing importance of photonics and the need for efficient design processes and optimization techniques in the photonic field. It enables designers to harness the potential of photonics and seamlessly incorporate it into their electronic designs.

## North America Photonic Design Automation Market Overview

The market in North America is segmented into the US and Canada. North America is a key player in the global photonic design automation market, with a strong presence of leading technology companies, research institutions, and a robust manufacturing ecosystem. This region has witnessed significant growth and adoption of photonic design automation technologies across various industries. The rising need for high-speed and high-bandwidth communication networks is a key driver for the photonic design automation market in North America. The strong collaboration between academia and industry in the region stimulates the advancement of cutting-edge algorithms, simulation tools, and design methodologies, ensuring that companies remain at the forefront of technological progress. Photonic design automation tools play a crucial role in designing and optimizing these devices, ensuring their performance and reliability.

Moreover, North America has a thriving research and development landscape, with renowned universities and research institutions dedicated to photonics and related fields. These institutions actively collaborate with industry players to develop cutting-edge technologies and drive innovation in the photonic design automation market. The development of advanced algorithms, simulation tools, and design methodologies is facilitated by robust academic-industry partnerships in the region, allowing companies to remain at the cutting edge of technological advancements. In terms of market players, North America is home to several major companies that offer photonic design automation solutions. These companies leverage their expertise in software development, semiconductor design, and photonics to provide comprehensive design automation tools and services. The North America market exhibits a dynamic and innovative business environment, comprising a blend of established industry leaders and emerging startups. Furthermore, the region's emphasis on research and development in leading-edge technologies such as the Internet of Things (IoT), machine learning (ML), and artificial intelligence (AI) contributes to its competitive advantage. The integration of these advanced technologies with photonic design automation empowers the industry with enhanced design capabilities, optimization, and automation of the design process.

## North America Photonic Design Automation Market Revenue and Forecast to 2030 (US\$ Million)

### North America Photonic Design Automation Market Segmentation

The North America photonic design automation market is segmented based on component, deployment, organization size, application, and country.

Based on component, the North America photonic design automation market photonic design automation market is bifurcated into solution and service. The solution segment held a larger share in 2022.

In terms of deployment, the North America photonic design automation market photonic design automation market is bifurcated into on-premise and cloud. The on-premise segment held a larger share in 2022.

By organization size, the North America photonic design automation market photonic design automation market is bifurcated into SMEs and large enterprises. The large enterprises segment held a larger share in 2022.

In terms of application, the North America photonic design automation market photonic design automation market is bifurcated into academic research and industrial research & manufacturing. The industrial research & manufacturing segment held a larger share in 2022.

Based on country, the North America photonic design automation market is categorized into the US and Canada. The US dominated the North America photonic design automation market in 2022.

Ansys Inc, VPIphotonics GmbH, Optiwave Systems Inc, Luceda Photonics, Cadence Design Systems Inc, Siemens AG, Synopsys Inc, AIM Photonics Inc, and SystemLab Inc are some of the leading companies operating in the North America photonic design automation market.

## Contents

### **1. INTRODUCTION**

- 1.1 The Insight Partners Research Report Guidance
- 1.2 Market Segmentation

### **2. EXECUTIVE SUMMARY**

- 2.1 Key Insights
- 2.2 Market Attractiveness

### **3. RESEARCH METHODOLOGY**

- 3.1 Coverage
- 3.2 Secondary Research
- 3.3 Primary Research

### **4. NORTH AMERICA PHOTONIC DESIGN AUTOMATION MARKET LANDSCAPE**

- 4.1 Overview
- 4.2 Ecosystem Analysis
  - 4.2.1 List of Vendors in the Value Chain:

### **5. NORTH AMERICA PHOTONIC DESIGN AUTOMATION MARKET - KEY MARKET DYNAMICS**

- 5.1 North America Photonic Design Automation Market - Key Market Dynamics
- 5.2 Market Drivers
  - 5.2.1 Growing Demand for Automation
  - 5.2.2 Increasing Need for Efficiency and Accuracy
- 5.3 Market Restraints
  - 5.3.1 Lack of Awareness Regarding Benefits and Capabilities of Photonic Design Automation
- 5.4 Market Opportunities
  - 5.4.1 Advancements in Photonic Devices
  - 5.4.2 Emphasis on High Performance and Environmentally Sustainable Solutions
- 5.5 Future Trends
  - 5.5.1 Integration of Photonics in Electronic Design Automation (EDA) Tools

5.5.2 Advancements in Compact Modelling and Simulation Tools  
5.6 Impact of Drivers and Restraints:

## **6. PHOTONIC DESIGN AUTOMATION MARKET - NORTH AMERICA MARKET ANALYSIS**

6.1 North America Photonic Design Automation Market Revenue (US\$ Million), 2022 - 2030

6.2 North America Photonic Design Automation Market Forecast and Analysis

## **7. NORTH AMERICA PHOTONIC DESIGN AUTOMATION MARKET ANALYSIS - COMPONENT**

7.1 Solution

7.1.1 Overview

7.1.2 Solution Market, Revenue and Forecast to 2030 (US\$ Million)

7.2 Service

7.2.1 Overview

7.2.2 Service Market, Revenue and Forecast to 2030 (US\$ Million)

## **8. NORTH AMERICA PHOTONIC DESIGN AUTOMATION MARKET ANALYSIS - DEPLOYMENT**

8.1 On-Premise

8.1.1 Overview

8.1.2 On-Premise Market, Revenue and Forecast to 2030 (US\$ Million)

8.2 Cloud

8.2.1 Overview

8.2.2 Cloud Market, Revenue and Forecast to 2030 (US\$ Million)

## **9. NORTH AMERICA PHOTONIC DESIGN AUTOMATION MARKET ANALYSIS - ORGANIZATION SIZE**

9.1 SMEs

9.1.1 Overview

9.1.2 SMEs Market, Revenue and Forecast to 2030 (US\$ Million)

9.2 Large Enterprises

9.2.1 Overview

9.2.2 Large Enterprises Market, Revenue and Forecast to 2030 (US\$ Million)

## **10. NORTH AMERICA PHOTONIC DESIGN AUTOMATION MARKET ANALYSIS - APPLICATION**

### **10.1 Academic Research**

#### **10.1.1 Overview**

#### **10.1.2 Academic Research Market, Revenue and Forecast to 2030 (US\$ Million)**

### **10.2 Industrial Research & Manufacturing**

#### **10.2.1 Overview**

#### **10.2.2 Industrial Research & Manufacturing Market, Revenue and Forecast to 2030 (US\$ Million)**

## **11. NORTH AMERICA PHOTONIC DESIGN AUTOMATION MARKET - COUNTRY ANALYSIS**

### **11.1 North America**

#### **11.1.1 North America Photonic Design Automation Market Overview**

#### **11.1.2 North America Photonic Design Automation Market Revenue and Forecasts and Analysis - By Country**

##### **11.1.2.1 North America Photonic Design Automation Market Revenue and Forecasts and Analysis - By Country**

##### **11.1.2.2 US Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Mn)**

###### **11.1.2.2.1 US Photonic Design Automation Market Breakdown, by Component**

###### **11.1.2.2.2 US Photonic Design Automation Market Breakdown, by Deployment**

###### **11.1.2.2.3 US Photonic Design Automation Market Breakdown, by Organization Size**

###### **11.1.2.2.4 US Photonic Design Automation Market Breakdown, by Application**

##### **11.1.2.3 Canada Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Mn)**

###### **11.1.2.3.1 Canada Photonic Design Automation Market Breakdown, by Component**

###### **11.1.2.3.2 Canada Photonic Design Automation Market Breakdown, by Deployment**

###### **11.1.2.3.3 Canada Photonic Design Automation Market Breakdown, by Organization Size**

###### **11.1.2.3.4 Canada Photonic Design Automation Market Breakdown, by Application**

## **12. INDUSTRY LANDSCAPE**

### **12.1 Overview**

- 12.2 Market Initiative
- 12.2 New Product Development
- 12.3 Merger and Acquisition

## **13. COMPANY PROFILES**

- 13.1 Ansys Inc
  - 13.1.1 Key Facts
  - 13.1.2 Business Description
  - 13.1.3 Products and Services
  - 13.1.4 Financial Overview
  - 13.1.5 SWOT Analysis
  - 13.1.6 Key Developments
- 13.2 VPIphotonics GmbH
  - 13.2.1 Key Facts
  - 13.2.2 Business Description
  - 13.2.3 Products and Services
  - 13.2.4 Financial Overview
  - 13.2.5 SWOT Analysis
  - 13.2.6 Key Developments
- 13.3 Optiwave Systems Inc
  - 13.3.1 Key Facts
  - 13.3.2 Business Description
  - 13.3.3 Products and Services
  - 13.3.4 Financial Overview
  - 13.3.5 SWOT Analysis
  - 13.3.6 Key Developments
- 13.4 Luceda Photonics
  - 13.4.1 Key Facts
  - 13.4.2 Business Description
  - 13.4.3 Products and Services
  - 13.4.4 Financial Overview
  - 13.4.5 SWOT Analysis
  - 13.4.6 Key Developments
- 13.5 Cadence Design Systems Inc
  - 13.5.1 Key Facts
  - 13.5.2 Business Description
  - 13.5.3 Products and Services
  - 13.5.4 Financial Overview

- 13.5.5 SWOT Analysis
- 13.5.6 Key Developments
- 13.6 Siemens AG
  - 13.6.1 Key Facts
  - 13.6.2 Business Description
  - 13.6.3 Products and Services
  - 13.6.4 Financial Overview
  - 13.6.5 SWOT Analysis
  - 13.6.6 Key Developments
- 13.7 Synopsys Inc
  - 13.7.1 Key Facts
  - 13.7.2 Business Description
  - 13.7.3 Products and Services
  - 13.7.4 Financial Overview
  - 13.7.5 SWOT Analysis
  - 13.7.6 Key Developments
- 13.8 AIM Photonics Inc
  - 13.8.1 Key Facts
  - 13.8.2 Business Description
  - 13.8.3 Products and Services
  - 13.8.4 Financial Overview
  - 13.8.5 SWOT Analysis
  - 13.8.6 Key Developments
- 13.9 SystemLab Inc
  - 13.9.1 Key Facts
  - 13.9.2 Business Description
  - 13.9.3 Products and Services
  - 13.9.4 Financial Overview
  - 13.9.5 SWOT Analysis
  - 13.9.6 Key Developments

## **14. APPENDIX**

- 14.1 Word Index



## List Of Tables

### LIST OF TABLES

Table 1. North America Photonic Design Automation Market Segmentation

Table 2. North America Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Million)

Table 3. North America Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Million) - Component

Table 4. North America Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Million) - Deployment

Table 5. North America Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Million) - Organization Size

Table 6. North America Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Million) - Application

Table 7. North America Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Mn) - By Country

Table 8. US Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Mn) - By Component

Table 9. US Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Mn) - By Deployment

Table 10. US Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Mn) - By Organization Size

Table 11. US Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Mn) - By Application

Table 12. Canada Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Mn) - By Component

Table 13. Canada Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Mn) - By Deployment

Table 14. Canada Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Mn) - By Organization Size

Table 15. Canada Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Mn) - By Application

Table 16. List of Abbreviation12. List of Figures

Figure 1. North America Photonic Design Automation Market Segmentation, By Country

Figure 2. Ecosystem: North America Photonic Design Automation Market

Figure 3. Impact Analysis of Drivers and Restraints

Figure 4. North America Photonic Design Automation Market Revenue (US\$ Million), 2022 - 2030

Figure 5. North America Photonic Design Automation Market Share (%) - Component, 2022 and 2030

Figure 6. Solution Market Revenue and Forecasts to 2030 (US\$ Million)

Figure 7. Service Market Revenue and Forecasts to 2030 (US\$ Million)

Figure 8. North America Photonic Design Automation Market Share (%) - Deployment, 2022 and 2030

Figure 9. On-Premise Market Revenue and Forecasts to 2030 (US\$ Million)

Figure 10. Cloud Market Revenue and Forecasts to 2030 (US\$ Million)

Figure 11. North America Photonic Design Automation Market Share (%) - Organization Size, 2022 and 2030

Figure 12. SMEs Market Revenue and Forecasts to 2030 (US\$ Million)

Figure 13. Large Enterprises Market Revenue and Forecasts to 2030 (US\$ Million)

Figure 14. North America Photonic Design Automation Market Share (%) - Application, 2022 and 2030

Figure 15. Academic Research Market Revenue and Forecasts to 2030 (US\$ Million)

Figure 16. Industrial Research & Manufacturing Market Revenue and Forecasts to 2030 (US\$ Million)

Figure 17. North America Photonic Design Automation Market- Revenue by Key Countries 2022 (US\$ Million)

Figure 18. North America Photonic Design Automation Market Breakdown by Key Countries, 2022 and 2030 (%)

Figure 19. US Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Mn)

Figure 20. Canada Photonic Design Automation Market Revenue and Forecasts to 2030 (US\$ Mn)

## I would like to order

Product name: North America Photonic Design Automation Market Forecast to 2030 - Regional Analysis  
- by Component (Solution and Service), Deployment (On-Premise and Cloud),  
Organization Size (SMEs and Large Enterprises), and Application (Academic Research  
and Industrial Research & Manufacturing)

Product link: <https://marketpublishers.com/r/NAF92A06F905EN.html>

Price: US\$ 2,485.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer  
Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click  
button on product page <https://marketpublishers.com/r/NAF92A06F905EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form  
below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms  
& Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below  
and fax the completed form to +44 20 7900 3970