

# Photonic Integrated Circuit (PIC) Market - Forecasts from 2017 to 2022

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## Abstracts

The global photonic integrated circuit (PIC) market is valued US\$496.09 million in 2017 and is estimated to reach US\$1716.3 million by 2022 exhibiting a CAGR of 28.18% during the forecast period. PIC is contemplated to grow as one of the most reliable and promising solutions for the optoelectronic devices owing to its higher efficiency, low energy consumption, and higher operational speed. It is a notable competitor of the systems based entirely on electronic devices as it offers a higher bandwidth. Photonic integrated circuit will prove to be a revolution in the future in its sector owing to its technological advancement. Unlike other systems that use electrons, it uses photons as data carriers. Integration of several functionalities can be done in a single chip owing to the development in the integrated indium phosphide based PIC at a modest cost. One of its major markets is the optical sensors market which finds its application in industries such as energy, defense, aerospace, and healthcare among others. However, rising investments in research and development on photonic integrated circuits are still being made in order to fully integrate electronics and optics on a single circuit.

## By End-Users

On the basis of end-users, photonic integrated circuit market is segmented as military and defense, aerospace, telecommunications, communication and technology, energy and power, healthcare, and others. Sectors like telecommunications, and communication and technology will experience the highest demand owing to their ability to process huge quantities of data at enormous speeds which makes them a significant contributor in intensifying the transmission capacity of the optical fiber communications. It is a groundbreaking technology which not only improves the performance but is also reliable in providing features such as reduction in power consumption and heat dissipation.

## By Geography

On the basis of geography, the photonic integrated market is segmented as North America, Europe, Middle East and Africa, Asia-Pacific, and South America. Currently, North America holds the maximum share of PIC market owing to the increasing usage in data centers and WAN applications of optical fiber communication systems. However, Asia-Pacific region is expected to account for the largest market share at the end of forecast year due to rapid economic growth in the region leading to high demand for photonic integrated circuits.

## Competitive Landscape

Photonic integrated circuit market is highly competitive due to the presence of well diversified international, regional, and local players. However, some big international players dominate the market share owing to their brand image market reach. With high market growth rate and increase in demand, this sector is attracting more players to enter the market resulting in a more competitive photonic integrated circuit market. Competitive landscape provides with the strategy and investment details in order to boost up their presence.

Some of the leading players in the photonic integrated circuit market include Infinera Corporation, Huawei Global, Intel, NeoPhotonics, OneChip Photonics, Avago Technologies, Ciena, Oclaro Inc, and JDS Uniphase Inc.

## Segmentation

The photonic integrated circuit market has been segmented on the basis of integration, raw materials, end-users, and geography.

### By Integration

- Hybrid Photonic Integration

- Monolithic Photonic Integration

### By Raw Material

- Gallium Arsenide

- Indium Phosphide

- Silica on silicon

- Silicon on insulator

- Lithium Niobate

By End-User

Military and Defense

Aerospace

Communication and Technology

Telecommunication

Energy and Power

Healthcare

Others

By Geography

North America

South America

Europe

Middle East & Africa

Asia-Pacific

## Contents

### **1. INTRODUCTION**

- 1.1. Market Definition
- 1.2. Scope of the study
- 1.3. Currency
- 1.4. Assumptions
- 1.5. Base, and forecast year timeline

### **2. RESEARCH METHODOLOGY**

- 2.1. Research Design
- 2.2. Secondary Sources
- 2.3. Validation

### **3. KEY FINDINGS OF THE STUDY**

### **4. MARKET DYNAMICS**

- 4.1. Drivers
- 4.2. Restraints
- 4.3. Opportunities and Market Trends
- 4.4. Market Segmentation
- 4.5. Porter's Five Forces Analysis
  - 4.5.1. Bargaining Power of Suppliers
  - 4.5.2. Bargaining Power of Buyers
  - 4.5.3. Threat of New Entrants
  - 4.5.4. Threat of Substitutes
  - 4.5.5. Competitive Rivalry in the Industry
- 4.6. Industry Value Chain Analysis
- 4.7. Industry Regulations
- 4.8. Scenario Analysis

### **5. GLOBAL PHOTONIC INTEGRATED CIRCUIT MARKET FORECAST BY INTEGRATION (US\$ MILLION)**

- 5.1. Introduction
- 5.2. Hybrid Photonic Integration

### 5.3. Monolithic Photonic Integration

## **6. GLOBAL PHOTONIC INTEGRATED CIRCUIT MARKET FORECAST BY RAW MATERIAL (US\$ MILLION)**

- 6.1. Introduction
- 6.2. Gallium Arsenide
- 6.3. Indium Phosphide
- 6.4. Silica On Silicon
- 6.5. Silicon On Insulator
- 6.6. Lithium Niobate

## **7. GLOBAL PHOTONIC INTEGRATED CIRCUIT MARKET FORECAST BY END-USER (US\$ MILLION)**

- 7.1. Introduction
- 7.2. Military and Defense
- 7.3. Aerospace
- 7.4. Communication and Technology
- 7.5. Telecommunications
- 7.6. Energy and Power
- 7.7. Healthcare
- 7.8. Others

## **8. GLOBAL PHOTONIC INTEGRATED CIRCUIT MARKET FORECAST BY GEOGRAPHY (US\$ MILLION)**

- 8.1. Introduction
- 8.2. North America
- 8.3. South America
- 8.4. Europe
- 8.5. Middle East and Africa
- 8.6. Asia-Pacific

## **9. COMPETITIVE INTELLIGENCE**

- 9.1. Market Share Analysis
- 9.2. Strategies of Key Players
- 9.3. Recent Investment and Deals

## **10. COMPANY PROFILES**

### 10.1. Infinera Corporation

- 10.1.1. Overview
- 10.1.2. Financials
- 10.1.3. Product and Services
- 10.1.4. Key Developments

### 10.2. Huawei Global

- 10.2.1. Overview
- 10.2.2. Financials
- 10.2.3. Products and Services
- 10.2.4. Key Developments

### 10.3. Intel

- 10.3.1. Overview
- 10.3.2. Financials
- 10.3.3. Products and Services
- 10.3.4. Key Developments

### 10.4. NeoPhotonics

- 10.4.1. Overview
- 10.4.2. Financials
- 10.4.3. Products and Services
- 10.4.4. Key Developments

### 10.5. Avago Technologies

- 10.5.1. Overview
- 10.5.2. Financials
- 10.5.3. Products and Services
- 10.5.4. Key Developments

### 10.6. Ciena

- 10.6.1. Overview
- 10.6.2. Financials
- 10.6.3. Products and Services
- 10.6.4. Key Developments

### 10.7. OneChip Photonics

- 10.7.1. Overview
- 10.7.2. Financials
- 10.7.3. Products and Services
- 10.7.4. Key Developments

### 10.8. Alcatel-Lucent

- 10.8.1. Overview
- 10.8.2. Financials
- 10.8.3. Products and Services
- 10.8.4. Key Developments
- 10.9. Oclaro, Inc
  - 10.9.1. Overview
  - 10.9.2. Financials
  - 10.9.3. Products and Services
  - 10.9.4. Key Developments
- 10.10. JDS Uniphase, Inc
  - 10.10.1. Overview
  - 10.10.2. Financials
  - 10.10.3. Product and Services
  - 10.10.4. Key Developments

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