

Global Free Space Optic (FSO) Communication Market Size study, by Platform (Space, Airborne, Ground), by Component (Transmitter, Transceiver, Receiver, Others), by Application (Mobile Backhaul, Disaster Recovery, Enterprise Connectivity, Defense, Satellite, Others), and Regional Forecasts 2022-2032

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Abstracts

The global Free Space Optic (FSO) Communication market is valued at approximately USD 599.08 million in 2023 and is anticipated to grow with a healthy growth rate of more than 31.3% over the forecast period 2024-2032. FSO communication represents a cutting-edge technology that enables high-speed, secure data transmission through modulated optical beams directed across open space, eliminating the need for fiber optics or other guiding systems. The simplicity and efficiency of FSO systems make them an attractive solution for various applications, including mobile backhaul, disaster recovery, and defense communications. These systems are particularly vital in scenarios requiring rapid deployment and secure, high-bandwidth connections. As demand for high-speed data transmission escalates, especially in the military sector where robust and secure communications are critical, FSO technology is gaining significant traction.

The surge in bandwidth requirements on the battlefield, driven by the shift from voice communications to data-rich multimedia content, has fueled the adoption of FSO systems. Their inherent security features and ability to provide high-bandwidth connections in dense RF environments make them ideal for military use. Moreover, FSO technology's role in civilian applications, such as mobile backhaul and enterprise connectivity, is expanding as organizations seek faster, more secure communication solutions. Despite the challenges posed by atmospheric interference, which can hinder

the performance of FSO systems, ongoing technological advancements are expected to enhance their reliability and adoption. The global push towards digital connectivity and the development of private LTE networks further solidifies the importance of FSO technology in the future of telecommunications.

The key regions considered for the global Free Space Optic Communication market study include Asia Pacific, North America, Europe, Latin America, and Middle East and Africa. North America dominates the market, with substantial investments in advanced communication technologies and a strong presence of key players. The region's focus on enhancing its telecommunications infrastructure and adopting innovative solutions contributes to its market leadership. Meanwhile, the Asia Pacific region is expected to experience the highest growth rate during the forecast period, driven by increasing investments in telecommunications and rapid digitalization across emerging economies.

Major market players included in this report are:

ViaSat, Inc.

Mynaric

FSONA Networks Corporation

QinetiQ Group plc

Wireless Excellence Limited

Axiom Optics

Mostcom JSC

EC System

Collinear

Plaintree Systems Inc.

Aoptix Technologies Inc.

MDA (MacDonald, Dettwiler and Associates)

SA Photonics, Inc.

Mynaric AG

Terabeam (formerly part of YDI Wireless)

The detailed segments and sub-segment of the market are explained below:

By Platform:

Space

Airborne

Ground

By Component:

Transmitter

Transceiver
Receiver
Others

By Application:
Mobile Backhaul
Disaster Recovery
Enterprise Connectivity
Defense
Satellite
Others

By Region:
North America
U.S.
Canada

Europe
UK
Germany
France
Spain
Italy
ROE

Asia Pacific
China
India
Japan
Australia
South Korea
RoAPAC

Latin America
Brazil
Mexico
Rest of Latin America

Middle East & Africa

Saudi Arabia
South Africa
RoMEA

Years considered for the study are as follows:

Historical year – 2022

Base year – 2023

Forecast period – 2024 to 2032

Key Takeaways:

Market Estimates & Forecast for 10 years from 2022 to 2032.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with Country level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand side and supply side analysis of the market.

Contents

CHAPTER 1. GLOBAL FREE SPACE OPTIC COMMUNICATION MARKET EXECUTIVE SUMMARY

- 1.1. Global Free Space Optic Communication Market Size & Forecast (2022-2032)
- 1.2. Regional Summary
- 1.3. Segmental Summary
 - 1.3.1. By Platform
 - 1.3.2. By Component
 - 1.3.3. By Application
- 1.4. Key Trends
- 1.5. Recession Impact
- 1.6. Analyst Recommendation & Conclusion

CHAPTER 2. GLOBAL FREE SPACE OPTIC COMMUNICATION MARKET DEFINITION AND RESEARCH ASSUMPTIONS

- 2.1. Research Objective
- 2.2. Market Definition
- 2.3. Research Assumptions
 - 2.3.1. Inclusion & Exclusion
 - 2.3.2. Limitations
 - 2.3.3. Supply Side Analysis
 - 2.3.3.1. Availability
 - 2.3.3.2. Infrastructure
 - 2.3.3.3. Regulatory Environment
 - 2.3.3.4. Market Competition
 - 2.3.3.5. Economic Viability (Consumer's Perspective)
 - 2.3.4. Demand Side Analysis
 - 2.3.4.1. Regulatory frameworks
 - 2.3.4.2. Technological Advancements
 - 2.3.4.3. Environmental Considerations
 - 2.3.4.4. Consumer Awareness & Acceptance
- 2.4. Estimation Methodology
- 2.5. Years Considered for the Study
- 2.6. Currency Conversion Rates

CHAPTER 3. GLOBAL FREE SPACE OPTIC COMMUNICATION MARKET

Global Free Space Optic (FSO) Communication Market Size study, by Platform (Space, Airborne, Ground), by Compo...

DYNAMICS

3.1. Market Drivers

- 3.1.1. Rising Demand for High-Speed Data Transmission in Military Applications
- 3.1.2. Increasing Adoption in IT and Telecommunications
- 3.1.3. Expansion of Private LTE Networks

3.2. Market Challenges

- 3.2.1. Atmospheric Interference and Weather-Related Limitations
- 3.2.2. High Costs of Installation and Maintenance

3.3. Market Opportunities

- 3.3.1. Technological Advancements Enhancing System Reliability
- 3.3.2. Growing Need for Secure Communication in Critical Applications
- 3.3.3. Expansion in Emerging Markets

CHAPTER 4. GLOBAL FREE SPACE OPTIC COMMUNICATION MARKET INDUSTRY ANALYSIS

4.1. Porter's 5 Force Model

- 4.1.1. Bargaining Power of Suppliers
- 4.1.2. Bargaining Power of Buyers
- 4.1.3. Threat of New Entrants
- 4.1.4. Threat of Substitutes
- 4.1.5. Competitive Rivalry
- 4.1.6. Futuristic Approach to Porter's 5 Force Model
- 4.1.7. Porter's 5 Force Impact Analysis

4.2. PESTEL Analysis

- 4.2.1. Political
- 4.2.2. Economical
- 4.2.3. Social
- 4.2.4. Technological
- 4.2.5. Environmental
- 4.2.6. Legal

4.3. Top investment opportunity

4.4. Top winning strategies

4.5. Disruptive Trends

4.6. Industry Expert Perspective

4.7. Analyst Recommendation & Conclusion

CHAPTER 5. GLOBAL FREE SPACE OPTIC COMMUNICATION MARKET SIZE &

FORECASTS BY PLATFORM 2022-2032

5.1. Segment Dashboard

5.2. Global Free Space Optic Communication Market: Platform Revenue Trend Analysis, 2022 & 2032 (USD Million)

5.2.1. Space

5.2.2. Airborne

5.2.3. Ground

CHAPTER 6. GLOBAL FREE SPACE OPTIC COMMUNICATION MARKET SIZE & FORECASTS BY COMPONENT 2022-2032

6.1. Segment Dashboard

6.2. Global Free Space Optic Communication Market: Component Revenue Trend Analysis, 2022 & 2032 (USD Million)

6.2.1. Transmitter

6.2.2. Transceiver

6.2.3. Receiver

6.2.4. Others

CHAPTER 7. GLOBAL FREE SPACE OPTIC COMMUNICATION MARKET SIZE & FORECASTS BY APPLICATION 2022-2032

7.1. Segment Dashboard

7.2. Global Free Space Optic Communication Market: Application Revenue Trend Analysis, 2022 & 2032 (USD Million)

7.2.1. Mobile Backhaul

7.2.2. Disaster Recovery

7.2.3. Enterprise Connectivity

7.2.4. Defense

7.2.5. Satellite

7.2.6. Others

CHAPTER 8. GLOBAL FREE SPACE OPTIC COMMUNICATION MARKET SIZE & FORECASTS BY REGION 2022-2032

8.1. North America Free Space Optic Communication Market

8.1.1. U.S. Free Space Optic Communication Market

8.1.1.1. Platform breakdown size & forecasts, 2022-2032

- 8.1.1.2. Component breakdown size & forecasts, 2022-2032
- 8.1.1.3. Application breakdown size & forecasts, 2022-2032
- 8.1.2. Canada Free Space Optic Communication Market
 - 8.1.2.1. Platform breakdown size & forecasts, 2022-2032
 - 8.1.2.2. Component breakdown size & forecasts, 2022-2032
 - 8.1.2.3. Application breakdown size & forecasts, 2022-2032
- 8.1.3. Mexico Free Space Optic Communication Market
 - 8.1.3.1. Platform breakdown size & forecasts, 2022-2032
 - 8.1.3.2. Component breakdown size & forecasts, 2022-2032
 - 8.1.3.3. Application breakdown size & forecasts, 2022-2032
- 8.2. Europe Free Space Optic Communication Market
 - 8.2.1. UK Free Space Optic Communication Market
 - 8.2.1.1. Platform breakdown size & forecasts, 2022-2032
 - 8.2.1.2. Component breakdown size & forecasts, 2022-2032
 - 8.2.1.3. Application breakdown size & forecasts, 2022-2032
 - 8.2.2. Germany Free Space Optic Communication Market
 - 8.2.2.1. Platform breakdown size & forecasts, 2022-2032
 - 8.2.2.2. Component breakdown size & forecasts, 2022-2032
 - 8.2.2.3. Application breakdown size & forecasts, 2022-2032
 - 8.2.3. France Free Space Optic Communication Market
 - 8.2.3.1. Platform breakdown size & forecasts, 2022-2032
 - 8.2.3.2. Component breakdown size & forecasts, 2022-2032
 - 8.2.3.3. Application breakdown size & forecasts, 2022-2032
 - 8.2.4. Spain Free Space Optic Communication Market
 - 8.2.4.1. Platform breakdown size & forecasts, 2022-2032
 - 8.2.4.2. Component breakdown size & forecasts, 2022-2032
 - 8.2.4.3. Application breakdown size & forecasts, 2022-2032
 - 8.2.5. Italy Free Space Optic Communication Market
 - 8.2.5.1. Platform breakdown size & forecasts, 2022-2032
 - 8.2.5.2. Component breakdown size & forecasts, 2022-2032
 - 8.2.5.3. Application breakdown size & forecasts, 2022-2032
 - 8.2.6. Rest of Europe Free Space Optic Communication Market
 - 8.2.6.1. Platform breakdown size & forecasts, 2022-2032
 - 8.2.6.2. Component breakdown size & forecasts, 2022-2032
 - 8.2.6.3. Application breakdown size & forecasts, 2022-2032
 - 8.3. Asia Pacific Free Space Optic Communication Market
 - 8.3.1. China Free Space Optic Communication Market
 - 8.3.1.1. Platform breakdown size & forecasts, 2022-2032
 - 8.3.1.2. Component breakdown size & forecasts, 2022-2032

- 8.3.1.3. Application breakdown size & forecasts, 2022-2032
- 8.3.2. India Free Space Optic Communication Market
 - 8.3.2.1. Platform breakdown size & forecasts, 2022-2032
 - 8.3.2.2. Component breakdown size & forecasts, 2022-2032
 - 8.3.2.3. Application breakdown size & forecasts, 2022-2032
- 8.3.3. Japan Free Space Optic Communication Market
 - 8.3.3.1. Platform breakdown size & forecasts, 2022-2032
 - 8.3.3.2. Component breakdown size & forecasts, 2022-2032
 - 8.3.3.3. Application breakdown size & forecasts, 2022-2032
- 8.3.4. Australia Free Space Optic Communication Market
 - 8.3.4.1. Platform breakdown size & forecasts, 2022-2032
 - 8.3.4.2. Component breakdown size & forecasts, 2022-2032
 - 8.3.4.3. Application breakdown size & forecasts, 2022-2032
- 8.3.5. South Korea Free Space Optic Communication Market
 - 8.3.5.1. Platform breakdown size & forecasts, 2022-2032
 - 8.3.5.2. Component breakdown size & forecasts, 2022-2032
 - 8.3.5.3. Application breakdown size & forecasts, 2022-2032
- 8.3.6. Rest of Asia Pacific Free Space Optic Communication Market
 - 8.3.6.1. Platform breakdown size & forecasts, 2022-2032
 - 8.3.6.2. Component breakdown size & forecasts, 2022-2032
 - 8.3.6.3. Application breakdown size & forecasts, 2022-2032
- 8.4. Latin America Free Space Optic Communication Market
 - 8.4.1. Brazil Free Space Optic Communication Market
 - 8.4.1.1. Platform breakdown size & forecasts, 2022-2032
 - 8.4.1.2. Component breakdown size & forecasts, 2022-2032
 - 8.4.1.3. Application breakdown size & forecasts, 2022-2032
 - 8.4.2. Mexico Free Space Optic Communication Market
 - 8.4.2.1. Platform breakdown size & forecasts, 2022-2032
 - 8.4.2.2. Component breakdown size & forecasts, 2022-2032
 - 8.4.2.3. Application breakdown size & forecasts, 2022-2032
 - 8.4.3. Rest of Latin America Free Space Optic Communication Market
 - 8.4.3.1. Platform breakdown size & forecasts, 2022-2032
 - 8.4.3.2. Component breakdown size & forecasts, 2022-2032
 - 8.4.3.3. Application breakdown size & forecasts, 2022-2032
- 8.5. Middle East & Africa Free Space Optic Communication Market
 - 8.5.1. Saudi Arabia Free Space Optic Communication Market
 - 8.5.1.1. Platform breakdown size & forecasts, 2022-2032
 - 8.5.1.2. Component breakdown size & forecasts, 2022-2032
 - 8.5.1.3. Application breakdown size & forecasts, 2022-2032

- 8.5.2. South Africa Free Space Optic Communication Market
 - 8.5.2.1. Platform breakdown size & forecasts, 2022-2032
 - 8.5.2.2. Component breakdown size & forecasts, 2022-2032
 - 8.5.2.3. Application breakdown size & forecasts, 2022-2032
- 8.5.3. Rest of Middle East & Africa Free Space Optic Communication Market
 - 8.5.3.1. Platform breakdown size & forecasts, 2022-2032
 - 8.5.3.2. Component breakdown size & forecasts, 2022-2032
 - 8.5.3.3. Application breakdown size & forecasts, 2022-2032

CHAPTER 9. COMPETITIVE INTELLIGENCE

- 9.1. Key Company SWOT Analysis
 - 9.1.1. Company
 - 9.1.2. Company
 - 9.1.3. Company
- 9.2. Top Market Strategies
- 9.3. Company Profiles
 - 9.3.1. ViaSat, Inc.
 - 9.3.1.1. Key Information
 - 9.3.1.2. Overview
 - 9.3.1.3. Financial (Subject to Data Availability)
 - 9.3.1.4. Product Summary
 - 9.3.1.5. Market Strategies
 - 9.3.2. Mynaric
 - 9.3.3. FSONA Networks Corporation
 - 9.3.4. QinetiQ Group plc
 - 9.3.5. Wireless Excellence Limited
 - 9.3.6. Axiom Optics
 - 9.3.7. Mostcom JSC
 - 9.3.8. EC System
 - 9.3.9. Collinear
 - 9.3.10. Plaintree Systems Inc.
 - 9.3.11. Aoptix Technologies Inc.
 - 9.3.12. MDA (MacDonald, Dettwiler and Associates)
 - 9.3.13. SA Photonics, Inc.
 - 9.3.14 Mynaric AG
 - 9.3.15. Terabeam (formerly part of YDI Wireless)

CHAPTER 10. RESEARCH PROCESS

10.1. Research Process

10.1.1. Data Mining

10.1.2. Analysis

10.1.3. Market Estimation

10.1.4. Validation

10.1.5. Publishing

10.2. Research Attributes

List Of Tables

LIST OF TABLES

TABLE 1. Global Free Space Optic Communication market, report scope

TABLE 2. Global Free Space Optic Communication market estimates & forecasts by Region 2022-2032 (USD Million)

TABLE 3. Global Free Space Optic Communication market estimates & forecasts by Platform 2022-2032 (USD Million)

TABLE 4. Global Free Space Optic Communication market estimates & forecasts by Component 2022-2032 (USD Million)

TABLE 5. Global Free Space Optic Communication market estimates & forecasts by Application 2022-2032 (USD Million)

TABLE 6. Global Free Space Optic Communication market by segment, estimates & forecasts, 2022-2032 (USD Million)

TABLE 7. Global Free Space Optic Communication market by region, estimates & forecasts, 2022-2032 (USD Million)

TABLE 8. U.S. Free Space Optic Communication market estimates & forecasts, 2022-2032 (USD Million)

TABLE 9. Canada Free Space Optic Communication market estimates & forecasts, 2022-2032 (USD Million)

TABLE 10. Mexico Free Space Optic Communication market estimates & forecasts, 2022-2032 (USD Million)

.....

This list is not complete, final report does contain more than 100 tables. The list may be updated in the final deliverable.

List Of Figures

LIST OF FIGURES

- FIG 1. Global Free Space Optic Communication market, research methodology
- FIG 2. Global Free Space Optic Communication market, market estimation techniques
- FIG 3. Global market size estimates & forecast methods.
- FIG 4. Global Free Space Optic Communication market, key trends 2023
- FIG 5. Global Free Space Optic Communication market, growth prospects 2022-2032
- FIG 6. Global Free Space Optic Communication market, porters 5 force model
- FIG 7. Global Free Space Optic Communication market, PESTEL analysis
- FIG 8. Global Free Space Optic Communication market, value chain analysis
- FIG 9. Global Free Space Optic Communication market by segment, 2022 & 2032 (USD Million)
- FIG 10. Global Free Space Optic Communication market by Platform, 2022 & 2032 (USD Million)
- FIG 11. Global Free Space Optic Communication market by Component, 2022 & 2032 (USD Million)
- FIG 12. Global Free Space Optic Communication market by Application, 2022 & 2032 (USD Million)
- FIG 13. Global Free Space Optic Communication market, regional snapshot 2022 & 2032
- FIG 14. North America Free Space Optic Communication market 2022 & 2032 (USD Million)
- FIG 15. Europe Free Space Optic Communication market 2022 & 2032 (USD Million)
- FIG 16. Asia Pacific Free Space Optic Communication market 2022 & 2032 (USD Million)
- FIG 17. Latin America Free Space Optic Communication market 2022 & 2032 (USD Million)
- FIG 18. Middle East & Africa Free Space Optic Communication market 2022 & 2032 (USD Million)
- FIG 19. Global Free Space Optic Communication market, company market share analysis (2023)

.....

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