

# Shortwave Infrared Market Size, Share & Trends Analysis Report By Offering, By Imaging Type (Spectral Imaging, Thermal Imaging, Hyperspectral Imaging), By Technology, By Vertical, By Region, And Segment Forecasts, 2025 - 2030

<https://marketpublishers.com/r/S2E6BFDC768EN.html>

Date: January 2025

Pages: 100

Price: US\$ 4,950.00 (Single User License)

ID: S2E6BFDC768EN

## Abstracts

This report can be delivered to the clients within 8 Business Days

### Shortwave Infrared Market Size & Trends

The global shortwave infrared market size was estimated at USD 603.0 million in 2024 and is expected to grow at a CAGR of 12.0% from 2025 to 2030. The market growth is driven by expanding applications across industries such as defense, industrial inspection, healthcare, and security. SWIR refers to the wavelength range between 1.0 and 3.0 microns, which offers unique imaging advantages due to its ability to penetrate materials and capture high-contrast images even in low-light conditions. As industries increasingly demand enhanced imaging and sensing solutions, SWIR technology is becoming essential for applications such as surveillance, agriculture, electronics inspection, and scientific research. For instance, in April 2024, Quantum Solutions, a leader in quantum dot technology, announced the launch of its Q.Eye SWIR (short-wave infrared) image sensors. These cutting-edge sensors, with an impressive spectral range of 400-1700 nm, are poised to revolutionize imaging capabilities in machine vision and robotics applications.

One of the primary growth drivers in the shortwave infrared (SWIR) industry is its rising adoption in defense and military operations. SWIR imaging systems provide enhanced visibility during night operations and through adverse weather conditions, aiding in target detection, navigation, and situational awareness. The market is also seeing

robust growth in the industrial sector, where SWIR cameras are used for quality control, non-destructive testing, and material identification, particularly in semiconductors and pharmaceuticals. Additionally, advancements in SWIR sensor technology, such as reduced costs and miniaturization, are fueling wider adoption in consumer electronics, autonomous vehicles, and environmental monitoring. The growing need for sophisticated surveillance and security systems in both public and private sectors further supports market expansion.

SWIR cameras are now utilized across a wide range of applications, including vehicle navigation, where demand has surged. These cameras are highly effective in navigating challenging conditions like fog, snow, or dust. SWIR technology's ability to distinguish between colors and analyze material properties, such as water vapor, air temperature, and chemical composition, makes it ideal for applications like spectrometry, aircraft inspection, and astronomy. The technology is also witnessing increased use in scientific research areas, such as ecosystem evaluation, climate change studies, ergonomics, microbe and disease assessment, and psychology.

### Global Shortwave Infrared Market Report Segmentation

This report forecasts revenue growth at global, regional, and country levels and provides an analysis of the latest industry trends in each of the sub-segments from 2017 to 2030. For this study, Grand View Research has segmented the global SWIR market report based on offering, imaging type, technology, vertical, and region:

Offering Outlook (Revenue, USD Million, 2017 - 2030)

Solution

Services

Imaging Type Outlook (Revenue, USD Million, 2017 - 2030)

Spectral Imaging

Thermal Imaging

Hyperspectral Imaging

Technology Outlook (Revenue, USD Million, 2017 - 2030)

Cooled

Uncooled

Vertical Outlook (Revenue, USD Million, 2017 - 2030)

Electronics and Communication

Military and Defence

Medical and Healthcare

Food & Beverage

Automotive

Others

Regional Outlook (Revenue, USD Million, 2017 - 2030)

North America

U.S.

Canada

Mexico

Europe

UK

Germany

France

Asia Pacific

China

India

Japan

Australia

South Korea

Latin America

Brazil

MEA

UAE

South Africa

KSA

## Contents

### **CHAPTER 1. METHODOLOGY AND SCOPE**

- 1.1. Market Segmentation and Scope
- 1.2. Market Definitions
- 1.3. Research Methodology
  - 1.3.1. Information Procurement
  - 1.3.2. Information or Data Analysis
  - 1.3.3. Market Formulation & Data Visualization
  - 1.3.4. Data Validation & Publishing
- 1.4. Research Scope and Assumptions
  - 1.4.1. List of Data Sources

### **CHAPTER 2. EXECUTIVE SUMMARY**

- 2.1. Market Outlook
- 2.2. Segment Outlook
- 2.3. Competitive Insights

### **CHAPTER 3. SWIR MARKET VARIABLES, TRENDS, & SCOPE**

- 3.1. Market Introduction/Lineage Outlook
- 3.2. Market Size and Growth Prospects (USD Million)
- 3.3. Industry Value Chain Analysis
- 3.4. Market Dynamics
  - 3.4.1. Market Drivers Analysis
    - 3.4.1.1. Growing demand in industrial applications
    - 3.4.1.2. Technological advancements
  - 3.4.2. Market Restraints Analysis
    - 3.4.2.1. Technical challenges
  - 3.4.3. Industry Opportunities
  - 3.4.4. Industry Challenges
- 3.5. SWIR Market Analysis Tools
  - 3.5.1. Porter's Analysis
    - 3.5.1.1. Bargaining power of the suppliers
    - 3.5.1.2. Bargaining power of the buyers
    - 3.5.1.3. Threats of substitution
    - 3.5.1.4. Threats from new entrants

- 3.5.1.5. Competitive rivalry
- 3.5.2. PESTEL Analysis
  - 3.5.2.1. Political landscape
  - 3.5.2.2. Economic and Social landscape
  - 3.5.2.3. Technological landscape
  - 3.5.2.4. Environmental landscape
  - 3.5.2.5. Legal landscape

## **CHAPTER 4. SWIR MARKET: OFFERING ESTIMATES & TREND ANALYSIS**

- 4.1. Segment Dashboard
- 4.2. SWIR Market: Offering Movement Analysis, 2024 & 2030 (USD Million)
- 4.3. Solution
  - 4.3.1. Solution Market Revenue Estimates and Forecasts, 2017 - 2030 (USD Million)
- 4.4. Services
  - 4.4.1. Services Market Revenue Estimates and Forecasts, 2017 - 2030 (USD Million)

## **CHAPTER 5. SWIR MARKET: IMAGING TYPE ESTIMATES & TREND ANALYSIS**

- 5.1. Segment Dashboard
- 5.2. SWIR Market: Imaging Type Movement Analysis, 2024 & 2030 (USD Million)
- 5.3. Spectral Imaging
  - 5.3.1. Spectral Imaging Market Revenue Estimates and Forecasts, 2017 - 2030 (USD Million)
- 5.4. Thermal Imaging
  - 5.4.1. Thermal Imaging Market Revenue Estimates and Forecasts, 2017 - 2030 (USD Million)
- 5.5. Hyperspectral Imaging
  - 5.5.1. Hyperspectral Imaging Market Revenue Estimates and Forecasts, 2017 - 2030 (USD Million)

## **CHAPTER 6. SWIR MARKET: TECHNOLOGY ESTIMATES & TREND ANALYSIS**

- 6.1. Segment Dashboard
- 6.2. SWIR Market: Technology Movement Analysis, 2024 & 2030 (USD Million)
- 6.3. Cooled
  - 6.3.1. Cooled Market Revenue Estimates and Forecasts, 2017 - 2030 (USD Million)
- 6.4. Uncooled
  - 6.4.1. Uncooled Market Revenue Estimates and Forecasts, 2017 - 2030 (USD Million)

## **CHAPTER 7. SWIR MARKET: VERTICAL ESTIMATES & TREND ANALYSIS**

### 7.1. Segment Dashboard

### 7.2. SWIR Market: Vertical Movement Analysis, 2024 & 2030 (USD Million)

### 7.3. Electronics and Communication

#### 7.3.1. Electronics and Communication Market Revenue Estimates and Forecasts, 2017 - 2030 (USD Million)

### 7.4. Military and Defense

#### 7.4.1. Military and Defense Market Revenue Estimates and Forecasts, 2017 - 2030 (USD Million)

### 7.5. Medical and Healthcare

#### 7.5.1. Medical and Healthcare Market Revenue Estimates and Forecasts, 2017 - 2030 (USD Million)

### 7.6. Food & Beverage

#### 7.6.1. Food & Beverage Market Revenue Estimates and Forecasts, 2017 - 2030 (USD Million)

### 7.7. Automotive

#### 7.7.1. Automotive Market Revenue Estimates and Forecasts, 2017 - 2030 (USD Million)

### 7.8. Others

#### 7.8.1. Others Market Revenue Estimates and Forecasts, 2017 - 2030 (USD Million)

## **CHAPTER 8. SWIR MARKET: REGIONAL ESTIMATES & TREND ANALYSIS**

### 8.1. SWIR Market Share, By Region, 2024 & 2030 (USD Million)

### 8.2. North America

#### 8.2.1. North America SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

#### 8.2.2. North America SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

#### 8.2.3. North America SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

#### 8.2.4. North America SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

#### 8.2.5. North America SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

#### 8.2.6. U.S.

##### 8.2.6.1. U.S. SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.2.6.2. U.S. SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.2.6.3. U.S. SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.2.6.4. U.S. SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.2.6.5. U.S. SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

8.2.7. Canada

8.2.7.1. Canada SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.2.7.2. Canada SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.2.7.3. Canada SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.2.7.4. Canada SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.2.7.5. Canada SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

8.2.8. Mexico

8.2.8.1. Mexico SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.2.8.2. Mexico SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.2.8.3. Mexico SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.2.8.4. Mexico SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.2.8.5. Mexico SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

8.3. Europe

8.3.1. Europe SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.3.2. Europe SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.3.3. Europe SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.3.4. Europe SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.3.5. Europe SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

8.3.6. UK

8.3.6.1. UK SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.3.6.2. UK SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.3.6.3. UK SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.3.6.4. UK SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.3.6.5. UK SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

8.3.7. Germany

8.3.7.1. Germany SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.3.7.2. Germany SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.3.7.3. Germany SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.3.7.4. Germany SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.3.7.5. Germany SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

8.3.8. France

8.3.8.1. France SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.3.8.2. France SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.3.8.3. France SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.3.8.4. France SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.3.8.5. France SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

8.4. Asia Pacific

8.4.1. Asia Pacific SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.4.2. Asia Pacific SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.4.3. Asia Pacific SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.4.4. Asia Pacific SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.4.5. Asia Pacific SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

#### 8.4.6. China

8.4.6.1. China SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.4.6.2. China SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.4.6.3. China SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.4.6.4. China SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.4.6.5. China SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

#### 8.4.7. Japan

8.4.7.1. Japan SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.4.7.2. Japan SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.4.7.3. Japan SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.4.7.4. Japan SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.4.7.5. Japan SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

#### 8.4.8. India

8.4.8.1. India SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.4.8.2. India SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.4.8.3. India SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.4.8.4. India SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.4.8.5. India SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

#### 8.4.9. South Korea

8.4.9.1. South Korea SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.4.9.2. South Korea SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.4.9.3. South Korea SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.4.9.4. South Korea SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.4.9.5. South Korea SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

8.4.10. Australia

8.4.10.1. Australia SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.4.10.2. Australia SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.4.10.3. Australia SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.4.10.4. Australia SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.4.10.5. Australia SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

8.5. Latin America

8.5.1. Latin America SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.5.2. Latin America SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.5.3. Latin America SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.5.4. Latin America SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.5.5. Latin America SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

8.5.6. Brazil

8.5.6.1. Brazil SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.5.6.2. Brazil SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.5.6.3. Brazil SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.5.6.4. Brazil SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.5.6.5. Brazil SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

8.6. Middle East & Africa

8.6.1. Middle East & Africa SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.6.2. Middle East & Africa SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.6.3. Middle East & Africa SWIR Market Estimates and Forecasts, by Imaging Type,

2017 - 2030 (USD Million)

8.6.4. Middle East & Africa SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.6.5. Middle East & Africa SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

8.6.6. KSA

8.6.6.1. KSA SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.6.6.2. KSA SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.6.6.3. KSA SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.6.6.4. KSA SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.6.6.5. KSA SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

8.6.7. UAE

8.6.7.1. UAE SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.6.7.2. UAE SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.6.7.3. UAE SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.6.7.4. UAE SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.6.7.5. UAE SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

8.6.8. South Africa

8.6.8.1. South Africa SWIR Market Estimates and Forecasts, 2017 - 2030 (USD Million)

8.6.8.2. South Africa SWIR Market Estimates and Forecasts, by Offering, 2017 - 2030 (USD Million)

8.6.8.3. South Africa SWIR Market Estimates and Forecasts, by Imaging Type, 2017 - 2030 (USD Million)

8.6.8.4. South Africa SWIR Market Estimates and Forecasts, by Technology, 2017 - 2030 (USD Million)

8.6.8.5. South Africa SWIR Market Estimates and Forecasts, by Vertical, 2017 - 2030 (USD Million)

## **CHAPTER 9. COMPETITIVE LANDSCAPE**

- 9.1. Recent Developments & Impact Analysis by Key Market Participants
- 9.2. Company Categorization
- 9.3. Company Market Positioning
- 9.4. Company Market Share Analysis
- 9.5. Company Heat Map Analysis
- 9.6. Strategy Mapping
  - 9.6.1. Expansion
  - 9.6.2. Mergers & Acquisition
  - 9.6.3. Partnerships & Collaborations
  - 9.6.4. New Product Launches
  - 9.6.5. Research And Development
- 9.7. Company Profiles
  - 9.7.1. Teledyne FLIR LLC
    - 9.7.1.1. Participant's Overview
    - 9.7.1.2. Financial Performance
    - 9.7.1.3. Product Benchmarking
    - 9.7.1.4. Recent Developments
  - 9.7.2. Corning Incorporated
    - 9.7.2.1. Participant's Overview
    - 9.7.2.2. Financial Performance
    - 9.7.2.3. Product Benchmarking
    - 9.7.2.4. Recent Developments
  - 9.7.3. Collins Aerospace
    - 9.7.3.1. Participant's Overview
    - 9.7.3.2. Financial Performance
    - 9.7.3.3. Product Benchmarking
    - 9.7.3.4. Recent Developments
  - 9.7.4. Allied Vision Technologies GmbH
    - 9.7.4.1. Participant's Overview
    - 9.7.4.2. Financial Performance
    - 9.7.4.3. Product Benchmarking
    - 9.7.4.4. Recent Developments
  - 9.7.5. Leonardo DRS
    - 9.7.5.1. Participant's Overview
    - 9.7.5.2. Financial Performance
    - 9.7.5.3. Product Benchmarking
    - 9.7.5.4. Recent Developments
  - 9.7.6. Hamamatsu Photonics K.K.
    - 9.7.6.1. Participant's Overview

- 9.7.6.2. Financial Performance
- 9.7.6.3. Product Benchmarking
- 9.7.6.4. Recent Developments
- 9.7.7. Fluke Corporation
  - 9.7.7.1. Participant's Overview
  - 9.7.7.2. Financial Performance
  - 9.7.7.3. Product Benchmarking
  - 9.7.7.4. Recent Developments
- 9.7.8. New Imaging Technologies (NIT)
  - 9.7.8.1. Participant's Overview
  - 9.7.8.2. Financial Performance
  - 9.7.8.3. Product Benchmarking
  - 9.7.8.4. Recent Developments
- 9.7.9. Raptor Photonics
  - 9.7.9.1. Participant's Overview
  - 9.7.9.2. Financial Performance
  - 9.7.9.3. Product Benchmarking
  - 9.7.9.4. Recent Developments
- 9.7.10. Lynred
  - 9.7.10.1. Participant's Overview
  - 9.7.10.2. Financial Performance
  - 9.7.10.3. Product Benchmarking
  - 9.7.10.4. Recent Developments

## I would like to order

Product name: Shortwave Infrared Market Size, Share & Trends Analysis Report By Offering, By Imaging Type (Spectral Imaging, Thermal Imaging, Hyperspectral Imaging), By Technology, By Vertical, By Region, And Segment Forecasts, 2025 - 2030

Product link: <https://marketpublishers.com/r/S2E6BFDCA768EN.html>

Price: US\$ 4,950.00 (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/S2E6BFDCA768EN.html>