

# **Global Short-Wave Infrared Cameras & Sensors Market Size study, by Technology, Product (SWIR Cameras, SWIR FPAs), Application, Interface, and Regional Forecasts 2022-2032**

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## **Abstracts**

The Global Short-Wave Infrared Cameras & Sensors Market is valued at approximately USD 0.29 billion in 2023 and is projected to expand at a compelling CAGR of 11.30% over the forecast period 2024-2032. In a landscape increasingly dependent on high-resolution, non-visible imaging, short-wave infrared (SWIR) technologies have emerged as mission-critical across multiple verticals—from semiconductor inspection and surveillance to industrial automation and biomedical imaging. The distinct ability of SWIR cameras to visualize through obscurants like fog, dust, or plastic packaging while capturing thermal contrasts at micrometer precision renders them indispensable in applications demanding enhanced situational awareness and process control.

The market is witnessing substantial momentum due to technological advancements in sensor miniaturization and quantum efficiency, enabling more compact, cost-efficient, and high-performance imaging solutions. The surge in industrial IoT integration has further catapulted the demand for smart imaging devices, wherein SWIR sensors embedded with machine vision algorithms empower predictive maintenance and real-time quality assurance. At the product level, SWIR focal plane arrays (FPAs) are redefining imaging architecture by offering improved sensitivity, dynamic range, and faster readout speeds for a wide array of commercial and military applications.

However, this growth trajectory is tempered by persistent cost-related challenges, particularly in the realm of indium gallium arsenide (InGaAs) sensor manufacturing, which remains capital-intensive. Furthermore, lack of awareness and standardization limits broader market penetration, especially in price-sensitive regions. That said,

companies are navigating these barriers through partnerships, licensing innovations, and the development of cost-optimized uncooled SWIR systems. The integration of USB, GigE, and Camera Link interfaces has further improved plug-and-play compatibility, accelerating adoption in mid-sized enterprises and R&D institutions.

From a regional perspective, North America continues to dominate the SWIR cameras & sensors market, fueled by defense spending, a robust industrial base, and a thriving semiconductor industry. Europe trails closely, with significant traction in environmental monitoring, food safety, and material sorting applications. Meanwhile, Asia Pacific is poised to record the fastest CAGR through 2032, owing to aggressive investments in smart manufacturing, infrastructure digitization, and electronics production—particularly in China, Japan, and South Korea. The Middle East & Africa and Latin America are gradually emerging as opportunistic markets driven by infrastructural modernization and homeland security initiatives.

**Major market player included in this report are:**

Hamamatsu Photonics K.K.

Teledyne FLIR LLC

Sensors Unlimited (A division of Collins Aerospace)

Xenics NV

Allied Vision Technologies GmbH

New Imaging Technologies (NIT)

Photon etc.

Leonardo DRS

Princeton Infrared Technologies, Inc.

InView Technology Corporation

SWIR Vision Systems

IRCameras LLC

Sierra-Olympic Technologies Inc.

Raptor Photonics Ltd.

FLIR Systems Inc.

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

By Technology:

InGaAs

HgCdTe

Others

By Product:

SWIR Cameras

SWIR Focal Plane Arrays (FPAs)

By Application:

Industrial Inspection

Security & Surveillance

Scientific Research

Medical Diagnostics

Others

## By Interface:

USB

GigE

Camera Link

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

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.

#### Companies Mentioned

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