

APAC Thermal Imaging Systems - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The APAC Thermal Imaging Systems Market size is estimated at USD 2.76 billion in 2025, and is expected to reach USD 3.65 billion by 2030, at a CAGR of 5.68% during the forecast period (2025-2030).

Key Highlights

- As thermal imaging systems are used to increase an object's visibility in low light conditions, the growing adoption across healthcare and biological science, manufacturing, and military & defense sectors continue to drive the studied market's growth in Asia Pacific.
- Thermal imaging detects a long IR range of the electromagnetic spectrum, which is invisible to the human eye by means of special and sophisticated cameras called Infrared Imagers. Thermal imaging systems have witnessed a paradigm shift in recent years due to their increasing use in military and defense applications. The army and navy popularly use it for border surveillance and law enforcement. It is also used in ship collision avoidance and guidance systems, whereas in the aviation industry, it has greatly mitigated the risks of flying in low light and night conditions.
- To cope with diversely asymmetric, multi-dimensional, and highly lethal battlefield imperatives, armies of various countries in the Asia Pacifc region are modernizing their military arsenal and getting soldiers geared up with the latest combat and surveillance technology. Motion detection is one of the important element of Automatic Target Recognition (ATR) and perimeter monitoring systems. Thermal imaging has become an integral part of these systems because of its ability to operate in all weather conditions.
- The Asia Pacific region has emerged among the leading spenders on military equipment/technology owing to the frequent border conflicts, especially in the east and South Asian regions. Furthermore, the growing threat of terrorism also encourages the regional government spend significantly on technologies to boost the operating capabilities of military and defense forces. For instance, according to SIPRI, in 2022-2023, East Asia was the leading spender on military technology (USD 397 billion), followed by

South Asia (98.3 billion), and Southeast Asia (USD 43.1 billion).

- In recent years, the Asia pacific region has also emerged to be among the leading automotive market both in terms of production and consumption of automobiles. Furthermore, the region is also witnessing a stable growth in terms of the adoption of electrical and autonomous vehicles wherein themal imaging cameras are widely used. Hence, the expanding automotive market will drive the demand for thermal imaging systems in Asia Pacific.
- Furthermore, the emergence of countries such as China, India, Taiwan, and South Korea, among others in the global manufacturing industry landscape also continues to drive opportunities in the studied market as a significant percentage of manufacturing companies are increasing their investment in advanced technologies, automation, and robotics solutions wherein thermal imaging systems are widely used.
- However, a higher cost of thermal imaging solutions along with the technical limitations associated with these devices such as their limitations to see through glass as thermal energy can be reflected off shiny surfaces, continues to hamper the studied market's growth.
- The outbreak of the COVID-19 virus has had a notable impact on the growth of the studied market as the Asia pacific region registered the highest number of covid cases. Furthermore, the stringent containment measures imposed across various countries also disrupted the supply chain and demand across various end user industries, thereby bringing a slowdown in the studied market. However, market demand is likely to increase, as the covid-led restrictions have already been liftem from all region, which in turn is driving the demand for thermal imaging systems across various end user verticals.

APAC Thermal Imaging Systems Market Trends

Increasing Spending by Government and Defense Activities?

- Military and defense were the very first applications of IR and thermal imaging systems. With the defense sector's rising investments in surveillance, IR, and thermal imaging systems, adoption is expected to increase in the future. The Asia-Pacific region offers potential growth opportunities due to the rise in technology penetration, high defense spending, and the presence of many small and medium enterprises (SMEs).?
- For instance, according to Stockholm International Peace Research Institute, countries like China, India, and Japan have the highest military spending in the region. During the period (2014-2023), China reported the highest rate of growth in military spending (60%), followed by Australia (34%) and India (44%), South Korea (34%), and Japan (31%). Hence, such trends drive various opportunities for the vendors in the market.
- Moreover, the changing outlook of regional governments toward developing local industries is also fostering the development of the local thermal imaging systems market in the Asia Pacific. For instance, in February 2022, the government of India signed an INR 1,075 Crore (~USD 130 million) contract with BEL under its 'Make in India' initiative for the supply of commander thermal imagers for T-90 Tanks of the Indian army.
- Similarly, in June 2023, the Indian army announced that it updated its 9K111M Konkurs-M anti-tank guided missile with Tonbo Imaging's Sarisa cooled, longwave Infrared (LWIR) thermal imagers. This new thermal imaging camera features the ability to detect, recognize, and identifie dangers at vast distances during various operating conditions including day, night, and poor weather conditions. Hence, such trends drive the studied market's growth in the military and defense segment.

China is Expected to Hold Significant Market Share

- China is expected to hold a significant market share for the thermal imaging systems market during the forecast period due to the increasing adoption of infrared imaging products and services by organizations in the region for applications such as

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surveillance, threat detection, automotive, predictive maintenance, and others.?

- Other factors contributing to the growth of the studied market in China are the large military spending and the presence of the largest industrial sector in the entire Asia Pacific region, wherein the adoption of automation and robotics solutions are increasing significantly with each passing year. For instance, according to China's Ministry of Industry and Information Technology, in 2023, industrial robot installations in China took the top spot globally, taking up more than 50% of the global market share.
- Furthermore, China is also the leading producer of industrial robots in the Asia Pacific region which drives the demand for thermal imaging systems as they are widely used in industrial robots. For instance, the Ministry of Industry and Information Technology data showed that, in 2023, the country's output of industrial robots reached 590,000 units, up 5.4 percent year-on-year.
- Moreover, China is rapidly expanding its military capabilities, spending big on modern military equipment and machineries which is also supporting the growth of the studied market. For instance, according to SIPRI, the estimated military expenditure of the country reached USD 296.44 billion in 2023, from USD 198.54 billion in 2016.

APAC Thermal Imaging Systems Industry Overview

The thermal imaging system market is consolidated, with a considerable number of regional and global players. However, the growing market demand and efforts by regional governments to develop local industries are anticipated to help new players emerge in the thermal imaging systems landscape of the region, driving competition among vendors. Hence, the major market players are adopting different strategies, such as product portfolio expansion, new product innovations, mergers, acquisitions, etc., to consolidate their market presence further. Some key market players include FLIR Systems Inc. (Teledyne Technologies), Opgal Optronic Industries Ltd.?, Fluke Corporation, Testo Inc., etc.

The APAC region is expected to continue leading the thermal imaging market due to rapid industrialization, expanding military budgets, and a growing emphasis on smart city initiatives. Emerging economies like India and Southeast Asian nations present substantial growth opportunities for vendors looking to capitalize on this trend.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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