

Night Vision Devices Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The night vision devices market was valued at USD 7679.14 million in 2021, and it is projected to be worth USD 12,199.31 million by 2027, registering a CAGR of 8.1% during the forecast period. The night vision devices provide the soldiers with color images in the low light environment in the field. These devices have also gained popularity among wildfire researchers in recent years, which is estimated to create more demand for such devices. The technical and application feasibility, such as head-mounted night vision, coupled with reasonable cost, has propelled the demand. These devices enable clear visibility of over 150 to 200 yards at night.

Key Highlights

Night vision devices are more dominantly applied in the military and defense industry. Over the years, countries around the world have been increasing their military and defense budgets significantly, which is estimated to drive the market for night vision devices. According to SIPRI, the United States spent over USD 778 billion on its defense activities, followed by China, with USD 252 billion in 2020.

Additionally, night vision devices are increasingly being adopted by law enforcement agencies for conducting training activities to ensure the mission-ready status of military troops. In March 2020, MKU, an Indian defense company, announced to release of its range of gen-3 night vision devices for police forces. These devices are developed on uncooled microbolometer technology and are expected to showcase in the International Police Expo, to be held in May 2020.

With the rapid advancement of thermal imaging and infrared technologies, optics manufacturers continue to enhance their products to compete in high-demand areas, such as night vision devices. Wearable night vision equipment, such as enhanced night vision goggles (ENVG), which incorporate thermal imaging into their design, continue to increase as technology advances rapidly. Helmet-mounted goggles, cameras, and other thermal devices have been at the forefront of the market. Still, night vision goggles are expected to be the application to watch as the market develops.

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Companies like BAE Systems PLC and L3Harris Communication, among others, are a few companies having a contract from the US Army and are developing night vision devices to gain increased revenue. However, as these devices are subjected to costly maintenance, it is restricting the market growth to an extent.

To expand the business in different regions and capture a wide market share, companies are constantly acquiring or partnering with other firms. For instance, in January 2022, EOTECH, an optical technology company based in Ann Arbor, purchased Intevac Inc.'s photonics division from Santa Clara, Calif., for USD 100 million.

The COVID-19 scenario has positively impacted the market growth. As most businesses are switching to remote working models, the demand for webcams has gone up significantly. Employees are finding webcams as a crucial accessory in video conferencing to upgrade from the low quality of laptop-embedded cameras.

Night Vision Devices Market Trends

Surveillance Applications to Hold Significant Share

The primary functions of the video surveillance system are to capture, process, manage, store, and view recordings and images captured by the system. Technological advancements in the video surveillance industry have led to the development of night vision cameras that are designed to work in low-lit areas. According to WHO, around 1.25 million people die every year in road accidents globally. The deployment of video surveillance in road networks can help officials manage traffic in a better way and identify the causes of road accidents.

Amid the ongoing community spread of COVID-19 across the world, in March 2020, the South Diego Chula Vista Police Department announced an investment of over USD 11,000 in acquiring two drones equipped with night vision cameras to mitigate the risk of the officers in these areas. The department has mentioned that it is aiming at watching over people living on the streets with these drones amid the outbreak.

With the increasing rate of crimes, video surveillance is expected to play a significant role in preventing crime, primarily due to the threat of being detected. For instance, according to the Metropolitan Police, there were around 215.7 thousand violent crime offenses recorded by the police in London in 2018-2019, an increase of approximately 13.8 thousand as compared to the value registered in 2017-2018.

As per the UNC Charlotte of Criminal Justice, more than 60% of convicted burglars agreed that they look for the presence of security cameras before entering a residential property, while 40% of burglars agreed that they look for another easier target in case surveillance cameras are present. The emergence of smart homes has increased the prominence of video surveillance systems in the residential segment in the past few years. The surveillance systems implemented in this sector have varied applications, such as monitoring and access control. These systems are also equipped with features such as motion detection and night vision.

North America is Expected to Hold Largest Market Share

North America is expected to hold the largest market share in the night vision devices market driven by the United States, with the highest spending nation on its military and defense activities and by housing the key vendors in the market, including L3Harris Communication, Flir Systems Inc., American Technology Network Corp., and BAE Systems PLC, among others.

The governments in the region are exploring nighttime firefighting activities with improved technologies, such as night vision devices, enhancing their nighttime aerial firefighting capabilities. Night vision technology enables the safe operation of aircraft at night. In July 2019, the Orange County Fire Authority teamed up with Coulson Aviation by investing over USD 4 million to introduce firefighting helicopters to respond to calls in California. These helicopters are equipped with night vision devices for pilots and

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have a capacity of 1,000 gallons of water.

With the advancement in technologies, night vision devices are being integrated with machine learning and Augmented reality technologies further to enhance the night vision capabilities of the devices. For instance, in April 2022, a recent study at the University of California, Irvine, by a team led by Andrew Browne captured 140 pictures of different faces using a camera that can detect visible light and part of the infrared spectrum.

Further, the United States Army has recently started training its forces using Enhanced Night Vision Goggle-Binocular (ENVG-B). These goggles provide imagery and data from the battlefield directly to the soldier's eye. The system includes a high-resolution display, an embedded soldier wireless personal network rapid target acquisition system, and Augmented reality algorithms that enhance the night vision capabilities of army personnel on the battlefield.

Companies in the market are also developing new technologies in applications such as aviation. In March 2022, Canada-based technology firm Baanto International launched a 27-inch ShadowSense touch screen tech designed for defense forces. This touchscreen fulfills the Night Vision Imaging Systems (NVIS) requirements, which can be deployed in mission regardless of the level of ambient light.

Night Vision Devices Market Competitor Analysis

The market is consolidated, with the presence of a few major companies dominating the market. These companies are continuously investing in making strategic partnerships with governments and product developments to gain more market share. The stringent government regulation, coupled with high manufacturing costs, is increasing the competition among these players. Overall, the intensity of competitive rivalry remains high, mainly driven by the strong presence of the large players involved in the market studied. ?

December 2021 - Thales launched XTRAIM, a new weapon sight offering day/night de camouflage capabilities that previously could only be achieved by using several separate pieces of equipment. It is compatible with all shoulder-fired assault rifles (HK416) and light machine guns (Minimi), providing users with an unparalleled precision night-firing capability.

May 2021 - Ulefone has introduced a new Night Vision Camera. The highly portable device, which acts as a smartphone accessory, may be used as a wearable body camera that can be quickly attached to your jacket, belt, back pocket, etc. The Night vision camera features a Sony STARVIS IMX307 extremely light-sensitive CMOS image sensor, ideal for low-light photography, night photography, and videography.

Additional Benefits:

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

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