asmag.com Security & IoT HIKVISION

READER SURVEY RESULTS

BEYOND VISIBLE LIGHT

READER SURVEY

METHODOLOGY

Asmag.com surveyed its reader database of physical security professionals from Sept 30 to Oct 8, 2024. Invitations to take the online survey were shared on social media, asmag.com website and sent via email. After a review of the responses and data cleansing, a total of 150 respondents were included in the analysis.

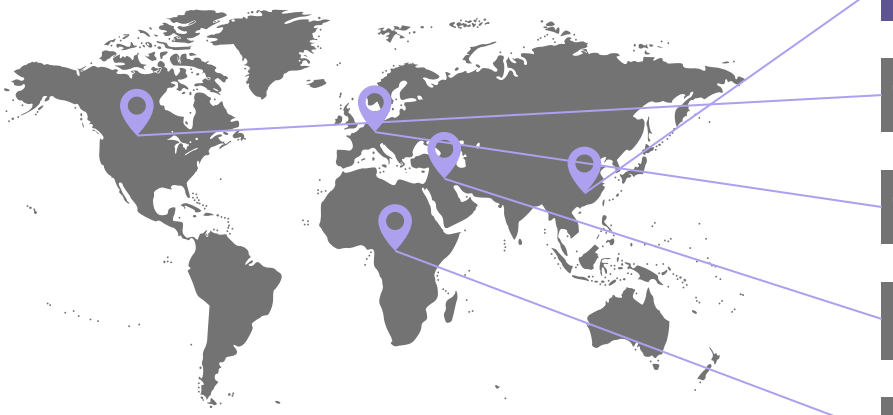
Note: Reported percentages might not add to 100% because of rounding.

Demographics

Business nature and profession in the industry

57%	43%	39%	25%	14%	9%
System Integrator/ Installers	Security Consultant	Dealer/ Distributor	Importer/ Reseller	User	Other

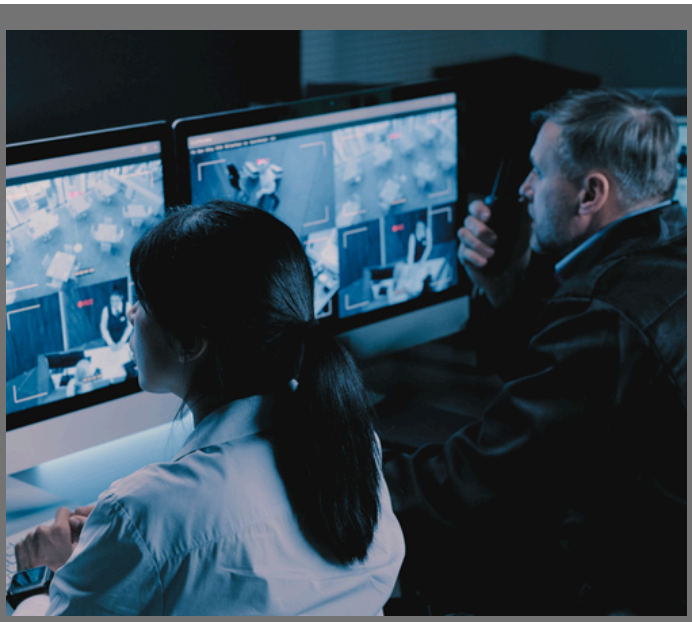
Regions



62%	APAC
13%	Americas
13%	Europe
7%	Middle East
5%	Africa

Verticals

Application Area	Percentage
Manufacturing/industrial parks	11.8%
Commercial buildings	9.4%
Government/public safety	8.7%
Retail	8.3%
Smart/safe city	7.6%
Residential	7.4%
Transportation	7.0%
Construction/real estate	6.7%
Healthcare	6.0%
Education	5.8%
Hospitality	5.4%
Logistics	5.4%
Oil and gas	5.5%
Financial institutions	3.9%
Others	1.3%



BEYOND VISIBLE LIGHT: TECHNOLOGY ADOPTION AND USAGE

Which non-visible technologies are growing in adoption in the security market, and in which industries are these technologies commonly used?

Read the full survey analysis!

https://www.asmag.com/showpost/34635.aspx

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READER SURVEY

RESULTS

Executive Summary

- **High adoption of beyond visible light technologies:** Thermal imaging and audio technology were the most widely adopted technologies, signaling strong interest in enhancing detection capabilities. While X-ray and radar had lower adoption, they are recognized as growing trends.
- **Customer demand and technology adoption:** Customer demand for thermal imaging and audio closely aligns with their current deployment rates, indicating that these technologies are meeting market needs. However, there is a slight gap between the adoption of X-ray and radar technologies compared to customer demand, suggesting potential barriers like cost or complexity.
- **Security as primary motivation for technology adoption:** Enhancing detection in low-light environments and proactive threat detection were the top reasons for adopting these technologies. There's also growing interest in using them beyond security, with applications in industrial monitoring and operational efficiency.
- **Challenges to adoption:** High initial investment and technical complexity were identified as the primary barriers to adopting these advanced technologies. This highlights the need for cost reduction and simplified deployment to increase future adoption.

Technology Adoption and Use

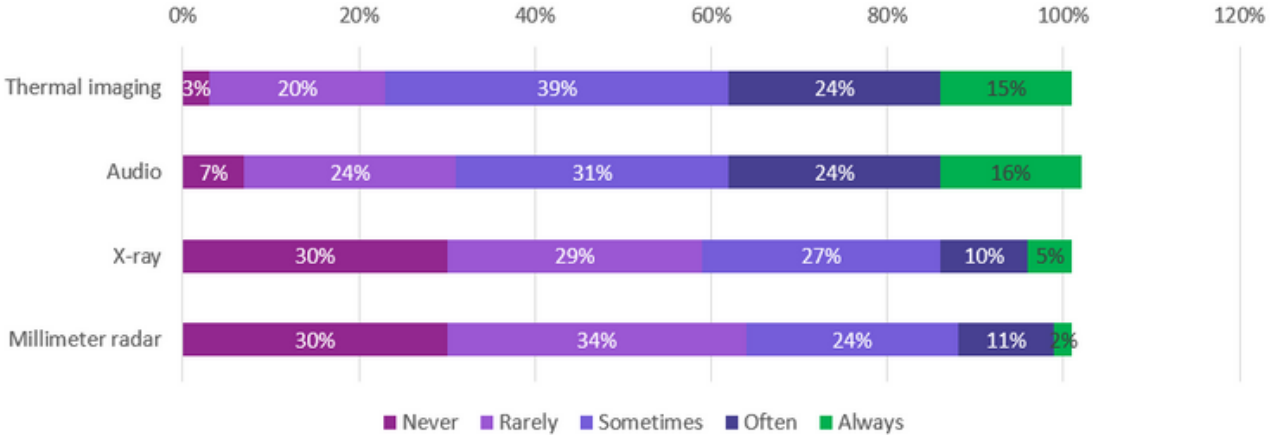
Which technologies are you offering or have deployed in your business/projects?

Technology	Percentage
Thermal imaging	72%
Audio technology	57%
X-ray technology	31%
Millimeter radar technology	29%

How often are your customers/projects asking for these technologies?

Category	Never	Rarely	Sometimes	Often	Always
Thermal imaging	3%	20%	39%	24%	15%
Audio	7%	24%	31%	24%	16%
X-ray	30%	29%	27%	10%	5%
Millimeter radar	30%	34%	24%	11%	2%

Note: Percentages were calculated based on the total number of respondents.



What are the primary reasons for adopting these technologies?

Rank	Reason	Percentage
1	To enhance detection capabilities in low-light and challenging environments	69%
2	For proactive threat detection and management	49%
3	To expand applications beyond security	41%
4	To meet customer request/project requirements	41%
5	To improve situational awareness through multi-dimensional perception	41%
6	To reduce manpower; for remote monitoring	31%
7	To increase operational efficiency and streamlined processes	31%
8	To comply with industry-specific regulations or standards	17%

✦ Any reasons specific to a technology?

Thermal Imaging

Application:

- “Thermal imaging can be applied to machine - overheat warnings?”
- “Thermal Imaging meant for perimeter monitoring and also industrial standard niche requirement.”
- “use thermal to detect fires.”
- “Vandals wearing reflective clothing to avoid ID.”
- “Use thermal camera in places where regular fire alarm can’t be installed.”
- "Thermal technology seems to be more prevalent for what has been available.”

Challenge:

- “Thermal imaging are of at high costs which built a barrier in our company to implement.”

Radar

- “Security system by Radar is better personal & privacy than camera.”
- “Robot with millimeter wave radar.”

X-ray

- “AI Technology : Object Detection in X-Ray Baggage Scanner.”

Audio

- “For Audio, it is used more on the service sector.”
- “Digital audio.”

Security-related reasons

- “Improve security performance.”
- “Proactive security and protection.”
- “Enhanced capabilities.”
- “Detecting Explosives.”
- “Continues automatic monitoring.”
- “Low[er] unwanted alarms.”
- “Able to detect better with a longer distance away.”
- “Low light capability enhancement.”

Others

- “New invent[ion] .”
- “Efficiency.”
- “Industrial robot.”
- “Quality Assurance.”
- “Cost.”

Technology Breakdown

- What are the primary applications of thermal imaging technology for your projects/customers?

Application	Percentage
Security and perimeter protection	86%
Early fire and smoke detection	65%
Industrial equipment monitoring and process monitoring	53%
Rapid body temperature monitoring for workplaces, events, healthcare	43%
Other (border protection, search and rescue, weapon control)	4%

- What are the primary applications of audio technology for your projects/customers?

Application	Percentage
Security (intercom, public address, warning messages, etc.)	88%
Industrial equipment monitoring (AI audio detection of abnormal sounds)	47%
Environmental enhancement (background music)	41%
Acoustic source localization (smart traffic management)	35%
Other (explosion sounds, audio clarity)	6%

- What are the primary applications of X-ray technology for your projects/customers?

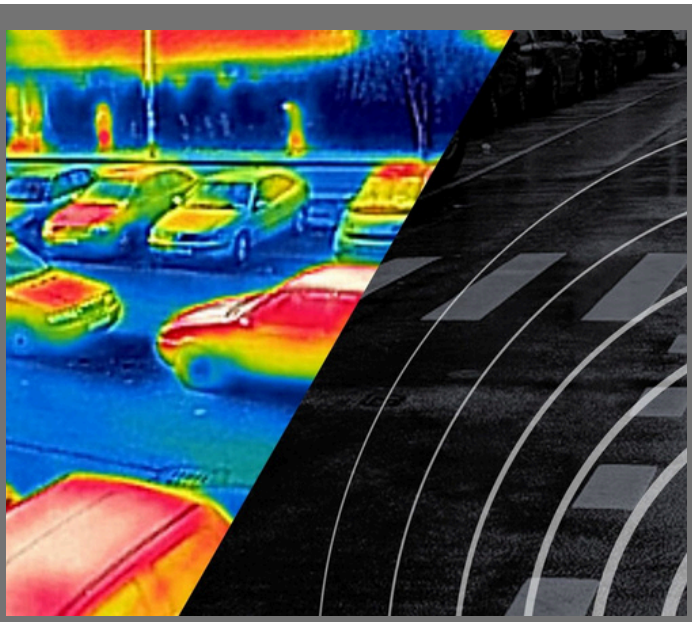
Application	Percentage
Security checkpoints	93%
Quality control (food, pharmaceutical, electronic, energy)	46%
Industrial processes (component assembly)	37%
Other	4%

- What are the primary applications of millimeter radar technology for your projects/customers?

Application	Percentage
Security and perimeter protection	81%
Traffic management (speed measurement, flow detection, signal control)	64%
Industrial applications (height measurement, water level measurement, etc.)	57%
Healthcare (fall detection, vital sign monitoring)	36%
Other – wide area protection	5%

- Key industry verticals voted best suited for these technologies

Ranking	Thermal Imaging	Audio	X-ray	Radar
1	Energy Infrastructure	Retail	Transportation	Transportation
2	Factories	Factories	Energy Infrastructure	Energy Infrastructure
3	Transportation	Energy Infrastructure	Factories	Factories
4	Healthcare	Office/Corporate Buildings	Office/Corporate Buildings	Parking Lots
5	Office/Corporate Buildings	Healthcare	Healthcare	Office/Corporate Buildings



NON-VISIBLE LIGHT TECHNOLOGIES IN SECURITY: ADOPTION CHALLENGES AND FUTURE TRENDS

What is the future outlook for these non-visible technologies? Which factors are most important in driving their adoption?

Get the full analysis of the results here!

https://www.asmag.com/showpost/34636.aspx

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Future Trends

- If you haven't already, which technologies will you invest in/offer in the near future?

Technology	Percentage
Thermal imaging	61%
Millimeter radar technology	48%
Audio technology	45%
X-ray technology	37%

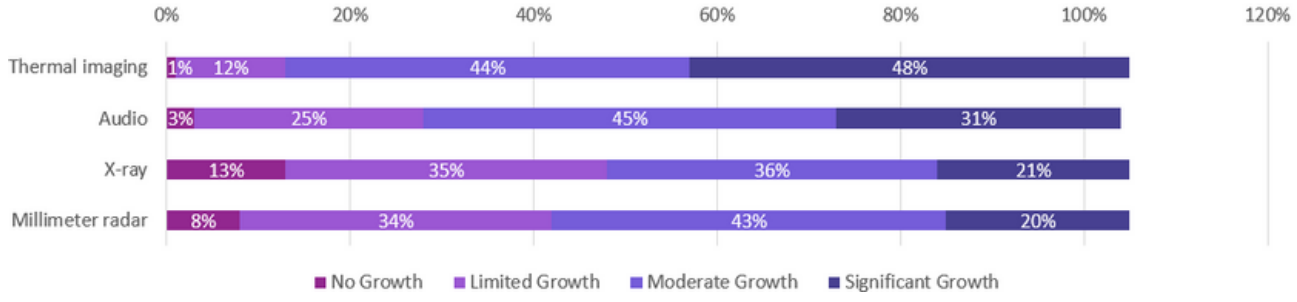
- What could be challenges or limitations to adopting these technologies?

Challenge	Percentage
High initial investment	69%
Technical complexity	49%
Maintenance and support costs	41%
Regulations/Legal framework	37%
Interoperability issues	32%
Certifications	31%
Limited functionality	26%
Other (please specify)	2%

- How do you see the growth potential/adoption of these technologies in the security industry over the next 5 years?

Technology	No Growth	Limited Growth	Moderate Growth	Significant Growth
Thermal imaging	1%	12%	44%	48%
Audio	3%	25%	45%	31%
X-ray	13%	35%	36%	21%
Millimeter radar	8%	34%	43%	20%

Note: Percentages were calculated based on the total number of respondents.



- What factors do you believe will be most important in driving the adoption of these technologies in the industry over the next few years?

Factor	Percentage
Return on investment (ROI)	59%
Case studies and success stories to showcase benefits	59%
Customer demand	53%
Technological advancements	51%
New applications will push adoption	47%
Regulatory requirements	40%
Other: (Localization, Clients ability to understand the advantages and limitations)	2%

- Any new applications you foresee for these technologies in the future that would boost their adoption – emerging use cases?

Integration with other technologies

- "New technology is great, but the important thing is being able to integrate it into the system - the investment cost is not much."
- "Integration of Millimeter Radar Technology with Thermal and Speed Detection cameras can enhance Traffic Management efficiency. "
- "Integration with biometrics and camera."
- "Integration with other technologies."
- "DAS system, providing detection along route and at same time enabling communication infrastructure."
- "Integration of these technologies."

Cost, Efficiency, and Viability

- "Everything now depends on the maturity of the system, making it more viable. "
- "Independent of lighting, low power mobile, lower cost imagers. "
- "Reduce cost. "

AI and Advanced Functions

- “Further development of AI functionalities and added focus on automatic handling of events, sensors and cameras e.g. automatic handover between cameras and on need for sensor knowledge.”
- “AI audio edge detection.”
- “AI applied to audio to monitor for all types of security and safety events. Combined with video for higher detection accuracy.”
- “Technology and AI.”
- “AI.”
- “Intelligent AI based video imaging.”

Audio and Surveillance

- “I think the use of audio with camera system will increase in the future. ”
- “AI audio edge detection. ”
- “Audio is limited on account of distance between speaker and mic, not successful in capturing voice in large volume area. ”
- “AI applied to audio to monitor for all types of security and safety events. ”
- “Thermal imaging and audio function. ”

Safety and Security Applications

- “Border Security. ”
- “Harmful/Explosive Gas detection. ”
- “Operations Monitoring. ”
- “Health & security care, Factory Automation. ”
- “Surveillance camera.”

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About Hikvision

Hikvision is a global leader in machine perception, AI, and big data, shaping the future of AIoT. The company offers advanced security solutions, including video security, access control, and alarm systems, all powered by AI technology. Hikvision supports industries such as smart cities, transportation, retail, and energy, while also expanding into smart home, robotics, and medical imaging. With over 80 subsidiaries worldwide, Hikvision products are available in more than 150 countries, fostering a safer, more intelligent world. Listed on the Shenzhen Stock Exchange, Hikvision continues to drive innovation and growth.