

NuVISION for Home Office Border Force



NUVIA and Genetec have developed an integrated solution to protect borders from nuclear threats such as smuggling of radioactive sources, Radiological Dispersal Devices (RDD) or “dirty bombs” and Radiological Exposure Devices (RED). The NuVISION gamma camera enables the operator to identify, localise and quantify such a threat in real time and interface with Security Center Omnicast™, an IP video management solution (VMS) that gives a clear picture of events and enables quick reactions to threats.

Benefits

- Real-time threat identification and alarms
- Precise localisation of nuclear threat in the premises
- Differentiation between medical and SNM isotopes
- Nuclear threat surveillance integrated with modular Security Center Omnicast system
- Enables intervention in a timely manner

Description

Securing critical infrastructure, Major Public Events (MPE) and borders has become a bigger focus over the last few years. Several complementary solutions can be deployed on site to minimize the risk of nuclear threats such as Radiological Dispersal Devices (RDD) or “dirty bombs” and Radiological Exposure Devices (RED). Nuclear instrumentation such as portal monitors, Personal Radiation Detectors (PRDs), Radiation Isotopes Devices (RIIDs) all play specific roles in securing borders. However detecting and localising a threat from a distance in real-time is currently not possible even when combining all these instruments. Developed in cooperation with the CEA-LETI, NuVISION is a compact spectrometric portable gamma camera based on CZT semiconducting detectors with coded aperture AND Compton imaging capabilities. The aim is to superimpose the radiological threat onto a visual image and quickly identify a threat. The Security Center Omnicast™ will trigger the alarm and precisely display the origin of the threat. The NuVISION gamma camera enables to discrimination of medical isotopes (such as the ones used in nuclear medicine for diagnostic purposes) from Special Nuclear Material representing a real threat.

Example of Application

In this scenario NuVISION cameras are typically placed between 10 and 50 meters from the area to be screened. NuVISION detects all 'dangerous' nuclear sources defined in IAEA Safety Standards No. RS-G-1.9. In case of a non-innocent event, NuVISION triggers an alarm. Border Security staff are provided with the knowledge of the precise threat location and can take aside the person carrying the potential nuclear threat for further investigation without attracting undue attention.



Genetec's next generation video surveillance system is a complete suite of solutions and enables to integrate various type of sensors such as standard video cameras but also innovative gamma camera sensors such as NuVISION.

About Genetec

Genetec Inc. is an innovative technology company with a broad solutions portfolio that encompasses security, intelligence, and operations. The company's flagship product, Security Center, is an open-architecture platform that unifies IP-based video surveillance, access control, automatic license plate recognition (ALPR), communications, and analytics. Genetec also develops cloud-based solutions and services designed to improve security, and contribute new levels of operational intelligence for governments, enterprises, transport, and the communities in which we live.

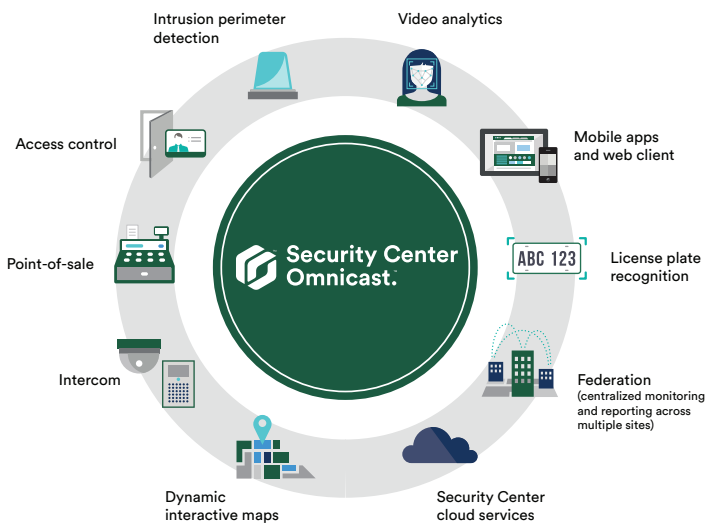
About NUVIA

NUVIA is an international group specialised in nuclear technology, through three activities: Engineering, Services and Products. NUVIA has developed under a unique brand name – NUVIA Tech Instruments - a differentiating product offering to tackle challenging applications in Health Physics, Environmental and Homeland Security markets. NUVIA's disruptive technologies are designed to make the world safer, through prevention and radiological surveys, doubt removal and radioprotection, search and identification of radioactive sources, contamination search and screening in emergency situations.

NUVIA is a referenced partner of Genetec and the NuVISION gamma camera is an approved technology of the global Security Center Omnicast™ solution.

Reference

IAEA paper "Gamma cameras as new technological developments to strengthen nuclear security detection architectures: Emerging potential approaches within regulatory frameworks and implementation practice, expected added value to existing measures from instrumentation-specific technical and functional characteristics".



NuVISION has been developed in cooperation with the CEA-LETI