

IMC[™] OPTICAL Intelligent Moving Camera

Viseum iVOS™ (Intelligent Virtual Operator Software)

Installation Example - Airport Security

Each Optical Viseum IMC has multiple surveillance cameras built inside a single unit for complete panoramic coverage in any direction up to 360°. For each deployment the required number of Wide Contextual View Cameras are fitted into each camera unit and directed at the zone areas to be automatically protected (see examples below):

- 6 x Wide Contextual View Cameras and 1 x AiPTZ Camera for full 360° coverage deployed on CCTV camera columns.
- 5 x Wide Contextual View Cameras and 1 x AiPTZ Camera for 300° coverage deployed on corners of buildings or airport security lighting columns.
- 3 x Wide Contextual View Cameras and 1 x AiPTZ Camera 180° coverage deployed on sides of airport buildings.

360 Security Camera



Viseum IMCTM (Intelligent Moving Camera)

Intelligent Virtual Operator Software (Viseum iVOS):

Example installation covering access to 3 terminal buildings with 50 aircraft gates.

This makes better use of airport security personnel – by not needing to train airport security staff for routine CCTV monitoring tasks, the software automatically monitors each and every camera installed on the network simultaneously. Upon activation of the software analysing an incident, it automatically controls the AiPTZ Camera to follow, confirm, record and report incidents. The software performs key but mundane tasks, such as:

- What activity to automatically monitor.
- When to automatically monitor for particular incidents.
- Where to automatically monitor for particular incidents.
- What responses should follow particular incidents.

Security Emergency Threat Management:

If potential intruders approach the airport perimeter fence line up to 320 m away, or if they breach the airport perimeter fence, the Viseum AiPTZ Camera is automatically controlled to zoom into and follow them. Their close-up video images are then automatically recorded and displayed on surveillance monitors for security response. If the airport's perimeter intrusion detection system (PIDS) is penetrated, Viseum's iVOS F3 (Find, Fix and Follow) Software Technology Services will automatically track the intruders where they circulate inside the perimeter. This software will also track the intruders through the airport terminal buildings using the airport's internal CCTV cameras. This will track them when they move from the view of one camera to another, and reidentify them when they temporarily disappear from view of the cameras.

If there is more than one intruder within coverage of a single Viseum IMC installation, the Viseum software will track all of them and control the AiPTZ Camera to automatically zoom into, follow and switch between all intruders to a) confirm their sightings, and b) record close-up video images of them. Throughout the entire incident, each intruder's locations and close-up video images are automatically reported for security response. If they reach certain areas, or if security personnel have not responded correctly, the Viseum system will automatically notify the head of security to initiate further escalation procedures.

When the incident has finished, CCTV evidence is used for rapid investigation. Images of the intruder(s) are fed into Viseum software systems to automatically track their movements from the lead up to the breach through to the end of it, including attempts to evade capture within crowds of people. Viseum's iVOS FaceRec face recognition software is then used to automatically investigate if the intruders had previously visited the site for the planning of their crime.

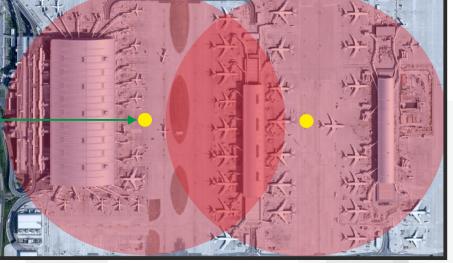
Visit us at https://www.viseum.co.uk

Viseum IMCs have been granted 20 years' patent protection

Any non-Viseum branded IMC system will be noticeably inferior and an illegal copy in breach of international law

Patent Portfolio - European EP 1 579 399 | United States of America US 7,952,608 B2









World's best CCTV Security and Surveillance

Automated remote detection and following of incidents

Industry-standard remote site deterrent

More coverage from fewer cameras



Automated security and situational awareness

nteligent CCTV www.viseum.co.uk

FOR THE HIGHEST LEVELS OF CCTV SURVEILLANCE

R IMC[™] Intelligent Moving Camera

AiPTZ[™] Camera 360° Analytics

Surveillance monitoring experts _____iVOS™ Intelligent Virtual Operator Software

THE <u>CCTV AND SURVEILLANCE</u> INDUSTRY-STANDARD DETERRENT AND AUTOMATED <u>SECURITY AND SITUATIONAL AWARENESS</u>

ONE CAMERA DEPLOYMENT COVERS UP TO THE SIZE OF 4 OLYMPIC STADIUMS

Intelligent camera and video

LEVEL 1 TECHNOLOGY INTRODUCTION PROGRAMME



VISEUM PRIVACY



THE WORLD'S ONLY LONG-RANGE ANALYTICS 360° PANORAMIC SECURITY CAMERA

- Britain's Largest Police Force "Our best crime deterrent" Described by them as a virtual gigapixel camera, a virtual CCTV operator and a virtual guard.
- Operates completely automatically covering large areas Identifying, confirming and following incidents close up and in every direction.
- Multi-HD-Camera view of each incident PTZ Camera close-up view and wide contextual views.

CUSTOMISED SOFTWARE TECHNOLOGY SERVICES:





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MADE IN GREAT BRITAIN

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The only surveillance camera system to automatically follow people and vehicles to remember, think and react for you.

(R)



Intelligent camera and video

Surveillance monitoring experts

Automatic Face Recognition For Added Layers of Person Recognition. Automated Criminal Identification.



Automatic Person Identification, Following and Re-identification. People Surveillance.



Automatic Number Plate Recognition Vehicle Identification and Re-identification. Traffic Management.

1

Quality and quantity of video information

Automated situational awareness of people and vehicles in and around your security estate:

When and at what location did suspects enter the remote site?
When and what location they left the area?
Where else have they been and where are they located now?
Have they been in the area before, do they keep returning and at what frequency?
What have they been doing and what are they doing now?

Having this extra video information delivered as standard, complete situational awareness is given of any scenario. Information of where people and vehicles are in your entire estate.

Automated alarms of unrecognized people and vehicles:

•	Does a person constantly hide their face whenever they approach a CCTV camera?
	Does a person's ID tag match their face?
	Is the vehicle number plate purposely obstructed?
	Have these suspects interacted with anyone else and have they visited any sensitive areas?
	Did certain people leave vehicles unattended or attended and are these vehicles on a watchlist?

All of this relevant recorded and indexed video information is used to automatically identify and mitigate risk. Security threats are further investigated automatically. For example, other known information of suspect(s) can also be automatically made available using databases such as from government, local authority or social media.

Countless automated surveillance applications using Viseum Intelligent CCTV:

<u>Security</u>	Threats to your estate are automatically dealt with and video information is automatically presented for decision support.
Health and Safety	Accidents at the workplace are automatically examined to identify the exact cause of, and responsibility for, injury.
Work Staff Efficiency	Illegal workers are identified immediately, their action monitored and their location followed.
<u>Remote Site Status</u>	Remote sites are checked to ensure that the correct authorised people are working in the area at the right times.

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IMC Overguard[™] (Intelligent Moving Camera) Extreme-Range AiRadar[™]/Uncooled Thermal/Optical IVOS[™] (Intelligent Virtual Operator Software)

Fully Automated High Security and Surveillance

Auto early warning detection system. No physical perimeter breach for alarms. <u>THREE</u> levels of automated threat detection and confirmation. The world's only multiview and multitasking surveillance camera system. Automatically protect areas up to the size of <u>New York City</u> in complete darkness and all weather conditions.

Popular models from **2 km** up to:

- **40 km** 360° radar detection and following of targets.
- 43 & 78 km 360° thermal heat source detection and following of targets.
- **43 km** 360° optical confirmation and following each incident.

MILITARY GRADE SECURITY AND SURVEILLANCE

"Outstanding performance" (Senior Officer RAF)

Superior Thermal Imagers

Outperforms all competition in all like-for-like field and bench tests:

- Longer range with greater image quality.
- Full frame rate sensors for greater quality.
- Product longevity with extended 4 year warranty.
- > Download Comparison Chart <

Optional Fully Marinised Anti-Corrosion. Grade 316 Stainless Steel.

LONGEST RANGE SOLID STATE PULSE AIRADAR™

LAND AND SEA RADAR SURVEILLANCE SYSTEM

BRITAIN

IN GREAT

Various models of ruggedized IP rated weather proofing IP66 to IP68 and operating temperatures -40 to +65°C

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Surveillance monitoring experts

Intelligent camera and video

IMIC OVErguard[™] (Intelligent Moving Camera) Extreme-Range AiRadar[™]/Uncooled Thermal/Optical

iVOS[™] (Intelligent Virtual Operator Software)

57.52

Technical Specifications

360° Pulse Radar:

- Automatically reports activity within 2,000 km². Includes GPS locations, speed, size and bearing of all targets in range.
- Operates in all weathers and ambient light conditions including extreme fog and complete darkness.
- Priority for areas (zones) for automatic threat detection and optimizing first responders.

360° Uncooled Thermal (Cooled thermal cameras have extreme short life, high cost of purchase, long maintenance downtimes and restrictive export licencing):

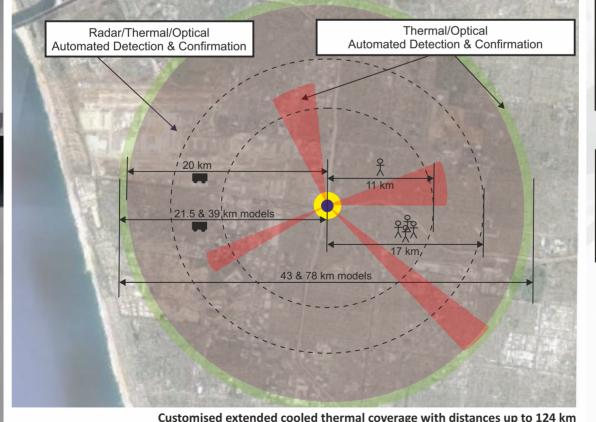
- Up to 1080p full HD self-healing uncooled thermal imager.
- VOx 12µm uncooled sensor displays temperature changes of ±0.05°C for accurate tracking of targets at extreme ranges.
- 9x Auto-Zoom Lens for automated high quality situational awareness. Optional wide and narrow dual lens for longer range.

360° Optical:

- 1920 x 1080 resolution (2 MP) 1/2.8" progressive scan HD camera sensor.
- 135x Long-Range Zoom Lens IR-corrected fluorite ELD low dispersion glass rapid auto focus.
- Automatic and manual day/night switching.
- 5.5 km Zero Light Performance Viseum laser diode technology manipulates IR intensity for long range in complete darkness.

Deployments:

Optimized low power and secure wireless communications for mobile perimeter and remote outpost installations.



Customised extended cooled thermal coverage with distances up to <u>124 km</u> RANGES DEPEND ON ENVIRONMENTAL CONDITIONS

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PATENTED MODULAR CONFIGURATION

Intelligent camera and video

Surveillance monitoring experts

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SUPERIOR OPERATIONAL PERFORMANCE



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UNCOOLED THERMAL Intelligent Moving Camera (IMC)

Viseum iVOS™ (Intelligent Virtual Operator Software)

Panoramic Thermal Security Camera

Each Thermal Viseum IMC has multiple surveillance cameras built inside a single unit for complete long-range panoramic coverage in any direction up to 360°. For each deployment, the required number of wide contextual view thermal cameras are fitted into each camera unit and directed at the zone areas to be automatically protected. See these examples below:

- 9 x wide contextual view thermal cameras and 1 x AiPTZ optical/thermal camera for full 360° coverage fixed on surveillance camera masts/columns.
- 7 x wide contextual view thermal cameras and 1 x AiPTZ optical/thermal camera for 280° coverage fixed on corners of buildings.
- 5 x wide contextual view thermal cameras and 1 x AiPTZ optical/thermal camera for 200° coverage fixed on sides of airport buildings.
 - Out to **21.5 & 39 km models** directional preset tours heat source detection.
 - Out to **1 km** omnidirectional automated heat source detection.
 - Dual optical and thermal automated confirmation of each incident.
 - Out to **5.5 km** zero light optical performance Viseum long-range laser illumination.

Example installation automatically covering access up to 10 aircraft terminals with 250 aircraft gates.



Intelligent Moving Camera Optical + Dual Thermal Model

1 km



43 & 78 km models



– 21.5 & 39 km models —

Automatic Detection & Confirmation

RANGES VARY DEPENDING ON ENVIRONMENTAL CONDITIONS

Constant High Security Automatic Incident Confirmation, Person and Vehicle Detection

Customised extended cooled thermal coverage with distances up to <u>124 km</u>

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