

Product brief: smartVISION

Enhanced vision and safer operations

smartVISION is a video-based visualisation solution optimised for ATC and airport environments. It provides ATC grade video presentation in combination with support and augmentation functions to support the air traffic controller's (ATCO's) workflow and increase efficiency, situation awareness and safety. To fulfill all operational targets of small, medium and high-capacity towers, high dynamic range cameras are used to provide a harmonised panorama view under all weather and light conditions as well as an ATC-grade PTZ camera, including ICAO compliant light gun functionality. smartVISION was developed in close cooperation with ATCOs and complies to highest ATC standards and regulations.

Key features

High resolution panorama view

To ensure a harmonised 360° panoramic view, multiple camera streams are stitched together to create a virtual out-of-the-window view.

Video augmentation

Configurable labels, detected objects, PTZ (panoramic tilt zoom) orientation and static overlays (outlines, glidepath, construction area, designators) are fused into one HMI.

Surveillance integration

Surveillance data is mapped as configurable label overlays in the panorama or the approach view, enhancing situational awareness.

Flexible camera setup

Support for a variety of camera setups enables a flexible installation range at the perfect spot(s), whether a central mast or multiple decentralised locations.

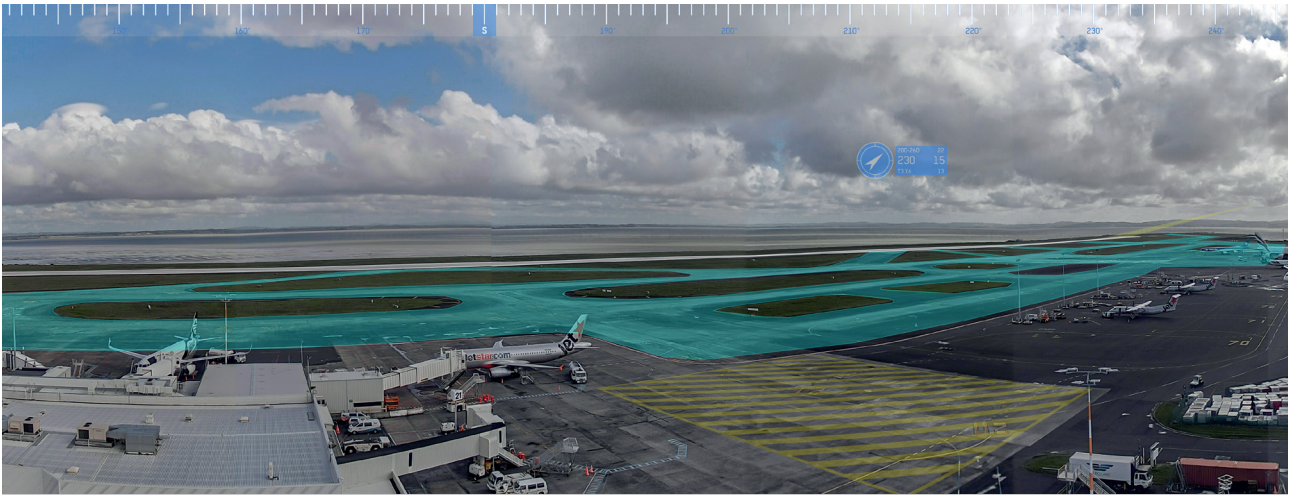
Smart PTZ functions

Intuitive control function via touch gestures, mouse or virtual joystick are supported by automatic tracking based on video or surveillance data.



smartVISION at a glance

- ATC-grade video presentation
- Advanced PTZ with ICAO-certified light gun
- Supports remote and contingency digital tower solutions
- Enhanced safety and situational awareness
- Intuitive user interface designed with ATCOs
- Flexible layout & controller working position
- Intelligent video tracking
- Designed for all weather conditions
- Multi remote tower ready
- Automatic object detection
- Advanced panoramic stitching
- Open standards-based integration platform



Digital tower solution of Auckland International Airport including ultra high resolution panorama view and augmentation

Benefits

Cost savings

smartVISION empowers ANSPs to reduce costs by centralising all relevant Air Traffic Control services.

Scalable solution

Enables seamless implementation of scalable solutions covering different service and airport categories: from AFIS to ATC, from regional airports to large hubs.

User experience and acceptance

Frequentis has established an iterative validation process which allows the user to customise the HMI of the solution according to their needs. This supports fast and efficient user acceptance, which is the key to a smooth and successful project.

Improved situation awareness

smartVISION supports a wide range of functions – such as box and follow, label overlay and PTZ tracking – increasing situational awareness compared to conventional tower operation.

Mature and proven solution

The solution's maturity is demonstrated by a large reference base of customers with installations in Austria, Germany, UK (Jersey), US, New Zealand, Argentina, Brazil, Denmark and many more.

Integrated product portfolio

The Frequentis offering includes all the building blocks for a remote or digital tower solution within a single integrated product portfolio, providing additional benefits through inter-product functionality and a shared roadmap.

Facts and figures

Number of installed sites:	10+
Solution profiles	Remote tower, contingency, blind spot coverage, remote AFIS, apron management
Panorama screens	Resolution: HD or 4k / Scalable number: 1-16
Safety and regulations	ED-109A AL 4, ED-153 SWAL 3, Doc884 EC1139
Interfaces	Asterix (CAT 20, 21, 62), ONVIF, PELCO-D, DDS, AMQP
Standards	EUROCAE ED-240A, ICAO 4444, ICAO Annex 2 (light gun)

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