



# Remote Digital Tower

## Enhancing military air traffic control

Mature, safe and secure solution

Intuitive, scalable and deployable

Field-proven with advanced feature set

Defence

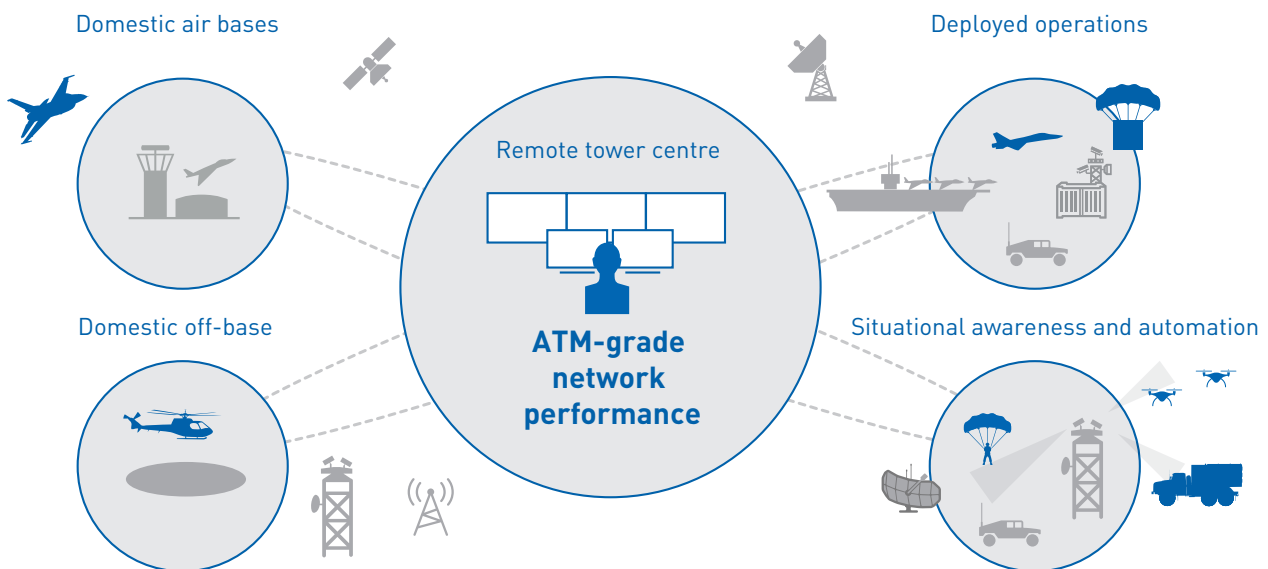
**FREQUENTIS**  
FOR A SAFER WORLD

# Ensure mission success and secure air traffic control

The latest international crises have highlighted potential military vulnerabilities and the need to invest in assuring national air sovereignty. Military ATC organisations need to replace legacy infrastructure with flexible hardware and software that can ensure mission success and safety in the face of new and rapidly changing challenges.

## Addressing the demands of military use cases

A remote digital tower solution complements and enhances the common out-of-the-window view of traditional air traffic control towers with digital augmentation. Video visualisation and advanced sensor technology create a virtual air traffic control (ATC) tower, capable of controlling airbases remotely – at fixed-base infrastructure, deployed or within overseas missions..



### Air bases

- Ensure mission continuity
- Overcome staff shortages
- Extend service availability
- Reduce investment costs

### Landing sites

- Increase flight safety
- Reduce travel and ATC staffing efforts
- Improve soldier morale
- Support mission complexity

### Deployable and expeditionary

- Move controllers out of harm's way
- Adding digital capabilities
- Flexible and scalable

### Situational awareness

- Vision enhancement
- Object detection and tracking
- Information sharing and fusion
- Enhanced security and protection

# A mature solution designed by operators

A remote digital tower is a flexible and scalable solution that improves efficiency, safety and success in air traffic control while supporting even the most complex military missions.

## Turning challenges into opportunities

Frequentis leads the market in remote digital tower (RDT) solutions. Our RDT solutions increase flexibility and situational awareness, while keeping controllers out of harm's way by locating them in secure environments.

Our operationally proven and tested ATC working environment ensures the safe, orderly and expeditious handling of military air traffic. Advanced camera systems operating across multiple optical and thermal spectral bands augment situational awareness under standard and silent operations.

Data from our advanced sensor technology, in combination with sophisticated video processing and object-tracking capabilities, can be used beyond ATC in base and deployable operations, supporting surveillance, general defence and airbase security.

## Safety and situational awareness

- Digitally enhanced vision
- Object and threat detection
- Crew safety

## Capability enhancement

- Tower operation beyond airfield
- Secure and tactical tower location
- Digitalised after-action review
- Sharing of airfield data

## Cost reduction

- Up to 80% CAPEX reduction
- Staffing synergies and improvements
- Higher capacity and efficiency

## Maximum performance with minimised risk

### **Maturity and user acceptance**

Our remote digital tower technology draws on Frequentis' extensive experience in ATM. It is operationally available, approved by the US DoD and DFS (German ANSP).

### **Successful change management**

Risk is mitigated by applying an incremental change management process supported by DFS consulting services and long-term support for service and maintenance.

### **Flexibility, scalability and integration**

The solution is highly customisable and has been proven in both large-scale and compact working positions. The camera technology can be centralised, decentralised or deployable.

### **Innovative and advanced feature set**

The solution features a touch-based HMI for highest usability; video stitching and harmonisation create the optimal display, while proven object detection and thermal panorama systems increase situational awareness.

### **Product safety and security**

Secure data backbone solutions guarantee continuous operations. The solution design maximises safety for 24/7 operations with non-rotating panorama sensors and ATC-grade PTZ with integrated light-gun.

### **One step ahead**

Deployability, mobility, and flexibility, optional drone detection, and additional smart airbase tools complement the solution. Key technologies are advanced sensors, tracking and high-performance video processing and data sharing.

# Remote digital tower success stories

Frequentis is the global leader in digital tower equipment, providing solutions to meet multiple different use cases in military ATC: single fixed deployments at airfields used permanently or as a backup to the main tower; connected solutions enabling remote management from a central location; field-deployable digital tower solutions for Forward Operating Bases. Drawing on more than seven decades of international ATC experience, Frequentis offers mature, field-proven RDT solutions that help military customers to ensure mission success and to create command-and-control advantages.

## Commercial Airbases and Public Airports

Frequentis has the largest number of references for achieving acceptance of digital tower projects by different air navigation service providers on different continents and for different use cases. After establishing a strong reference and maturing the technology with DFS in Germany from 2018, Frequentis has deployed its solution in Denmark, Australia, Iceland, the UK, Argentina and the USA.

## Brazil Air Force (DECEA, CISCEA)

The digital tower in Santa Cruz is a first-of-its-kind project in South America to provide remote air traffic control services using digital tower technology. The solution provides controllers with a real-time 360° visualisation of the airport and its surroundings in a remotely operated environment. Digital support tools such as automatic object detection, surveillance labeling, image recognition and tracking are some of the major features of this solution, which will support the safety-critical and high-pressure work of controllers.

## US Department of Defense (DoD)

The United States DOD has selected Frequentis' remote digital tower technology in support of the US Air Force, US Navy, and US Marine Corps. The system for the US DOD has been installed, configured for use, and was tested at multiple airbase locations. The project scope included fixed RDT and deployable systems for use by the Air Force and other DOD agencies. The successful completion of this program has led to follow-on contracts and the acceptance of Frequentis in the FAA certification process.

## Remote digital tower product portfolio

- smartVISION visualisation and surveillance
- smartTOOLS information display and control
- smartSTRIPS flight data handling
- iSecCOM red/black voice communication system
- Recording and replay system
- Implementation, operation and technical services

## Related solutions and extensions

- vitalsphere™ ATM-grade network performance
- Deployable Remote Digital Tower
- Drone detection system and UTM
- Base security and incident management
- PRISMA approach automation solution
- towerPAD: airfield overview and automation solution

**FREQUENTIS AG**  
Innovationsstraße 1  
1100 Vienna, Austria  
Tel: +43 1 811 50-0  
www.frequentis.com

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