

VISUAL ENHANCEMENTS

- Seamless panoramic image
- Contrast harmonization and wide dynamic range



- Optional thermal cameras
- 30 frames per second frame rate



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FREQUENTIS | **Raytheon**



Raytheon has partnered with Frequentis USA to develop a remote tower solution that combines Raytheon's Standard Terminal Automation Replacement Solution (STARS) with Frequentis's smartVISION™ remote tower software. The offering also employs a variety of surveillance capabilities, including Raytheon's Skyleer™ low-power radar for airports lacking in radar coverage to the ground.

Remote towers can be leveraged as an alternative to replacing costly brick-and-mortar air traffic control towers by using 360-degree high-resolution cameras to produce images that are stitched together and displayed across multiple monitors to create panoramic views of operations on the airport surface and in the surrounding airspace. Our remote tower solution provides tower controllers with complete air situation awareness, allowing them to perform all control tower operations, like directing takeoffs, landings and ground traffic, from an office building either at the airfield or miles away.

FREQUENTIS | **Raytheon**

RAYTHEON/FREQUENTIS USA PARTNERSHIP

- Extensive operational experience across air traffic domains:
 - Communication systems
 - Navigation landing systems
 - Surveillance systems
 - Automation systems
- Provides air traffic control solutions to more than 150 air navigation service providers (ANSPs) around the world
- Decades of experience with National Airspace (NAS) operational site analysis, survey, design, security, deployment, training, transition, logistics and both long- and short-term maintenance and sustainment
- STARS is deployed at more than 600 Federal Aviation Administration (FAA) and Department of Defense (DoD) facilities worldwide



END-TO-END SOLUTION

- STARS: Raytheon's Standard Terminal Automation Replacement Solution provides full airspace situational awareness in the airport vicinity.
 - Ability to fuse data from multiple sources
- smartVISION: Frequentis's smartVISION remote tower provides a digital display of airport operations, including STARS overlay.
- Surveillance: Solution provides a complete sensor installation to meet airport needs.
 - Surveillance sensors (Skyler low-power radar, commercial ADS-B receiver) installed at or near airport for target surveillance
 - Remote tower cameras installed at airport
- Installation is independent of TRACONs and other NAS services.

WHY REMOTE TOWERS?

- They provide controllers with enhanced situational awareness through visual target designation, tagging and tracking based on sensor inputs (radar, ADS-B, visual, IR, etc.).
- Equipment is scalable, expandable and readily adaptable to accommodate airport growth.
- Digital video technologies, such as stitching and digital zooming, coupled with tracking pan-tilt-zoom cameras provide the controller with powerful tools that substantially improve the out-of-the-window view over a traditional air traffic control tower.
- They offer lower capital and operational and maintenance costs.



smartVISION AROUND THE WORLD

smartVISION is operational at four locations with another eight sites in process, spanning nine ANSPs, and includes the first military remote tower award in the world.

