RAD's Broadband Wireless Solution Brings Real-Time HD Video Surveillance to Turkey's Largest Industrial Enterprise

Ensuring High Bandwidth SLAs for Oil Refineries

Challenge
Provide high bandwidth connectivity and backhaul for multiple HD video surveillance cameras with nLOS transmission requirements.

Solution
RAD's Airmux-5000 sub-6GHz point-to-multipoint broadband radios.

Tupras is Turkey's largest industrial enterprise. The utility operates four oil refineries, with an annual total of 28.1 million tons in crude oil processing capacity. Activities within the refinery yards, in particular in and around the oil tank valves, must be monitored 24 hours a day using real-time high-definition video surveillance and recording technology.

"It's not possible to trench for fiber optic cables within the refinery yards near the oil tanks," explains Kaan Mutluel, Tupras's veteran industrial IT manager. "The ground is too hard, plus there is always the risk that the fiber cables will be cut – and we can't afford any downtime in this type of critical infrastructure operation."

Mutluel searched for a robust, high-bandwidth wireless solution that would provide guaranteed SLAs per surveillance camera. Oil refinery tank yards are constructed in such a way that unobstructed line of sight is not always possible from every vantage point. This required the wireless solution to perform flawlessly in near line-of-sight conditions as well

Fast Rollout with High Reliability

Tupras evaluated a number of wireless options, but with professional guidance by Dengebir, one of RAD's leading system integration partners in Turkey, chose RAD's Airmux-5000 point-to-multipoint broadband access radios, which transmit over unlicensed frequencies and, therefore, do not require any broadcast license.

Tüpraş

dengebir
telekomünikasyon satış teknik servis

"We've worked with RAD for many years and have used many of their networking products in the past. They are very reliable – which is crucial for this type of environment."

Kaan Mutluel, Industrial IT Manager, Tupras

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Your Network's Edge

"We've worked with RAD for many years and have used many of their networking products in the past," notes Mutluel. "They are very reliable – which is crucial for this type of environment."

The Airmux radios are installed at oil refineries in Izmir, the country's primary Mediterranean port, and Izmit, about 100 kilometers east of Istanbul. The Airmux-5000 base stations, supporting to 200 Mbps, work opposite dozens subscriber units, each uploading 10 Mbps guaranteed bandwidth. The Airmux-5000 family supports ups to 750 Mbps for bandwidth-intensive applications.

"This project was a requirement from government and we took a risk to implement it without digging extremly dangerous area for solid communication and video transmission," explains Mustafa Altay from Dengebir. "There was very limited time to make it happen but we knew that RAD's Airmux solution would be rock solid," he concludes. "At the end we created a success story with Mr. Kaan Mutluel."

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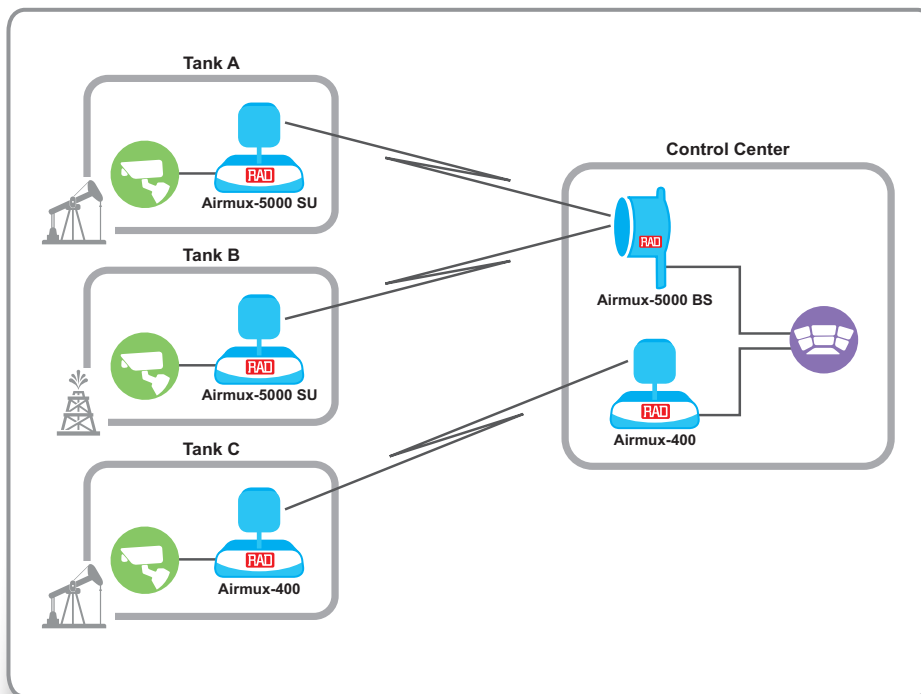>
> Mustafa Altay, General Manager, Dengebir

Features
- Robust, high-bandwidth wireless solution
- Provides guaranteed SLAs per surveillance camera
- Performs in near line-of-sight conditions

Benefits
- No need to roll out fiber
- No critical infrastructure downtime
- Delivers video from any vantage point

Tank A
Airmux-5000 SU

Tank B
Airmux-5000 SU

Tank C
Airmux-400

Control Center
Airmux-5000 BS
Airmux-400

Wireless HD Video Backhaul

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