



## DEPLOYMENT STORY

# ACHIEVING SPECTRUM DOMINANCE ACROSS MULTIPLE MILITARY AIRBASES

How a NATO member monitors the spectrum of multiple locations from one central location



**Domain:**  
Multi



**Application:**  
Spectrum monitoring



**Customer:**  
Military end-user

## **PROBLEM – SPECTRUM MANAGERS STRETCHED TO THE LIMIT**

Experienced spectrum managers at airbases have multifaceted roles that extend beyond spectrum monitoring.

They must ensure all equipment for troops entering theater is operating on the correct frequency, investigate and resolve interference issues, plan strategic spectrum usage, coordinate with international partners, and develop policy recommendations.

However, there is a shortage of highly skilled military spectrum managers, most of whom have a heavy workload and are spread thinly across multiple airbases. A lack of sufficient personnel combined with reactive spectrum monitoring techniques—searching for problems by driving around with handheld spectrum analyzers—can compromise security and operations.

This NATO member wanted to support highly stretched spectrum managers by automating time-consuming and manual tasks, reporting to improve spectrum awareness, and ensuring full situational awareness. They wanted a solution that works 24/7/365—that never forgets to carry out tasks and never gets tired.

## SOLUTION – A DISTRIBUTED SENSOR NETWORK CONTROLLED FROM A CENTRAL LOCATION

This NATO partner installed a network of RFeye Nodes (fit-and-forget hardware) around multiple airbases, creating small monitoring networks that can be joined together to create a large operating theater. Locally, the networks were used for air traffic control, spectrum monitoring, and ground-based air defense.

As the RF receivers can be operated remotely, the air force could concentrate its expert spectrum managers in one central location, which acted as a central nervous system for multiple air bases.

Despite the relatively limited number of experts, by using specialist software the NATO partner could scale operations without having to scale the personnel. It used RFeye Site software for real-time spectrum monitoring, EW target acquisition, and geolocation and RFeye Mission Manager software for automated spectrum management.

In addition to a fixed network of RFeye Nodes, the NATO partner invested in several Stormcases to carry out spectrum vigilance through tactical deployments.

## RESULT – SPECTRUM DOMINANCE

The combination of fixed and tactical deployable RFeye Nodes, as well as remote and automated capabilities, allowed this NATO partner to actively monitor spectrum operations and threat targets in real-time at each operating base from one central location.

Centralizing and automating operations reduced the amount of expertise required and provided three key capabilities:

- Daily monitoring to ensure spectrum cleanliness for air operations
- Checking EMSO with inbound and outbound units
- Ground-based air defense capabilities, acting as early warning protection against drones and missiles

The NATO partner achieved spectrum dominance across their entire network of airbases—identifying problems before they become security risks and ensuring spectrum cleanliness for operations.



Interested in military spectrum management?

[Talk to us](#)



Deployment arranged by **Jon Bradley**

## EQUIPMENT USED



### RFeye® Receiver (Node)

High-performance spectrum sensor (receive / record) to 40GHz



### RFeye® Site

Real-time spectrum monitoring & geolocation toolkit



### RFeye® Mission Manager

Automated spectrum monitoring & mission management

**CRFS**

EXTRAORDINARY  
RF TECHNOLOGY

CRFS is an RF technology specialist for defense, national security agencies and systems integration partners. We provide advanced capabilities for real-time spectrum monitoring, situational awareness and electronic warfare support to help our customers understand and exploit the electromagnetic environment.



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