

VAISALA

Observations to ensure all-weather capability

Solutions Brochure



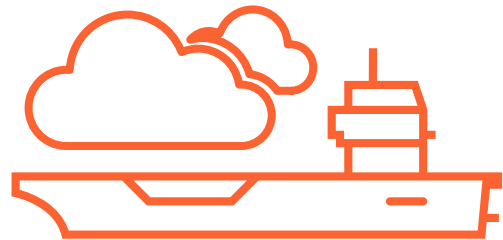
Enhance your weather insights when it matters most

Defense operations and training depend heavily on weather conditions. Challenges arise from fast-changing weather, extreme events, and unpredictable elements like windshear.

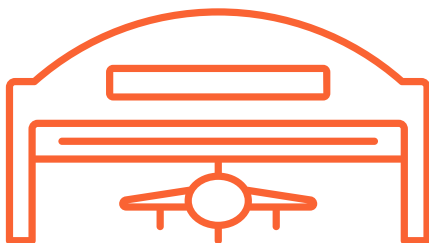
Vaisala provides essential instruments and intelligence for defense operations, improving safety, efficiency, and situational awareness. Advanced technology and reliable data ensure accurate weather predictions and environmental monitoring, critical for planning and executing defense operations.



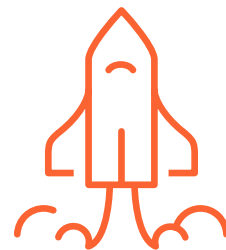
Ground operations



Naval weather



Airfield operations



Range support

Total weather & environmental awareness from a trusted partner



With more than 85 years of experience in weather and environmental technology, Vaisala is the world's most trusted provider of weather observation systems for tactical operations.

Committed to excellence, we take every measure to ensure our systems are not only comprehensive in their observations but also meet the most stringent performance requirements in any situation.

We provide 24/7 global support, extensive project capabilities and thorough training throughout the entire lifespan of your system to help you make weather your ally when it matters most.

- » Comprehensive offerings
- » One-stop-shop approach
- » Innovative technology
- » Trusted accuracy and reliability
- » Long industry expertise

Defense applications



Ground operations

Operations and disaster response missions often take place over complex terrain or in urban areas. Knowing the present weather conditions lowers the risk for both personnel and equipment losses. This has created a need for new, often mobile, approaches to measuring weather phenomena.

- Reliable in-situ weather observations in all weather conditions and any location
- Systems for upper-air atmospheric profiling and tactical weather observations
- Upper-air soundings for ballistic weather corrections, supporting UAS/UAV operations and local observations to enhance the accuracy of forecasting models



Airfield operations

Vaisala has a proven track record in aviation with nearly 50 years of expertise. Whatever your airfield size, geography or climate, we are ready to assist with end-to-end support that ensures long term operation and peace of mind.

- Automatic weather stations for aviation support
- Weather radars and lightning and wind observation data for real-time monitoring and adverse weather and windshear warning
- Optical sensors for cloud base and visibility measurement in harsh conditions



Space launch and test range support

Precise weather measurements are essential for ensuring that test ranges and space launch facilities have complete and current knowledge of atmospheric conditions. For test ranges, understanding the impacts of weather is also crucial for the success of validation campaigns and development projects.

- Complete weather observations to support accurate launch decision-making and ensure personnel safety
- Accurate boundary layer wind data for calculating trajectories



Naval weather

Naval defense operations demand unwavering accuracy, even in the harshest conditions. Adverse weather and challenging environments are the norm, making reliable monitoring an indispensable tool for ensuring operational efficiency and the safety of naval personnel.

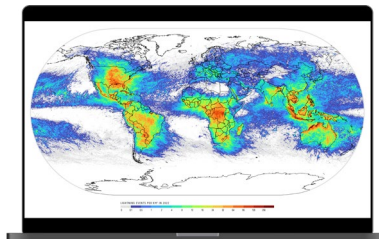
- Weather awareness for navigation, aircraft operations and weapon systems
- Optical & wind sensors, automatic weather stations built to maritime purpose
- Weather data to support UAS/UAV operations

Solutions at a glance

Lightning data

Global Lightning Detection Network GLD360

The most accurate storm and lightning information anywhere in the world, even over the oceans and outside the range of radars or satellites, to protect operations and personnel.



Weather stations & instruments

Automatic weather stations and networks

Dependable, real-time weather data to ensure safe rocket and space launching conditions as well as research at test ranges for artillery, MRLS and missiles.

AviMet® Automated Weather Observing System AWOS

Accurate, reliable, integrated wind and weather data to help pilots and other aviation personnel make critical decisions with continuous, real-time reports on airfield weather conditions.

Integrated meteorology systems

Customer-specified platforms designed and integrated by Vaisala in cooperation with the customer and/or local partner.

Maritime Observation System AWS430

A beacon of reliability in naval environments, designed to withstand salt, moisture, extreme temperatures, vibrations and impact shocks.

Vaisala weather radars

Superior weather data quality and availability through industry-leading data processing and hardware, designed to meet even the most demanding requirements.



Sounding systems and radiosondes

MARWIN Sounding System MW32

Fully rugged sounding system designed and specified for tough military use.

Cirrus® Sounding System MW51

Portable, secure, upper-air multisoundings for complete situational awareness to support mission-critical forecasting.

Radiosonde RS41-SGM

World-class, high quality, upper-air weather data in all weather conditions with radio silence and encryption features for improved security.



Visibility and precipitation

Forward Scatter Sensor FD70

Enhance safety and efficiency for mission-critical airfield operations with reliable forward scatter technology that detects 100% of precipitation from dust to ice and freezing rain. Superior 100 km visibility measurement range.



Remote sensing

WindCube® Scan

Accurate 3-dimensional, real-time wind data up to 10 km to protect your pilots & flight operations from windshear hazards or accurately measure wind conditions at artillery and missile test ranges.



Trust Vaisala to improve
your readiness to operate
in any weather conditions

We understand the challenges – and the stakes – of protecting personnel and the mission. Ask us how accurate and reliable weather insights improve your readiness for critical operations.

Why Vaisala?

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